Arch Therapeutics, Inc.
Form 424B3
July 14, 2016

Filed Pursuant to Rule 424(b)(3)

Registration No. 333-212213

ARCH THERAPEUTICS, INC.

PROSPECTUS

Up to 16,482,082 Shares of Common Stock

This prospectus relates to the offering and resale by the selling securityholders of Arch Therapeutics, Inc. named herein of up to 16,482,082 shares of common stock, par value $0.001 per share ("**Common Stock**"). These shares include the 9,418,334 shares of issued and outstanding Common Stock currently held by the selling securityholders and 7,063,748 shares of Common Stock currently underlying Series E Warrants held by the selling securityholders, all of which were initially issued and sold in a private placement offering that was concluded on May 26, 2016 (the "**2016 Private Placement Financing**"). The Common Stock issued in the 2016 Private Placement Financing was sold as a part of a unit ("**Unit**") consisting of a share of our Common Stock and a Series E Warrant at a purchase price of $0.36 per Unit. The Series E Warrants entitle the holders thereof to purchase 0.75 shares of Common Stock at an initial exercise price of $0.4380 per share, were exercisable immediately upon issuance and expire five years thereafter.

The selling securityholders may sell the shares of Common Stock to be registered hereby from time to time on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale, in the over-the-counter market, in one or more transactions otherwise than on these exchanges or systems or in the over-the-counter market, such as privately negotiated transactions, or using a combination of these methods, and at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale, or at negotiated prices. See the disclosure under the heading "**PLAN OF DISTRIBUTION**" in this prospectus for more information.

We will not receive any proceeds from the resale of Common Stock by the selling securityholders.

Our Common Stock is traded on the QB tier of the OTC Marketplace ("**OTCQB**") under the symbol "**ARTH**". On July 13, 2016, the closing price of our Common Stock was $0.795 per share.

We originally offered and sold the securities issued in the 2016 Private Placement Financing under an exemption from the registration requirements of the Securities Act of 1933, as amended (the "**Securities Act**"), pursuant to Section 4(a)(2) of the Securities Act and Rule 506(b) promulgated under Securities Act.

Investing in our Common Stock involves a high degree of risk. Before making any investment in our Common Stock, you should read and carefully consider the risks described in this prospectus under the heading "RISK FACTORS" beginning on Page 11 of this prospectus.

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

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

This prospectus is dated July 14, 2016

TABLE OF CONTENTS

ABOUT THIS PROSPECTUS

You should rely only on the information that we have provided or incorporated by reference in this prospectus, any applicable prospectus supplement and any related free writing prospectus that we may authorize to be provided to you. We have not authorized anyone to provide you with different information. No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus, any applicable prospectus supplement or any related free writing prospectus that we may authorize to be provided to you. You must not rely on any unauthorized information or representation. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. You should assume that the information in this prospectus, any applicable prospectus supplement or any related free writing prospectus is accurate only as of the date on the front of the document and that any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus, any applicable prospectus supplement or any related free writing prospectus, or any sale of a security registered under the registration statement of which this prospectus forms a part.

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus forms a part, and you may obtain copies of those documents as described below under the heading "**WHERE YOU CAN FIND MORE INFORMATION.**"

As used in this prospectus, unless the context indicates or otherwise requires, the "**Company**", "**we**", "**us**", "**our**" and "**Arch**" refer to Arch Therapeutics, Inc., a Nevada corporation, and its consolidated subsidiary, and the term "**ABS**" refers to Arch Biosurgery, Inc., a private Massachusetts corporation that, through a reverse merger acquisition completed on June 26, 2013, has become our wholly owned subsidiary.

On May 24, 2013, we effected a forward stock split, by way of a stock dividend, of our issued and outstanding shares of Common Stock at a ratio of 11 shares to each one issued and outstanding share. Unless the context indicates or otherwise requires, all share numbers and share price data included in this prospectus have been adjusted to give effect to that stock split.

Our trademarks include AC5 Surgical Hemostatic Device™, AC5™, Crystal Clear Surgery™, NanoDrape™ and NanoBioBarrier™. All other trademarks, trade names and service marks included in this prospectus are the property of their respective owners.

SUMMARY

This summary does not contain all of the information that should be considered before investing in our Common Stock. Investors should read the entire prospectus carefully, including the more detailed information regarding our business under the heading "OUR BUSINESS" beginning on Page 52 of this prospectus, the risks of purchasing our Common Stock discussed in this prospectus under the heading "RISK FACTORS" beginning on Page 11 of this prospectus and our consolidated financial statements and the accompanying notes beginning on Page F-1 of this prospectus.

Our Company

We are a biotechnology company in the development stage with limited operations to date. We aim to develop products that make surgery and interventional care faster and safer by using a novel approach that stops bleeding (referenced as "**hemostatic**" or "**hemostasis**"), controls leaking (referenced as "**sealant**" or "**sealing**"), and provides other advantages during surgery and trauma care. Our core technology is based on a self-assembling peptide that creates a physical, mechanical barrier, which could be applied to seal organs or wounds that are leaking blood and other fluids. We believe our technology could support an innovative platform of potential products in the field of stasis and barrier applications. Our lead product candidate, the AC5 Surgical Hemostatic Device™ (which we sometimes refer to as "**AC5™**"), is designed to achieve hemostasis in minimally invasive and open surgical procedures, and we hope to develop other hemostatic or sealant product candidates in the future based on our self-assembling peptide technology platform. Our plan and business model is to develop products that apply that core technology to use with human bodily fluids and connective tissues.

AC5 is designed to be a biocompatible synthetic peptide comprising naturally occurring amino acids. When applied to a wound, AC5 intercalates into the interstices of the connective tissue where it self-assembles into a physical, mechanical structure that provides a barrier to leaking substances, such as blood. AC5 is designed for direct application as a liquid, which we believe will make it user-friendly and able to conform to irregular wound geometry. Additionally, AC5 is not sticky or glue-like, which we believe will enhance its utility in the setting of minimally invasive and laparoscopic surgeries. Further, in certain settings, AC5 lends itself to a concept that we call Crystal Clear Surgery™ because the transparency and physical properties of AC5 enable a surgeon to operate through it in order to maintain a clearer field of vision and prophylactically stop or lessen bleeding as it starts.

We currently have no products that have obtained marketing approval in any jurisdiction, we have not generated revenues since inception and we do not expect to do so in the foreseeable future due to the early stage nature of our current product candidates. We had net losses for the years ended September 30, 2014 and September 30, 2015 of $8,142,823 and $2,947,526, respectively, and we had an accumulated deficit as of March 31, 2016 of $18,131,931. To date, we have financed our operations primarily through funding received from private placement offerings, such as the 2016 Private Placement Financing, 2015 Private Placement Financing (as later defined), the 2014 Private

Placement Financing (as later defined), the Notes Offering (as later defined), and under the MLSC Loan Agreement (as later defined). We have devoted much of our operational effort to date to the research and development of our core technology, including selecting our initial product composition, conducting initial safety and other related tests, generating scale-up, reproducibility and manufacturing and formulation methods, and developing and protecting the intellectual property rights underlying our technology platform.

For more information regarding our business, see the disclosure under the headings "**MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS**" and "**OUR BUSINESS**" included elsewhere in this prospectus. For a description of certain risks related to our business, see the disclosure under the heading "**RISK FACTORS**" beginning on Page 11 of this prospectus.

Private Placement Offerings

2016 Private Placement Financing

Beginning May 24, 2016 and through May 26, 2016, we entered into a series of substantially similar subscription agreements (each a "**2016 Subscription Agreement**") with 18 accredited investors (collectively, the "**2016 Investors**") providing for the issuance and sale by the Company to the 2016 Investors, in a private placement, of an aggregate of 9,418,334 Units at a purchase price of $0.36 per Unit (the "**2016 Private Placement Financing**"). Each Unit consisted of a share of Common Stock, and a Series E Warrant to purchase 0.75 shares of Common Stock at an exercise price of $0.4380 per share at any time prior to the fifth anniversary of the issuance date of the Series E Warrant (the "**Series E Warrants**," and the shares issuable upon exercise of the Series E Warrants, collectively, the "**Series E Warrant Shares**"). The exercise price of the Series E Warrants was set to equal the closing price of our Common Stock on the date of their issuance (May 26, 2016), which was $0.4380, and therefore the Series E Warrants were not issued at a discount to the market price of our Common Stock as of such date.

The number of shares of Common Stock into which each of the Series E Warrants is exercisable and the exercise price therefor are subject to adjustment as set forth in the Series E Warrants, including adjustments for stock subdivisions or combinations (by any stock split, stock dividend, recapitalization, reorganization, scheme, arrangement or otherwise). In addition, (i) at any time during the term of the Series E Warrants, we may reduce the then-current exercise price to any amount and for any period of time deemed appropriate by our Board of Directors (the "**Board**"); and (ii) certain of the Series E Warrants provide that they shall not be exercisable in the event and to the extent that the exercise thereof would result in the holder of the Series E Warrant, together with its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder's, would be deemed to beneficially own more than 4.99% of the Common Stock; *provided, however*, the holder, upon notice to us, may increase or decrease the ownership limitation, *provided that* any increase is limited to a maximum of 9.99% of the Company's Common Stock, and any increase in the ownership limitation will not become effective until the 61st day after delivery of such notice.

We engaged Maxim Group LLC ("**Maxim**") as our exclusive institutional investor placement agent in connection with the 2016 Private Placement Financing, and in consideration for the services provided by it, Maxim was entitled to receive cash fees equal to 8.2% of the gross proceeds received by us from certain institutional investors participating in the 2016 Private Placement Financing (the "**Maxim Investors**"), as well as reimbursement for all reasonable expenses incurred by it in connection with its engagement. We received gross proceeds of approximately $3,390,600 in the aggregate, of which approximately $2,084,000 was attributable to the Maxim Investors, resulting in a fee of approximately $170,888. In addition, the number of shares of our Common Stock outstanding increased as a result of the 2016 Private Placement Financing by approximately eight percent (8%) from 118,592,070 to 128,010,404.

Our existing stockholders will experience dilution upon any exercise of the Series E Warrants issued in the 2016 Private Placement Financing. Such Series E Warrants are currently exercisable for an aggregate of 7,063,748 shares of our Common Stock which, assuming no adjustments to and the full exercise of the Series E Warrants and no other issuances of our Common Stock would equal approximately 5.3% of the 133,380,265 shares of Common Stock outstanding as July 13, 2016, and approximately 5.0% of the 140,444,013 shares of Common Stock that would be outstanding after giving effect to the exercise of all such warrants.

On May 26, 2016, we entered into a registration rights agreement with the 2016 Investors (the "**2016 Registration Rights Agreement**"), pursuant to which we became obligated, subject to certain conditions, to file with the Securities and Exchange Commission (the "**SEC**") within 45 days after the closing of the 2016 Private Placement Financing one or more registration statements to register the shares of Common Stock issued in the Closings and the Series E Warrant Shares for resale under the Securities Act of 1933, as amended (the "**Securities Act**"). As a result, we registered for resale under this registration statement (the "**2016 Registration Statement**") an aggregate of 16,482,082 shares of Common Stock, representing the 9,418,334 shares issued at the closing of the 2016 Private Placement Financing and the 7,063,748 shares underlying the Series E Warrants.

Our failure to satisfy certain deadlines with respect to this registration statement and certain other requirements set forth in the 2016 Registration Rights Agreement may require us to pay monetary penalties to the 2016 Investors

and/or their assignees. Because the Series E Warrants are subject to certain adjustments and permit, in certain circumstances, the "cashless" exercise thereof, the number of shares that will actually be issuable upon any exercise thereof may be more or less than the number of shares being offered by this prospectus. In the event of any such adjustment to the number of shares issuable upon exercise of the Series E Warrants, the provisions of the 2016 Registration Rights Agreement would obligate us to register for resale any additional shares of our Common Stock that may then be issuable upon exercise of the Series E Warrants.

Under the 2016 Registration Rights Agreement, subject to exception in certain circumstances, we have agreed to keep the 2016 Registration Statement effective until the earlier of the date on which all shares of Common Stock to be registered hereunder have been sold, and the twelve month anniversary of the date the 2016 Registration Statement is declared effective by the SEC. If there is not an effective registration statement covering the resale of any of the shares issued in or issuable upon exercise of the Series E Warrants issued in the 2016 Private Placement Financing, then the selling securityholders will be entitled to exercise their Series E Warrants on a "cashless exercise" or "net exercise" basis during the period when the shares issuable upon exercise of such Series E Warrants are not so registered.

Twelve of the 2016 Investors, or their respective affiliates, have participated in previous financings that were conducted by us. In particular and as set forth in the table below, (i) Anson Investments Master Fund LP ("**Anson**"), Intracoastal Capital, LLC ("**Intracoastal**") and CVI Investments, Inc. ("**CVI**") or their respective affiliates, were investors in the Company's 2014 Private Placement Financing and Notes Offering; and (ii) Anson, Karen Carlin, Drake Partners Equity LLC ("**Drake**"), Jonathan Galli, Intracoastal, the Keyes Sulat Revocable Trust (the "**Trust**"), Lorraine A. Malanga, James M. McKeone, an affiliate of IRA FBO Ana B Parker ("**Ms. Parker**"), Dr. Stephanie Plent, and Popham Management, LLC ("**Popham**") and/or their respective affiliates were investors in the Company's 2015 Private Placement Financing. The table below summarizes the securities purchased by each of the 2016 Investors in the 2014 Private Placement Financing, Notes Offering and 2015 Private Placement Financing.

	2014 Private Placement				Notes Offering	2015 Private Placement	
Investor	2014 Private Placement Shares	Series A Warrant Shares	Series B Warrant Shares	Series C Warrant Shares	Aggregate Principal Amount of Notes	2015 Private Placement Shares	Series D Warrant Shares
Anson Investments Master Fund LP	2,000,000	2,000,000	2,000,000	2,000,000	250,000	1,600,000	1,600,000
Karen Carlin	0	0	0	0	0	113,637	113,637
CVI Investments, Inc.	2,000,000	2,000,000	2,000,000	2,000,000	250,000	0	0
Drake Partners Equity LLC	0	0	0	0	0	227,273	227,273
Jonathan Galli	0	0	0	0	0	350,000	350,000
Intracoastal Capital, LLC	800,000	800,000	800,000	800,000	250,000	1,590,909	1,590,909
Keyes Sulat Revocable Trust	0	0	0	0	0	454,546	454,546
Lorraine A. Malanga	0	0	0	0	0	113,637	113,637
James M. McKeone	0	0	0	0	0	454,546	454,546
IRA FBO Ana B Parker	0	0	0	0	0	5,000,000	5,000,000
Dr. Stephanie Plent	0	0	0	0	0	227,273	227,273
Popham Management, LLC	0	0	0	0	0	454,546	454,546

James R. Sulat, who was appointed as a member of the Board on August 19, 2015, is a co-trustee of the Trust along with his wife. In accordance with the Company's policies governing related party transactions, Mr. Sulat disclosed his interest in the 2016 Private Placement Financing to the remaining members of the Board, all of whom were disinterested in the transaction (the "**Disinterested Directors**"), and recused himself from discussing or voting on matters related to the 2016 Private Placement Financing. On May 24, 2016, The Disinterested Directors unanimously approved the 2016 Private Placement Financing.

In addition to participating in both the 2016 Private Placement Financing and 2015 Private Placement Financing, the Trust also previously purchased a promissory note in the aggregate principal amount of $75,000 and warrants from our wholly-owned subsidiary, ABS, on June 19, 2013. In contemplation of the Merger (as later defined), the securities purchased by the Trust were amended and restated to provide for (i) the conversion of all amounts owed under the

promissory note into an aggregate of 273,277 shares of the Company's Common Stock upon the closing of the Merger, calculating to approximately one share of the Company's Common Stock for each $0.27 outstanding under the promissory note, and (ii) the cancellation of the warrants in full upon the closing of the Merger. Accordingly, upon the closing of the Merger on June 26, 2013, the promissory note was converted into 273,277 shares of our Common Stock and the warrants were cancelled.

The net proceeds to us from the 2016 Private Placement Financing, after giving effect to legal and other expenses incurred through the date of this prospectus, were approximately $3,055,600. The table below describes in more detail these costs associated with the 2016 Private Placement Financing through the date of this prospectus:

Gross proceeds of the 2016 Private Placement Financing:	$3,390,600	(1)
Legal and other expenses incurred in connection with the 2016 Private Placement Financing:	$335,000	(2)
Resulting net proceeds to the Company:	$3,055,600	(3)

(1) Does not include potential gross proceeds payable to us upon exercise of the Series E Warrants issued in the 2016 Private Placement Financing, which would equal approximately $3,093,922 if all 7,063,748 of the shares issuable under the Series E Warrants outstanding on July 13, 2016 were exercised on a cash basis.

(2) This amount represents our legal, accounting, registration, placement agent and other fees and expenses associated with the 2016 Private Placement Financing (collectively, "**Transaction Expenses**"), which were estimated to total $335,000. This amount does not include additional payments that we may be required to make under certain circumstances but that are not currently determinable, including the following: (a) potential partial damages for failure to register and keep registered for the period specified in the 2016 Registration Rights Agreement the Common Stock issued in the 2016 Private Placement Financing or issuable upon exercise of the Series E Warrants (in a cash amount equal to 1.5% of the price paid to us by each investor in the 2016 Private Placement Financing on the date of and on each 30-day anniversary of such failure until the cure thereof, with no quantitative cap to the aggregate amount of such); and (b) payments in respect of claims for which we provide indemnification in the 2016 Registration Rights Agreement. Although we intend to comply with the requirements of the 2016 Subscription Agreements and the 2016 Registration Rights Agreement and do not currently expect to make any such payments, it is possible that such payments may be required.

(3) Calculated by subtracting Transaction Expenses from the gross proceeds to us from the 2016 Private Placement Financing.

2015 Private Placement Financing

Beginning June 22, 2015 and through June 30, 2015, we entered into a series of substantially similar subscription agreements (each a "**2015 Subscription Agreement**") with twenty accredited investors (collectively, the "**2015 Investors**") providing for the issuance and sale by us to the 2015 Investors, in a private placement, of an aggregate of 14,390,754 Units at a purchase price of $0.22 per Unit (the "**2015 Private Placement Financing**"). Each Unit consisted of a share of our Common Stock and a Series D Warrant ("**Series D Warrant**") to purchase a share of Common Stock at an exercise price of $0.25 per share at any time prior to the fifth anniversary of the issuance date of the Series D Warrant (the shares issuable upon exercise of the Series D Warrants, the "**Series D Warrant Shares**"). On June 30, 2015, we conducted an initial closing pursuant to which we sold and 19 of the 2015 Investors purchased 13,936,367 Units at an aggregate purchase price of approximately $3,066,000. On July 2, 2015, we conducted a second closing pursuant to which we sold and the remaining 2015 Investor purchased 454,387 Units at an aggregate purchase price of approximately $100,000. The aggregate gross proceeds raised by us in the 2015 Private Placement Financing totaled approximately $3,166,000, and the number of shares of our Common Stock outstanding increased by over eighteen percent (18%) from 78,766,487 to 93,157,241. We did not engage any underwriter or placement agent in connection with the 2015 Private Placement Financing.

The number of shares of Common Stock into which each of the Series D Warrants is exercisable and the exercise price therefor are subject to adjustment as set forth in the Series D Warrants, including adjustments for stock subdivisions or combinations (by any stock split, stock dividend, recapitalization, reorganization, scheme,

arrangement or otherwise). In addition, (i) at any time during the term of the Series D Warrants, we may reduce the then-current exercise price to any amount and for any period of time deemed appropriate by our Board; and (ii) certain of the Series D Warrants provide that they shall not be exercisable in the event and to the extent that the exercise thereof would result in the holder of the Series D Warrant or any of its affiliates beneficially owning more than 4.9% of our Common Stock, but such ownership limitation may be waived at the holder's discretion, *provided that* such waiver will not become effective until the 61st day after delivery of such waiver notice.

On June 30, 2015, we entered into a registration rights agreement with 19 of the 2015 Investors (the "**2015 Registration Rights Agreement**"), pursuant to which we became obligated, subject to certain conditions, to file with the SEC within 90 days after the closing of the 2015 Private Placement Financing one or more registration statements to register the shares of Common Stock issued in the 2015 Private Placement Financing and the Series D Warrant Shares for resale under the Securities Act of 1933, as amended (the "**Securities Act**"). The remaining 2015 Investor became a party to the 2015 Registration Rights Agreement on July 2, 2015. As a result, we initially registered for resale under a registration statement on Form S-1 (File Number 333-206873, and such registration statement, the "**2015 Registration Statement**") an aggregate of 28,781,508 shares of Common Stock, representing the (i) 14,390,754 shares issued at the Closings of the 2015 Private Placement and (ii) 14,390,754 shares underlying the Series D Warrants.

Our failure to satisfy certain deadlines with respect to the 2015 Registration Statement and certain other requirements set forth in the 2015 Registration Rights Agreement may require us to pay monetary penalties to the 2015 Investors and/or their assignees. Under the 2015 Registration Rights Agreement, subject to exception in certain circumstances, we have agreed to keep the 2015 Registration Statement effective until the earlier of the date on which all shares of Common Stock to be registered hereunder have been sold, and the twelve month anniversary of the date the 2015 Registration Statement is declared effective by the SEC. If there is not an effective registration statement covering the resale of any of the shares issued in or issuable upon exercise of the Series D Warrants issued in the 2015 Private Placement Financing, then the selling securityholders will be entitled to exercise their Series D Warrants on a "cashless exercise" or "net exercise" basis during the period when the shares issuable upon exercise of such Series D Warrants are not so registered.

Notes Offering

Beginning March 11, 2015 and through March 13, 2015, we entered into a series of substantially similar subscription agreements (each a "**Convertible Notes Subscription Agreement**") with each of Anson, Equitec Specialists, LLC, an affiliate of Intracoastal ("**Equitec**"), and Capital Ventures International, an affiliate of CVI ("**Capital Ventures**" and together with Anson and Equitec, the "**Convertible Notes Investors**") pursuant to which we issued unsecured 8% Convertible Notes (the "**Convertible Notes**", and such transaction, the "**Notes Offering**") to the Convertible Notes Investors in the aggregate principal amount of $750,000. On the Closing of the Notes Offering on March 13, 2015, each Convertible Notes Investor was issued a Convertible Note in the principal amount of $250,000. We did not engage any underwriter or placement agent in connection with the Notes Offering. Equitec and Capital Ventures also purchased Units in the 2014 Private Placement Financing and in May 2015 and September 2015, respectively, they assigned the remaining securities that they acquired in or as a result of the Notes Offering and 2014 Private Placement Financing to their respective affiliates, Intracoastal and CVI.

On September 8, 2015, we, along with the current holders of the Convertible Notes, entered into a series of substantially similar subordination agreements with the Massachusetts Life Sciences Center ("**MLSC**" and such agreements, the "**Subordination Agreements**"), pursuant to which the holders of the Convertible Notes agreed to subordinate their right to payment under the Convertible Notes to MLSC's right to receive payments under the MLSC Loan Agreement . Under the terms of the Subordination Agreements, the indebtedness accrued under the Convertible Notes could not be repaid unless and until all indebtedness and fees owed to MLSC under the MLSC Loan Agreement were repaid in full, but the right to convert the Convertible Notes into shares of Common Stock was expressly allowed.

Subject to the terms and conditions of the Subordination Agreements, the Convertible Notes issued in the Notes Offering became due and payable on March 13, 2016 (the "**Stated Maturity Date**") and could not be prepaid. The Convertible Notes bore interest on the unpaid principal balance at a rate equal to eight percent (8.0%) (computed on the basis of the actual number of days elapsed in a 360-day year) per annum until either (a) converted into shares of our Common Stock; or (b) the outstanding principal and accrued interest on the Convertible Notes was paid in full by

us. Interest on the Convertible Notes became due and payable upon their conversion or the Stated Maturity Date and could become due and payable upon the occurrence of an event of default under the Convertible Notes. In the event that the Stated Maturity Date occurred and repayment of the indebtedness accrued under the Convertible Notes was not permitted under the Subordination Agreements, (1) the term of the Convertible Notes and the holders' rights to convert such Convertible Notes into shares of Common Stock was automatically extended until repayment was permitted under the Subordination Agreements; and (2) interest would continue to accrue at a rate equal to eight percent (8.0%) (computed on the basis of the actual number of days elapsed in a 360-day year) per annum.

At any time prior to the Stated Maturity Date, the holders of the Convertible Notes had the right to convert some or all of such Convertible Notes into the number of shares of our Common Stock determined by dividing (a) the aggregate sum of the (i) principal amount of the Convertible Note to be converted, and (ii) amount of any accrued but unpaid interest with respect to such portion of the Convertible Note to be converted; and (b) the conversion price then in effect (the shares of Common Stock issuable upon such conversion, the "**Conversion Shares**"); *provided, however*, conversion was not permitted to the extent that, if after giving effect to such conversion, the holder, together with its affiliates collectively, would beneficially own more than 4.99% or 9.99% (at the holder's discretion) of the shares of Common Stock outstanding immediately after giving effect to such conversion. The initial conversion price was $0.20 per share, and it could be (A) reduced to any amount and for any period of time deemed appropriate by our Board, or (B) reduced or increased proportionately as a result of stock splits, stock dividends, recapitalizations, reorganizations, and similar transactions.

As of the date of this prospectus, all principal and interest accrued under the Convertible Notes has been converted into Conversion Shares, with the last such conversion occurring in April 2016. In total, approximately $796,073 in principal and accrued interest accrued under the Convertible Notes was converted in to 3,980,359 Conversion Shares at a conversion price of $0.20 per share.

2014 Private Placement Financing

On January 30, 2014, we entered into a securities purchase agreement (the "**Securities Purchase Agreement**") with nine accredited investors (the "**2014 Investors**") providing for our issuance and sale to the 2014 Investors, in a private placement, of an aggregate of 11,400,000 Units at a purchase price of $0.25 per Unit, for aggregate gross proceeds to us of $2.85 million (the "**2014 Private Placement Financing**"). Each Unit consisted of a share of our Common Stock and a Series A Warrant, a Series B Warrant, and a Series C Warrant (collectively, the "**2014 Warrants**"), each of which was exercisable for a share of Common Stock. Upon the closing of the 2014 Private Placement Financing on February 4, 2014, we issued to the 2014 Investors 11,400,000 shares of Common Stock and 2014 Warrants exercisable up to an aggregate of 34,200,000 shares of our Common Stock.

The Series A Warrants had an initial exercise price of $0.30 per share, were exercisable immediately upon their issuance and have a term of exercise equal to five years after their issuance date. The Series B Warrants had an initial exercise price of $0.35 per share, were exercisable immediately upon their issuance and had a term of exercise equal to the shorter of 12 months after their issuance date and six months after the first date on which the resale of all Registrable Securities (as defined in the Securities Purchase Agreement) is covered by one or more effective registration statements, which occurred on July 2, 2014 (the "**2014 Registration Statement Effective Date**"). The Series B Warrants expired on January 3, 2015. The Series C Warrants had an initial exercise price of $0.40 per share, were exercisable immediately upon their issuance and had an initial term of exercise equal to the shorter of 18 months after their issuance date and nine months after the 2014 Registration Statement Effective Date. As described below, the term of the Series C Warrants was extended to 5:00 p.m., New York time, on July 2, 2016 and, prior to such expiration date, all 11,400,000 shares underlying the Series C Warrants were exercised. The number of shares of our Common Stock into which each of the 2014 Warrants is exercisable and the exercise price therefor were subject to adjustment as set forth in the 2014 Warrants, including, without limitation, adjustments in the event of certain subsequent issuances and sales of shares of our Common Stock (or securities convertible or exercisable into shares of our Common Stock) at a price per share lower than then-effective exercise price of the 2014 Warrants, in which case the per share exercise price of the 2014 Warrants would be adjusted to equal such lower price per share and the number of shares issuable upon exercise of the 2014 Warrants would be adjusted accordingly so that the aggregate exercise price upon full exercise of the 2014 Warrants immediately before and immediately after such per share exercise price adjustment were equal (the "**Anti-Dilution Provisions**"), as well as customary adjustments in the event of stock dividends and splits, subsequent rights offerings and pro rata distributions to our Common Stockholders. As described below, the outstanding 2014 Warrants were amended on June 22, 2015 to remove the Anti-Dilution Provisions. In addition, as a result of the amendments described in greater detail below, the exercise price of both the Series A Warrants and Series C Warrants was decreased to $0.20 per share. The 2014 Warrants also provide that they shall not be exercisable in the event and to the extent that the exercise thereof would result in the holder of the 2014 Warrant or any of its affiliates beneficially owning more than 4.9% of our Common Stock.

On December 1, 2014, we entered into an agreement with Cranshire Capital Master Fund, Ltd. ("**Cranshire**"), which was the lead investor in the 2014 Private Placement Financing and is an affiliate of Intracoastal and Equitec, to amend certain provisions of the 2014 Warrants (the "**December 2014 Amendment**"). Under the terms of the December 2014 Amendment, the 2014 Warrants were amended to (i) reduce the exercise price of the Series B Warrants from $0.35 to

$0.20; (ii) reduce the exercise price of the Series C Warrants from $0.40 to $0.20; and (iii) clarify that each series of 2014 Warrants may be amended without having to amend all three series of 2014 Warrants. The number of shares of our Common Stock which could be purchased upon exercise of each 2014 Warrant remained unchanged following the December 2014 Amendment.

As noted above, between March 11, 2015 and through March 13, 2015, we entered into substantially similar Convertible Notes Subscription Agreements with each of the Convertible Notes Investors pursuant to which we issued Convertible Notes to the Convertible Notes Investors in the aggregate principal amount of $750,000. Because the conversion price of the Convertible Notes on the date the Notes Offering closed ($0.20 per share) was below then current exercise price of the Series A Warrants, the issuance of the Convertible Notes triggered the Anti-Dilution Provisions of the Series A Warrants and, as a result, the exercise price of the Series A Warrants was reduced to $0.20 per share and the aggregate number of shares issuable under the Series A Warrants increased by 5,700,000 shares (or fifty-percent (50%)) from 11,400,000 shares to 17,100,000 shares, in each case effective as of March 13, 2015.

On March 13, 2015 and May 30, 2015, we also entered into amendment agreements with Cranshire to extend the expiration date of the Series C Warrants to 5:00 p.m., New York time, on June 2, 2015, and 5:00 p.m., New York time, on July 2, 2015, respectively. On June 22, 2015, we entered into an additional amendment agreement with Cranshire pursuant to which to the Anti-Dilution Provisions contained in the Series A Warrants and Series C Warrants were removed in consideration for (a) further extending the expiration date of the Series C Warrants to 5:00 p.m., New York time, on July 2, 2016; and (b) agreeing to issue the holders of the Series A Warrants and Series C Warrants up to an additional 570,000 shares of Common Stock, subject to the delivery by each such holder of an investor certificate (such shares of Common Stock, the "**Inducement Shares**"). As of the date of this prospectus, all 570,000 Inducement Shares have been issued, and all Series C Warrants have been exercised.

Also upon the closing of the 2014 Private Placement Financing, we entered into a registration rights agreement (the "**2014 Registration Rights Agreement**") with the 2014 Investors pursuant to which we became obligated to file with the SEC one or more registration statements to register for resale under the Securities Act the shares of Common Stock issued in and underlying the 2014 Warrants issued in the 2014 Private Placement Financing. As a result, we initially registered for resale under a registration statement on Form S-1 (File Number 333-194745, and such registration statement, the "**2014 Registration Statement**") an aggregate of 45,600,000 shares of Common Stock, representing the 11,400,000 shares issued at the closing of the 2014 Private Placement Financing and the 34,200,000 shares underlying the 2014 Warrants upon the closing of the 2014 Private Placement Financing. Our failure to satisfy certain other deadlines with respect to the 2014 Registration Statement and certain other requirements set forth in the 2014 Registration Rights Agreement may require us to pay monetary penalties to the 2014 Investors. Additionally, we may be required in the future to amend the 2014 Registration Statement or to file a new registration statement in order to register additional shares of our Common Stock for resale by the investors in the 2014 Private Placement Financing to account for adjustments, if any, to the number of shares underlying the 2014 Warrants including, but not limited to, the additional 5,700,000 shares that became exercisable under the Series A Warrants as a result of the Notes Offering. Under the 2014 Registration Rights Agreement, subject to exception in certain circumstances, we have agreed to keep the 2014 Registration Statement effective until the earlier of the date on which all shares of Common Stock to be registered thereunder have been sold or may be sold without restriction pursuant to Rule 144 promulgated under the Securities Act ("**Rule 144**"). If there is not, at any time during the period required by the 2014 Registration Rights Agreement, an effective registration statement covering the resale of any of the shares issued in or issuable upon exercise of the 2014 Warrants issued in the 2014 Private Placement Financing, then the 2014 Investors and their assignees (i) will have "piggyback" registration rights with respect to any such shares that are not eligible for resale pursuant to Rule 144 in connection with any other registration statement we determine to file that would permit the inclusion of those shares; and (ii) will be entitled to exercise their 2014 Warrants on a "cashless exercise" or "net exercise" basis during the period when the shares issuable upon exercise of such 2014 Warrants are not so registered.

We did not engage any underwriter or placement agent in connection with the 2014 Private Placement Financing. We also did not make any payments, in cash or equity, to any of the 2014 Investors in connection with the 2014 Private Placement Financing, except that we have reimbursed, or have agreed to reimburse, Cranshire an aggregate cash amount of up to $35,000 for costs and expenses incurred by it or its affiliates in connection with the transactions contemplated by the 2014 Private Placement Financing and the registration of the securities issued in the 2014 Private Placement Financing. After deducting for the expense reimbursement to Cranshire, the net proceeds to us from the 2014 Private Placement Financing on the date it closed were approximately $2.815 million.

Corporate Information

We were incorporated under the laws of State of Nevada on September 16, 2009 as Almah, Inc. On May 10, 2013, we entered into an Agreement and Plan of Merger (the "**Merger Agreement**") with ABS and Arch Acquisition Corporation, our wholly owned subsidiary formed for the purpose of the transaction, pursuant to which Arch Acquisition Corporation merged with and into ABS and ABS thereby became our wholly owned subsidiary (the "**Merger**"). The Merger closed on June 26, 2013. In contemplation of the Merger, we changed our name from Almah, Inc. to Arch Therapeutics, Inc. Our principal executive offices are located at 235 Walnut St., Suite 6, Framingham,

Massachusetts 01702. The telephone number of our principal executive offices is (617) 431-2313. Our website address is http://www.archtherapeutics.com. We have not incorporated by reference into this prospectus the information on our website, and you should not consider it to be a part of this document.

ABS was incorporated under the laws of the Commonwealth of Massachusetts on March 6, 2006 as Clear Nano Solutions, Inc. On April 7, 2008, ABS changed its name from Clear Nano Solutions, Inc. to Arch Therapeutics, Inc., and on June 26, 2013, ABS changed its name from Arch Therapeutics, Inc. to Arch Biosurgery, Inc.

Prior to the completion of the Merger, we were a “shell company” under applicable rules of the SEC, and had no or nominal assets or operations. Upon the closing of the Merger, we abandoned our prior business plan and began pursuing, as our sole business, our current business as a biotechnology company.

The Offering

This prospectus relates to the resale from time to time by the selling securityholders identified in this prospectus of up to 16,482,082 shares of our Common Stock issued or underlying the Series E Warrants issued in the 2016 Private Placement Financing. None of the shares to be registered hereby are being offered for sale by us.

Common stock outstanding prior to offering	133,380,265 (1)
Common stock offered by the selling securityholders	16,482,082 (2)
Common stock to be outstanding after the offering	140,444,013 (3)
Use of proceeds	We will not receive any proceeds from the sale of Common Stock offered by the selling securityholders under this prospectus.
OTCQB symbol	"ARTH"
Risk Factors	See "**RISK FACTORS**" beginning on Page 11 and other information in this prospectus for a discussion of the factors you should consider before you decide to invest in our Common Stock and warrants.

(1) As of July 13, 2016, includes an aggregate of 9,418,334 shares of our Common Stock issued to the selling securityholders in connection with the Closings conducted under the 2016 Private Placement Financing. Includes 21,418,383 shares of Common Stock held by our affiliates.

(2) Consists of: (a) the 9,418,334 shares of Common Stock currently held by the selling securityholders that were originally issued in connection with the closing of the 2016 Private Placement Financing; and (b) 7,063,748 shares of Common Stock issuable upon exercise of the Series E Warrants determined as if the Series E Warrants were exercised in full (without regard to any limitations on exercise contained therein).

(3) Assumes (a) no further adjustment to the number of shares underlying the Series E Warrants; and (b) the full exercise of the Series E Warrants held by the selling securityholders as of July 13, 2016, which would result in the issuance of an aggregate of 7,063,748 shares of Common Stock. Excludes (i) 15,051,741 shares of Common Stock that are reserved for future issuance under our 2013 Stock Incentive Plan (the "**2013 Plan**"), of which 12,772,964 shares are subject to outstanding option awards granted under the 2013 Plan at exercise prices ranging from $0.17 to $0.43 per share and with a weighted average exercise price of $0.32 per share; (ii) 145,985 shares of Common Stock issuable upon the exercise of outstanding warrants issued in connection with the MLSC Loan (as later

defined), with an exercise price of $0.274 per share (the "**MLSC Warrant**"), none of which are being registered pursuant to the 2016 Registration Statement of which this prospectus forms a part; (iii) 3,575,000 shares of Common Stock issuable upon the exercise of the Series A Warrants, none of which are being registered pursuant to the 2016 Registration Statement of which this prospectus forms a part; and (iv) 11,200,163 shares of Common Stock issuable upon the exercise of the Series D Warrants, none of which are being registered pursuant to the 2016 Registration Statement of which this prospectus forms a part.

RISK FACTORS

Investment in our Common Stock involves a high degree of risk. You should carefully consider the following risk factors before making an investment decision. If any of the following risks and uncertainties actually occurs, our business, financial condition, and results of operations could be negatively impacted and you could lose all or part of your investment.

Risks Related to our Business

There is substantial doubt about our ability to continue as a going concern.

We are a development stage company with no commercial products. Our primary product candidate is in the process of being developed, and will require significant additional clinical development and investment before it could potentially be commercialized. As a result, we have not generated any revenue from operations since inception, and we have incurred substantial net losses to date. Moreover, our cash position is vastly inadequate to support our business plans and substantial additional funding will be needed in order to pursue those plans, which include research and development of our primary product candidate, seeking regulatory approval for that product candidate, and pursuing its commercialization in the U.S., Europe and other markets. Those circumstances raise substantial doubt about our ability to continue as a going concern. In particular and as discussed in greater detail below under the risk factor entitled "***We will need substantial additional funding and may be unable to raise capital when needed, which would force us to delay, reduce or eliminate our product development programs or commercialization efforts and could cause our business to fail***," as of July 13, 2016, we believe that we will need to raise additional cash within the next twelve months.

We have incurred significant losses since inception. We expect to continue to incur losses for the foreseeable future, and we may never generate revenue or achieve or maintain profitability.

As noted above under the risk factor entitled "***There is substantial doubt about our ability to continue as a going concern***," we are a development stage company with no commercial products. Consequently, we have incurred losses in each year since our inception and we expect that losses will continue to be incurred in the foreseeable future in the operation of our business. To date, we have financed our operations entirely through equity and debt investments by founders, other investors and third parties, and we expect to continue to rely on these sources of funding, to the extent available in the foreseeable future. Losses from operations have resulted principally from costs incurred in research and development programs and from general and administrative expenses, including significant costs associated with establishing and maintaining intellectual property rights, significant legal and accounting costs incurred in connection with both the closing of the Merger and complying with public company reporting and control obligations, and personnel expenses. We have devoted much of our operations to date to the research and development of our core technology, including selecting our initial product composition, conducting initial safety and other related tests, generating scale-up, reproducibility and manufacturing and formulation methods, and developing and protecting the intellectual property rights underlying our technology platform.

We expect to continue to incur significant expenses and we anticipate that those expenses and losses may increase in the foreseeable future as we seek to:

- develop our principal product candidate, AC5, and the underlying technology, including advancing applications and conducting preclinical biocompatibility studies;
- raise capital needed to fund our operations;
- build and enhance investor relations and corporate communications capabilities;
- conduct additional clinical trials relating to AC5 and any other product candidate we seek to develop;
- attempt to gain regulatory approvals for product candidates that successfully completes clinical trials;
- build relationships with contract manufacturing partners, and invest in product and process development through such partners;
- maintain, expand and protect our intellectual property portfolio;

- advance additional product candidates and technologies through our research and development pipeline;

- seek to commercialize selected product candidates which may require regulatory approval; and

- hire additional regulatory, clinical, quality control, scientific, financial, and management, consultants and advisors.

To become and remain profitable, we must succeed in developing and eventually commercializing product candidates with significant market potential. This will require us to be successful in a number of challenging activities, including successfully completing preclinical testing and clinical trials of product candidates, obtaining regulatory approval for our product candidates and manufacturing, marketing and selling any products for which we may obtain regulatory approval. We are only in the preliminary stages of many of those activities. We may never succeed in those activities and may never generate operating revenues or achieve profitability. Even if we do generate operating revenues sufficient to achieve profitability, we may not be able to sustain or increase profitability. Our failure to generate operating revenues or become and remain profitable would impair our ability to raise capital, expand our business or continue our operations, all of which would depress the price of our Common Stock. A further decline or lack of increase in the prices of our Common Stock could cause our stockholders to lose all or a part of their investment in the Company.

We will need substantial additional funding and may be unable to raise capital when needed, which would force us to delay, reduce or eliminate our product development programs or commercialization efforts and could cause our business to fail.

Based on our current operating expenses and working capital requirements, as of July 13, 2016, we believe that we will need to raise additional cash within the next twelve months. In addition to the funds raised from our previous equity and convertible debt financings and borrowings under the Life Sciences Accelerator Funding Agreement (the "**MLSC Loan Agreement**") that we entered into with MLSC, we will need to obtain additional cash to continue operations and fund our planned future operations, including the continuation of our ongoing research and development efforts, the licensing or acquisition of new assets, and researching and developing any potential patents, the related compounds and any further intellectual property that we may acquire. In addition, our plans may change and/or we may use our capital resources more rapidly than we currently anticipate. We presently expect that our expenses will increase in connection with our ongoing activities, particularly as we commence preclinical and clinical development for our lead product candidate, AC5. In particular, we currently estimate that in order to support our business operations as well as obtain regulatory approval of AC5 in the U.S. and Europe we will require up to $8,000,000 to $12,000,000 and potentially more in additional capital. Our future capital requirements will depend on many factors, including:

- the scope, progress and results of our research, preclinical, and clinical development activities;
- the scope, progress and results of our research and development collaborations;
- the extent of potential direct or indirect grant funding for our research and development activities;
- the scope, progress, results, costs, timing and outcomes of any regulatory process and clinical trials conducted for any of our product candidates;
- the timing of entering into, and the terms of, any collaboration agreements with third parties relating to any of our product candidates;
- the timing of and the costs involved in obtaining regulatory approvals for our product candidates;
- the costs of operating, expanding and enhancing our operations to support our clinical activities and, if our product candidates are approved, commercialization activities;
-

the costs of maintaining, expanding and protecting our intellectual property portfolio, including potential litigation costs and liabilities;

- the costs associated with maintaining and expanding our product pipeline;

- the costs associated with expanding our geographic focus;

- operating revenues, if any, received from sales of our product candidates, if any are approved by the U.S. Food and Drug Administration ("**FDA**") or other applicable regulatory agencies;

- the cost associated with being a public company, including obligations to regulatory agencies, and increased investor relations and corporate communications expenses; and

- the costs of additional general and administrative personnel, including accounting and finance, legal and human resources employees.

We intend to obtain additional financing for our business through public or private securities offerings, the incurrence of additional indebtedness, or some combination of those sources. We have sought funding through collaborative arrangements, such as the Project Agreement that we entered into with the National University of Ireland Galway ("**NUIG**") on May 28, 2015, and we may continue to seek funding through additional collaborative arrangements with strategic partners if we determine them to be necessary or appropriate, although these arrangements could require us to relinquish rights to our technology or product candidates and could result in our receipt of only a portion of any revenues associated with the partnered product. We cannot provide any assurance that additional financing from these sources will be available on favorable terms, if at all. In addition, we are bound by certain contractual terms and obligations that may limit or otherwise impact our ability to raise additional funding in the near-term including, but not limited to, provisions in the MLSC Loan Agreement (i) restricting our ability to incur certain types of additional indebtedness, and (ii) that would cause all amounts under the MLSC Loan Agreement to become immediately due and payable if we receive net proceeds of $5,000,000 or more in one or more financing transactions in any 12-month period from third parties other than our then-existing shareholders. These restrictions and provisions, which are discussed in greater detail below under the risk factor entitled "***Our current and any future debt facilities or instruments may require us to use our limited capital to repay amounts owed and may impose limitations on our operations, which could negatively affect our business plans***," could make it more challenging for us to raise capital through the incurrence of additional debt or through future equity issuances. Further, if we do raise capital through the sale of equity, or securities convertible into equity, the ownership of our then existing stockholders would be diluted, which dilution could be significant depending on the price at which we may be able to sell our securities. Also, if we raise additional capital through the incurrence of indebtedness, we may become subject to additional covenants restricting our business activities, and the holders of debt instruments may have rights and privileges senior to those of our equity investors. Finally, servicing the interest and principal repayment obligations under our debt facilities could divert funds that would otherwise be available to support research and development, clinical or commercialization activities..

If we are unable to obtain adequate financing on a timely basis or on acceptable terms in the future, we would likely be required to delay, reduce or eliminate one or more of our product development activities, which could cause our business to fail.

The terms of the 2016 Private Placement Financing could impose additional challenges on our ability to raise funding in the future.

The 2016 Subscription Agreements that we entered into in connection with the 2016 Private Placement Financing impose certain restrictions on our ability to issue equity or debt securities, including the following: (i) until the 60-day anniversary of the first date on which all the Registrable Securities (as defined in the 2016 Registration Rights Agreement)(the "**2016 Registrable Securities**") are covered by one or more effective registration statements, we may not offer, sell or issue any securities, except for equity awards granted to our directors, officers, employees and service providers under the 2013 Plan, securities issued upon the conversion, exercise or exchange of our convertible securities outstanding prior to the 2016 Private Placement Financing, and securities issued in connection with certain types of strategic transactions; (ii) until the six-month anniversary of the first date on which all the 2016 Registrable Securities are covered by one or more effective registration statements, the 2016 Investors shall have certain notice and participation rights with respect to offers and sales of securities that we may pursue; and (iii) until the earlier of the nine-month anniversary of the first date on which all the 2016 Registrable Securities are covered by one or more effective registration statements and the date on which the 2016 Investors have sold all such 2016 Registrable Securities, we may not effect or enter into an agreement for a VRT, where a "**VRT**" is a transaction in which we (1) issue convertible securities at (A) a conversion, exercise or exchange rate or other price that is based upon and/or varies with the trading prices of, or quotations for, the shares of our Common Stock at any time after the initial issuance of such convertible securities; or (B) with a conversion, exercise or exchange price that is subject to being reset at some future date after the initial issuance of such convertible securities or upon the occurrence of specified or contingent events directly or indirectly related to our business or the market for the common stock, other than pursuant to a customary "weighted average" anti-dilution provision; or (2) enter into any agreement (including, without limitation, an "equity line of credit" or an "at-the-market offering") whereby we or any subsidiary may sell securities at a future determined price, other than standard and customary "preemptive" or "participation" rights. These provisions could make our securities less attractive to investors and could limit our ability to obtain adequate financing on a timely basis or on acceptable terms in the future, which could have significant harmful effects on our financial condition and business and could include substantial limitations on our ability to continue to conduct operations.

Our current and any future debt facilities or instruments may require us to use our limited capital to repay amounts owed and may impose limitations on our operations, which could negatively affect our business plans.

On September 30, 2013, we entered into the MLSC Loan Agreement with MLSC pursuant to which MLSC has provided us an unsecured subordinated loan in principal amount of $1,000,000 (such loan, the "**MLSC Loan**"). The MLSC Loan bears interest at a rate of 10% per annum, and will become fully due and payable on the earlier of (i) September 30, 2018; (ii) the occurrence of an event of default under the MLSC Loan Agreement; or (iii) the

completion of a sale of substantially all of our assets, a change-of-control transaction or one or more financing transactions in which we receive from third parties other than our then-existing shareholders net proceeds of $5,000,000 or more in a 12-month period. We will need substantial amounts of cash in order to repay the principal and interest owed under MLSC Loan, as it becomes due, which we may not have or be able to obtain. Any failure to make payments as required under the MLSC Loan Agreement would constitute an event of default, and could result in, among other things, MLSC's acceleration of all amounts due thereunder.

Further, the MLSC Loan Agreement restricts our use of the proceeds of the MLSC Loan to funding working capital requirements and/or the purchase of capital assets in the life sciences field, and we are expressly prohibited from using any such proceeds for any severance payment, investment in certain securities or payment for goods or services to a related party of the Company. Additionally, the MLSC Loan Agreement provides that, for so long as any of the MLSC Loan remains outstanding, our headquarters and at least a majority of our employees must be located in Massachusetts and we must not take certain actions without obtaining MLSC's prior consent, including without limitation paying dividends on our capital stock, redeeming any of our outstanding securities, and completing a sale of substantially all of our assets or a change-of-control transaction. Further, our failure to remain a "certified life sciences company" under the Massachusetts General Law would constitute an event of default under the MLSC Loan Agreement. Our ability to pursue our business plans during the term of the MLSC Loan may be severely limited as a result of those restrictions, which could cause our operations and financial condition to suffer.

In addition, the MLSC Loan Agreement restricts our ability, without the prior written consent of MLSC, to incur certain types and amounts of additional indebtedness, including indebtedness senior or, in certain circumstances, equal to the MLSC Loan and any indebtedness to any of our stockholders or employees that is subject to a security interest and not expressly subordinated to the MLSC Loan. Our ability to finance our operations could be limited if, while the MLSC Loan is outstanding, the only source of capital available to us is prohibited by the restrictions set forth in the MLSC Loan Agreement, in which case we may be forced to curtail or eliminate some or all of our operations.

Our short operating history may hinder our ability to successfully meet our objectives.

We are a development stage company subject to the risks, uncertainties and difficulties frequently encountered by early-stage companies in evolving markets. Our operations to date have been primarily limited to organizing and staffing, developing and securing our technology and undertaking or funding preclinical studies of our lead product candidate. We have not demonstrated our ability to successfully complete large-scale, pivotal clinical trials, obtain regulatory approvals, manufacture a commercial scale product or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful product commercialization.

Because of our limited operating history, we have limited insight into trends that may emerge and affect our business, and errors may be made in developing an approach to address those trends and the other challenges faced by development stage companies. Failure to adequately respond to such trends and challenges could cause our business, results of operations and financial condition to suffer or fail. Further, our limited operating history may make it difficult for our stockholders to make any predictions about our likelihood of future success or viability.

If we are not able to attract and retain qualified management and scientific personnel, we may fail to develop our technologies and product candidates.

Our future success depends to a significant degree on the skills, experience and efforts of the principal members of our scientific and management personnel. These members include Terrence Norchi, MD, our President and Chief Executive Officer. The loss of Dr. Norchi or any of our other key personnel could harm our business and might significantly delay or prevent the achievement of research, development or business objectives. Further, our operation as a public company will require that we attract additional personnel to support the establishment of appropriate financial reporting and internal controls systems. Competition for personnel is intense. We may not be able to attract, retain and/or successfully integrate qualified scientific, financial and other management personnel, which could materially harm our business.

If we fail to properly manage any growth we may experience, our business could be adversely affected.

We anticipate increasing the scale of our operations as we seek to develop our product candidates, including hiring and training additional personnel and establishing appropriate systems for a company with larger operations. The management of any growth we may experience will depend, among other things, upon our ability to develop and improve our operational, financial and management controls, reporting systems and procedures. If we are unable to manage any growth effectively, our operations and financial condition could be adversely affected.

We have identified material weaknesses in our internal control over financial reporting, which could, if not remediated, result in material misstatements in our financial results.

Our management is responsible for establishing and maintaining adequate internal control over our financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"). As disclosed in Item 9A of Part II of our Annual Report on Form 10-K and Item 4 of Part I of our Quarterly Reports on Form 10-Q filed with the SEC, management has identified material weaknesses in our disclosure controls and procedures and our internal control over financial reporting as of September 30, 2015. A material weakness in internal control over financial reporting is defined as a deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our consolidated financial statements will not be prevented or detected on a timely basis. As a result of these material weaknesses, our management concluded in our latest annual assessment that our internal control over financial reporting was not effective as of September 30, 2015, based on criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control—Integrated Framework.

We have taken steps to remediate certain material weaknesses we had identified in our internal control over financial reporting. If our remedial measures are insufficient to address the material weaknesses we have identified, or if additional material weaknesses or significant deficiencies in our internal control are discovered or occur in the future, there may be an increased likelihood that our consolidated financial statements contain material misstatements. A restatement of our financial results could result in substantial costs to us for accounting and legal fees and could lead to litigation against us. In addition, even if we are successful in strengthening our controls and procedures, those controls and procedures may not be adequate to prevent or identify irregularities or errors or to facilitate the fair presentation of our consolidated financial statements. If we fail to achieve and maintain the adequacy of our internal controls in accordance with applicable standards, we would be unable to conclude that we have effective internal controls over financial reporting. If we cannot produce reliable financial reports, our business and financial condition could be harmed, investors could lose confidence in our reported financial information, and the market price of our stock could decline significantly. Moreover, our reputation with lenders, investors, securities analysts and others may be adversely affected.

We rely significantly on information technology and any failure, inadequacy, interruption or security lapse of that technology, including any cybersecurity incidents, could harm our ability to operate our business effectively.

We maintain sensitive data pertaining to our Company on our computer networks, including information about our research and development activities, our intellectual property and other proprietary business information. Our internal computer systems and those of third parties with which we contract may be vulnerable to damage from cyber-attacks, computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures, despite the implementation of security measures. System failures, accidents or security breaches could cause interruptions to our operations, including material disruption of our research and development activities, result in significant data losses or theft of our intellectual property or proprietary business information, and could require substantial expenditures to remedy. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data or applications or inappropriate disclosure of confidential or proprietary information, we could incur liability and our research and development programs could be delayed, any of which would harm our business and operations.

Risks Related to the Development and Commercialization of our Product Candidates

Our business plan is dependent on the success of our initial product candidate, AC5.

Our business is currently focused almost entirely on the development and commercialization of one product candidate, AC5. Our reliance on one primary product candidate means that, if we are not able to obtain regulatory approvals and market acceptance of that product, our chances for success will be significantly reduced. We are also less likely to withstand competitive pressures if any of our competitors develops and obtains regulatory approval or certification for a similar product faster than we can or that is otherwise more attractive to the market than AC5. Our current

dependence on one product candidate increases the risk that our business will fail if our development efforts for that product candidate experience delays or other obstacles or are otherwise not successful.

The Chemistry, Manufacturing and Control ("CMC") process may be challenging.

Because of the complexity of our lead product candidate, the CMC process, including product scale-up activities, may be difficult to complete successfully within the parameters required by the FDA or its foreign counterparts. Peptide formulation optimization is particularly challenging, and any delays could negatively impact our ability to conduct clinical trials and our subsequent commercialization timeline. Furthermore, we have, and the third parties with whom we may establish relationships may also have, limited experience with attempting to commercialize a self-assembling peptide as a medical device, which increases the risks associated with completing the CMC process successfully, on time, or within the projected budget. Failure to complete the CMC process successfully would impact our ability to start a clinical trial and could severely limit the long-term viability of our business.

Our principal product candidate is inherently risky because it is based on novel technologies.

We are subject to the risks of failure inherent in the development of products based on new technologies. The novel nature of AC5 creates significant challenges with respect to product development and optimization, engineering, manufacturing, scale-up, quality systems, pre-clinical in vitro and in vivo testing, government regulation and approval, third-party reimbursement and market acceptance. Our failure to overcome any one of those challenges could harm our operations, ability to complete a clinical trial, and overall chances for success.

The manufacturing, production, and sterilization methods that we intend to be utilized are detailed and complex and are a difficult process to manage.

We intend to utilize third party manufacturers to manufacture and sterilize our products. We believe that our proposed manufacturing methods make our choice of manufacturer and sterilizer critical, as they must possess sufficient expertise in synthetic organic chemistry and device manufacturing. If such manufacturers are unable to properly manufacture to product specifications or sterilize our products adequately, that could severely limit our ability to market our products.

Compliance with governmental regulations regarding the treatment of animals used in research could increase our operating costs, which would adversely affect the commercialization of our technology.

The Animal Welfare Act ("**AWA**") is the federal law that covers the treatment of certain animals used in research. Currently, the AWA imposes a wide variety of specific regulations that govern the humane handling, care, treatment and transportation of certain animals by producers and users of research animals, most notably relating to personnel, facilities, sanitation, cage size, and feeding, watering and shipping conditions. Third parties with whom we contract are subject to registration, inspections and reporting requirements under the AWA. Furthermore, some states have their own regulations, including general anti-cruelty legislation, which establish certain standards in handling animals. Comparable rules, regulations, and or obligations exist in many foreign jurisdictions. If our contractors or we fail to comply with regulations concerning the treatment of animals used in research, we may be subject to fines and penalties and adverse publicity, and our operations could be adversely affected.

If the FDA or similar foreign agencies or intermediaries impose requirements or an alternative product classification more onerous than we anticipate, our business could be adversely affected.

The development plan for our lead product candidate is based on our anticipation of pursuing the medical device regulatory pathway, and in February 2015 we received confirmation from The British Standards Institution ("**BSI**"), a Notified Body (which is a private commercial entity designated by the national government of an European Union ("**EU**") member state as being competent to make independent judgments about whether a medical device complies with applicable regulatory requirements) in the EU, that AC5 fulfills the definition of a medical device within the EU and will be classified as such in consideration for CE mark designation. However, the FDA and other applicable foreign agencies, including European Competent Authorities, will have authority to finally determine the regulatory route for our product candidates in their jurisdictions. If the FDA or similar foreign agencies or intermediaries deem our product to be a member of a category other than a medical device, such as a drug or biologic, or impose additional requirements on our pre-clinical and clinical development than we presently anticipate, financing needs would increase, the timeline for product approval would lengthen, the program complexity and resource requirements world increase, and the probability of successfully commercializing a product would decrease. Any or all of those

circumstances would materially adversely affect our business.

If we are not able to secure and maintain relationships with third parties that are capable of conducting clinical trials on our product candidates and support our regulatory submissions, our product development efforts, and subsequent regulatory approvals could be adversely impacted.

Our management has limited experience in conducting preclinical development activities and clinical trials. As a result, we have relied and will need to continue to rely on third party research institutions, organizations and clinical investigators to conduct our preclinical and clinical trials and support our regulatory submissions. If we are unable to reach agreement with qualified research institutions, organizations and clinical investigators on acceptable terms, or if any resulting agreement is terminated prior to the completion of our clinical trials, then our product development efforts could be materially delayed or otherwise harmed. Further, our reliance on third parties to conduct our clinical trials and support our regulatory submissions will provide us with less control over the timing and cost of those trials, the ability to recruit suitable subjects to participate in the trials, and the timing, cost, and probability of success for the regulatory submissions. Moreover, the FDA and other regulatory authorities require that we comply with standards, commonly referred to as good clinical practices ("**GCP**"), for conducting, recording and reporting the results of our preclinical development activities and our clinical trials, to assure that data and reported results are credible and accurate and that the rights, safety and confidentiality of trial participants are protected. Additionally, both we and any third party contractor performing preclinical and clinical studies are subject to regulations governing the treatment of human and animal subjects in performing those studies. Our reliance on third parties that we do not control does not relieve us of those responsibilities and requirements. If those third parties do not successfully carry out their contractual duties, meet expected deadlines or conduct our preclinical development activities or clinical trials in accordance with regulatory requirements or stated protocols, we may not be able to obtain, or may be delayed in obtaining, regulatory approvals for our product candidates and will not be able to, or may be delayed in our efforts to, successfully commercialize our product candidates. Any of those circumstances would materially harm our business and prospects.

Any clinical trials that are planned or are conducted on our product candidates may not start or may fail.

Clinical trials are lengthy, complex and extremely expensive processes with uncertain expenditures and results and frequent failures. While the Company has completed patient enrollment and treatment in its first clinical trial in Western Europe, clinical trials that are planned or which have or shall commence for any of our product candidates could be delayed or fail for a number of reasons, including if:

- the FDA or other regulatory authorities, or other relevant decision making bodies do not grant permission to proceed or place a trial on clinical hold due to safety concerns or other reasons;
- sufficient suitable subjects do not enroll, enroll more slowly than anticipated or remain in our trials;
- we fail to produce necessary amounts of product candidate;
- subjects experience an unacceptable rate of efficacy of the product candidate;
- subjects experience an unacceptable rate or severity of adverse side effects, demonstrating a lack of safety of the product candidate;
- any portion of the trial or related studies produces negative or inconclusive results or other adverse events;
- reports from preclinical or clinical testing on similar technologies and products raise safety and/or efficacy concerns;
- third-party clinical investigators lose their licenses or permits necessary to perform our clinical trials, do not perform their clinical trials on the anticipated schedule or consistent with the clinical trial protocol, GCP or regulatory requirements, or other third parties do not perform data collection and analysis in a timely or accurate manner;
- inspections of clinical trial sites by the FDA or an institutional review board ("**IRB**") or other applicable regulatory authorities find violations that require us to undertake corrective action, suspend or terminate one or more testing sites, or prohibit us from using some or all of the resulting data in support of our marketing applications with the FDA or other applicable agencies;
- manufacturing facilities of our third party manufacturers are ordered by the FDA or other government or regulatory authorities to temporarily or permanently shut down due to violations of current good manufacturing practices

("**cGMP**") or other applicable requirements;

- third-party contractors become debarred or suspended or otherwise penalized by the FDA or other government or regulatory authorities for violations of regulatory requirements;

- the FDA or other regulatory authorities impose requirements on the design, structure or other features of the clinical trials for our product candidates that we and/or our third party contractors are unable to satisfy;

- one or more IRBs refuses to approve, suspends or terminates a trial at an investigational site, precludes enrollment of additional subjects, or withdraws its approval of the trial;

- the FDA or other regulatory authorities seek the advice of an advisory committee of physician and patient representatives that may view the risks of our product candidates as outweighing the benefits;

- the FDA or other regulatory authorities require us to expand the size and scope of the clinical trials, which we may not be able to do; or

- the FDA or other regulatory authorities impose prohibitive post-marketing restrictions on any of our product candidates that attain regulatory approval.

Any delay or failure of one or more of our clinical trials may occur at any stage of testing. Any such delay could cause our development costs to materially increase, and any such failure could significantly impair our business plans, which would materially harm our financial condition and operations.

We cannot market and sell any product candidate in the U.S. or in any other country or region if we fail to obtain the necessary regulatory approvals or certifications from applicable government agencies.

We cannot sell our product candidates in any country until regulatory agencies grant marketing approval or other required certifications. The process of obtaining such approval is lengthy, expensive and uncertain. If we are able to obtain such approvals for our lead product candidate or any other product candidate we may pursue, which we may never be able to do, it would likely be a process that takes many years to achieve.

To obtain marketing approvals in the U.S. for our product candidates, we believe that we must, among other requirements, complete carefully controlled and well-designed clinical trials sufficient to demonstrate to the FDA that the product candidate is safe and effective for each indication for which we seek approval. As described above, many factors could cause those trials to be delayed or to fail.

We believe that the pathway to marketing approval in the U.S. for our lead product candidate will likely require the process of FDA Premarket Approval ("**PMA**") for the product, which is based on novel technologies and likely will be classified as a Class III medical device. This approval pathway can be lengthy and expensive, and is estimated to take from one to three years or longer from the time the PMA application is submitted to the FDA until approval is obtained, if approval can be obtained at all.

Similarly, to obtain approval to market our product candidates outside of the U.S., we will need to submit clinical data concerning our product candidates to and receive marketing approval or other required certifications from governmental or other agencies in those countries, which in certain countries includes approval of the price we intend to charge for a product. For instance, in order to obtain the certification needed to market our lead product candidate in the EU, we believe that we will need to obtain a CE mark for the product, which entails scrutiny by applicable regulatory agencies and bears some similarity to the PMA process, including completion of one or more successful clinical trials.

We may encounter delays or rejections if changes occur in regulatory agency policies, if difficulties arise within regulatory or related agencies such as, for instance, any delays in their review time, or if reports from preclinical and clinical testing on similar technology or products raise safety and/or efficacy concerns during the period in which we develop a product candidate or during the period required for review of any application for marketing approval or certification.

Any difficulties we encounter during the approval or certification process for any of our product candidates would have a substantial adverse impact on our operations and financial condition and could cause our business to fail.

We cannot guarantee that we will be able to effectively market our product candidates.

A significant part of our success depends on the various marketing strategies we plan to implement. Our business model has historically focused solely on product development, and we have never attempted to commercialize any product. There can be no assurance as to the success of any such marketing strategy that we develop or that we will be able to build a successful sales and marketing organization. If we cannot effectively market those products we seek to commercialize directly, such products' prospects will be harmed.

Any product for which we obtain required regulatory approvals could be subject to post-approval regulation, and we may be subject to penalties if we fail to comply with such post-approval requirements.

Any product for which we are able to obtain marketing approval or other required certifications, and for which we are able to obtain approval of the manufacturing processes, post-approval clinical data, labeling, advertising and promotional activities for such product, will be subject to continual requirements of and review by the FDA and comparable foreign regulatory authorities, including through periodic inspections. These requirements include, without limitation, submissions of safety and other post-marketing information and reports, registration requirements, cGMP requirements relating to quality control, quality assurance and corresponding maintenance of records and documents. Maintaining compliance with any such regulations that may be applicable to us or our product candidates in the future would require significant time, attention and expense. Even if marketing approval of a product is granted, the approval may be subject to limitations on the indicated uses for which the product may be marketed or other conditions of approval, or may contain requirements for costly and time consuming post-marketing approval testing and surveillance to monitor the safety or efficacy of the product. Discovery after approval of previously unknown problems with any approved product candidate or related manufacturing processes, or failure to comply with regulatory requirements, may result in consequences to us such as:

- restrictions on the marketing or distribution of a product, including refusals to permit the import or export of the product;
- the requirement to include warning labels on the products;
- withdrawal or recall of the products from the market;
- refusal by the FDA or other regulatory agencies to approve pending applications or supplements to approved applications that we may submit;

- suspension of any ongoing clinical trials;
- fines, restitution or disgorgement of profits or revenue;
- suspension or withdrawal of marketing approvals or certifications; or
- civil or criminal penalties.

If any of our product candidates achieves required regulatory marketing approvals or certifications in the future, the subsequent occurrence of any such post-approval consequences would materially adversely affect our business and operations.

Current or future legislation may make it more difficult and costly for us to obtain marketing approval or other certifications of our product candidates.

In 2007, the Food and Drug Administration Amendments Act of 2007 (the "**FDAAA**") was adopted. This legislation grants significant powers to the FDA, many of which are aimed at assuring the safety of medical products after approval. For example, the FDAAA grants the FDA authority to impose post-approval clinical study requirements, require safety-related changes to product labeling and require the adoption of complex risk management plans. Pursuant to the FDAAA, the FDA may require that a new product be used only by physicians with specialized training, only in specified health care settings, or only in conjunction with special patient testing and monitoring. The legislation also includes requirements for disclosing clinical study results to the public through a clinical study registry, and renewed requirements for conducting clinical studies to generate information on the use of products in pediatric patients. Under the FDAAA, companies that violate these laws are subject to substantial civil monetary penalties. The requirements and changes imposed by the FDAAA, or any other new legislation, regulations or policies that grant the FDA or other regulatory agencies additional authority that further complicates the process for obtaining marketing approval and/or further restricts or regulates post-marketing approval activities, could make it more difficult and more costly for us to obtain and maintain approval of any of our product candidates.

Public perception of ethical and social issues may limit or discourage the type of research we conduct.

Our clinical trials will involve human subjects, and third parties with whom we contract also conduct research involving animal subjects. Governmental authorities could, for public health or other purposes, limit the use of human or animal research or prohibit the practice of our technology. Further, ethical and other concerns about our or our third party contractors' methods, particularly the use of human subjects in clinical trials or the use of animal testing, could

delay our research and preclinical and clinical trials, which would adversely affect our business and financial condition.

Use of third parties to manufacture our product candidates may increase the risk that preclinical development, clinical development and potential commercialization of our product candidates could be delayed, prevented or impaired.

We have limited personnel with experience in medical device development and manufacturing, do not own or operate manufacturing facilities, and generally lack the resources and the capabilities to manufacture any of our product candidates on a clinical or commercial scale. We currently intend to outsource all or most of the clinical and commercial manufacturing and packaging of our product candidates to third parties. However, we have not established long-term agreements with any third party manufacturers for the supply of any of our product candidates. There are a limited number of manufacturers that operate under cGMP regulations and that are capable of and willing to manufacture our lead product candidate utilizing the manufacturing methods that are required to produce that product candidate, and our product candidates will compete with other product candidates for access to qualified manufacturing facilities. If we have difficulty locating third party manufacturers to develop our product candidates for preclinical and clinical work, then our product development programs will experience delays and otherwise suffer. We may also be unable to enter into agreements for the commercial supply of products with third party manufacturers in the future, or may be unable to do so when needed or on acceptable terms. Any such events could materially harm our business.

Reliance on third party manufacturers entails risks to our business, including without limitation:

- the failure of the third party to maintain regulatory compliance, quality assurance, and general expertise in advanced manufacturing techniques and processes that may be necessary for the manufacture of our product candidates;
- limitations on supply availability resulting from capacity and scheduling constraints of the third parties;

- failure of the third party manufacturers to meet the demand for the product candidate, either from future customers or for preclinical or clinical trial needs;
- the possible breach of the manufacturing agreement by the third party; and
- the possible termination or non-renewal of the agreement by the third party at a time that is costly or inconvenient for us.

The failure of any of our contract manufacturers to maintain high manufacturing standards could result in harm to clinical trial participants or patients using the products. Such failure could also result in product liability claims, product recalls, product seizures or withdrawals, delays or failures in testing or delivery, cost overruns or other problems that could seriously harm our business or profitability. Further, our contract manufacturers will be required to adhere to FDA and other applicable regulations relating to manufacturing practices. Those regulations cover all aspects of the manufacturing, testing, quality control and recordkeeping relating to our product candidates and any products that we may commercialize in the future. The failure of our third party manufacturers to comply with applicable regulations could result in sanctions being imposed on us, including fines, injunctions, civil penalties, failure of regulatory authorities to grant marketing approval or other required certifications of our product candidates, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of product candidates, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect our business, financial condition and operations.

Materials necessary to manufacture our product candidates may not be available on commercially reasonable terms, or at all, which may delay or otherwise hinder the development and commercialization of those product candidates.

We will rely on the manufacturers of our product candidates to purchase from third party suppliers the materials necessary to produce the compounds for preclinical and clinical studies, and may continue to rely on those suppliers for commercial distribution if we obtain marketing approval or other required certifications for any of our product candidates. The materials to produce our products may not be available when needed or on commercially reasonable terms, and the prices for such materials may be susceptible to fluctuations. We do not have any control over the process or timing of the acquisition of these materials by our manufacturers. Moreover, we currently do not have any agreements relating to the commercial production of any of these materials. If these materials cannot be obtained for our preclinical and clinical studies, product testing and potential regulatory approval of our product candidates would be delayed, which would significantly impact our ability to develop our product candidates and materially adversely affect our ability to meet our objectives and obtain operations success.

We may not be successful in maintaining or establishing collaborations, which could adversely affect our ability to develop and, if required regulatory approvals are obtained, commercialize our product candidates.

As demonstrated by the Project Agreement that we entered into with NUIG on May 28, 2015, we intend to collaborate with physicians, patient advocacy groups, foundations, government agencies, and/or other third parties to assist with the development of our product candidates. If required regulatory approvals are obtained for any of our product candidates, then we may consider entering into additional collaboration arrangements with medical technology, pharmaceutical or biotechnology companies and/or seek to establish strategic relationships with marketing partners for the development, sale, marketing and/or distribution of our products within or outside of the U.S. If we elect to expand our current relationship with NUIG and/or seek additional collaborators in the future but are unable to reach agreements with NUIG and/or such other collaborators, as applicable, then we may fail to meet our business objectives for the affected product or program. Moreover, collaboration arrangements are complex and time consuming to negotiate, document and implement, and we may not be successful in our efforts, if any, to establish and implement additional collaborations or other alternative arrangements. The terms of any collaboration or other arrangements that we establish may not be favorable to us, and the success of any such collaboration will depend heavily on the efforts and activities of our collaborators. Any failure to engage successful collaborators could cause delays in our product development and/or commercialization efforts, which could harm our financial condition and operational results.

We compete with other pharmaceutical and medical device companies, including companies that may develop products that make our product candidates less attractive or obsolete.

The medical device, pharmaceutical and biotechnology industries are highly competitive. If our product candidates become available for commercial sale, we will compete in that competitive marketplace. There are several products on the market or in development that could be competitors with our lead product candidate. Further, most of our competitors have greater resources or capabilities and greater experience in the development, approval and commercialization of medical devices or other products than we do. We may not be able to compete successfully against them. We also compete for funding with other companies in our industry that are focused on discovering and developing novel improvements in surgical bleeding prevention.

We anticipate that competition in our industry will increase. In addition, the healthcare industry is characterized by rapid technological change, resulting in new product introductions and other technological advancements. Our competitors may develop and market products that render our lead product candidate or any future product candidate we may seek to develop non-competitive or otherwise obsolete. Any such circumstances could cause our operations to suffer.

If we fail to generate market acceptance of our product candidates and establish programs to educate and train surgeons as to the distinctive characteristics of our product candidates, we will not be able to generate revenues on our product candidates.

Acceptance in the marketplace of our lead product candidate depends in part on our and our third party contractors' ability to establish programs for the training of surgeons in the proper usage of that product candidate, which will require significant expenditure of resources. Convincing surgeons to dedicate the time and energy necessary to properly train to use new products and techniques is challenging, and we may not be successful in those efforts. If surgeons are not properly trained, they may ineffectively use our product candidates. Such misuse could result in unsatisfactory patient outcomes, patient injury, negative publicity or lawsuits against us. Accordingly, even if our product candidates are superior to alternative treatments, our success will depend on our ability to gain and maintain market acceptance for those product candidates among certain select groups of the population and develop programs to effectively train them to use those products. If we fail to do so, we will not be able to generate revenue from product sales and our business, financial condition and results of operations will be adversely affected.

We face uncertainty related to pricing, reimbursement and healthcare reform, which could reduce our potential revenues.

If our product candidates are approved for commercialization, any sales will depend in part on the availability of coverage and reimbursement from third-party payers such as government insurance programs, including Medicare and Medicaid, private health insurers, health maintenance organizations and other healthcare related organizations. If our product candidates obtain marketing approval, pricing and reimbursement may be uncertain. Both the federal and state governments in the U.S. and foreign governments continue to propose and pass new legislation affecting coverage and reimbursement policies, which are designed to contain or reduce the cost of healthcare. Further, federal, state and foreign healthcare proposals and reforms could limit the prices that can be charged for the product candidates that we may develop, which may limit our commercial opportunity. Adoption of our product candidates by the medical community may be limited if doctors and hospitals do not receive adequate partial or full reimbursement for use of our products, if any are commercialized. In some foreign jurisdictions, marketing approval or allowance could be dependent upon pre-marketing price negotiations. As a result, any denial of private or government payer coverage or inadequate reimbursement for procedures performed using our products, before or upon commercialization, could harm our business and reduce our prospects for generating revenue.

In addition, the U.S. Congress recently adopted legislation regarding health insurance. As a result of this new legislation, substantial changes could be made to the current system for paying for healthcare in the U.S., including modifications to the existing system of private payers and government programs, such as Medicare, Medicaid and State Children's Health Insurance Program, creation of a government-sponsored healthcare insurance source, or some combination of those, as well as other changes. Restructuring the coverage of medical care in the U.S. could impact reimbursement for medical devices such as our product candidates. If reimbursement for our approved product candidates, if any, is substantially less than we expect, or rebate obligations associated with them are substantially increased, our business could be materially and adversely impacted.

The use of our product candidates in human subjects may expose us to product liability claims, and we may not be able to obtain adequate insurance or otherwise defend against any such claims.

We face an inherent risk of product liability claims and currently have clinical trial liability coverage. We will need to obtain additional product liability insurance coverage if and when we begin commercialization of any of our product candidates. If claims against us exceed any applicable insurance coverage we may obtain, then our business could be adversely impacted. Regardless of whether we would be ultimately successful in any product liability litigation, such litigation could consume substantial amounts of our financial and managerial resources, which could significantly harm our business.

Risks Related to our Intellectual Property

If we are unable to obtain and maintain protection for our intellectual property rights, the value of our technology and products will be adversely affected

Our success will depend in large part on our ability to obtain and maintain protection in the U.S. and other countries for the intellectual property rights covering or incorporated into our technology and products. The ability to obtain patents covering technology in the field of medical devices generally is highly uncertain and involves complex legal, technical, scientific and factual questions. We may not be able to obtain and maintain patent protection relating to our technology or products. Even if issued, patents issued or licensed to us may be challenged, narrowed, invalidated, held to be unenforceable or circumvented, or determined not to cover our product candidates or our competitors' products, which could limit our ability to stop competitors from marketing identical or similar products. One of our licensed MIT European patents was recently opposed , however this patent was maintained in amended form following an administrative hearing. Further, we cannot be certain that we were the first to make the inventions claimed in the patents we own or license, or that protection of the inventions set forth in those patents was the first to be filed in the U.S. Third parties that have filed patents or patent applications covering similar technologies or processes may challenge our claim of sole right to use the intellectual property covered by the patents we own or exclusively license. Moreover, changes in applicable intellectual property laws or interpretations thereof in the U.S. and other countries may diminish the value of our intellectual property rights or narrow the scope of our patent protection. Any failure to obtain or maintain adequate protection for our intellectual property would materially harm our business, product development programs and prospects.

In addition, our proprietary information, trade secrets and know-how are important components of our intellectual property rights. We seek to protect our proprietary information, trade secrets, know-how and confidential information, in part, with confidentiality agreements with our employees, corporate partners, outside scientific collaborators, sponsored researchers, consultants and other advisors. We also have invention or patent assignment agreements with our employees and certain consultants and advisors. If our employees or consultants breach those agreements, we may not have adequate remedies for any of those breaches. In addition, our proprietary information, trade secrets and know-how may otherwise become known to or be independently developed by others. Enforcing a claim that a party illegally obtained and is using our proprietary information, trade secrets and know-how is difficult, expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the U.S. may be less willing to protect trade secrets. Costly and time consuming litigation could be necessary to seek to enforce and determine the scope of our intellectual property rights, and failure to obtain or maintain protection thereof could adversely affect our competitive business position and results of operations.

We do not have exclusive rights to certain intellectual property as our patent portfolio includes certain patents that are jointly owned with our collaborators and others that have been in-licensed on a non-exclusive basis.

As of June 15, 2016, we either own or license from others a number of U.S. patents, U.S. patent applications and international (PCT) patent applications with certain of our collaborators. The rights of our collaborators to these patents, patent applications and other compounds under the collaborations may in the future restrict our ability to further develop or generate revenues from those compounds except through the collaborations.

Our patent portfolio includes a total of 22 patents and applications assigned to Arch Biosurgery, Inc. This portfolio covers self-assembling peptides and methods of use thereof, and includes four patents that have been either allowed, issued or granted, and eighteen pending applications in nine jurisdictions.

We have also entered into a license agreement with Massachusetts Institute of Technology (“MIT”) and Versitech Limited pursuant to which we have been granted exclusive rights under one portfolio of patents and non-exclusive rights under another portfolio of patents. The portfolio exclusively licensed from MIT and Versitech Limited includes thirteen patents that have been either allowed, issued or granted and nine applications that are pending in a total of nine jurisdictions.

The portfolio non-exclusively licensed from MIT includes a number of PCT applications which have now entered the national and regional phases outside of the US, including nine patents that have been either allowed, issued or granted in three jurisdictions that expire between 2016 and 2027 (absent patent term extension), and two pending patent applications in two jurisdictions.

If we lose certain intellectual property rights owned by third parties and licensed to us, our business could be materially harmed.

We have entered into certain in-license agreements with MIT and with certain other third parties, and may seek to enter into additional in-license agreements relating to other intellectual property rights in the future. To the extent we and our product candidates rely heavily on any such in-licensed intellectual property, we are subject to our and the counterparty's compliance with the terms of such agreements in order to maintain those rights. Presently, we, our lead product candidate and our business plans are dependent on the patent and other intellectual property rights that are licensed to us under our license agreement with MIT. Although that agreement has a durational term through the life of the licensed patents, it also imposes certain diligence, capital raising, and other obligations on us, our breach of which could permit MIT to terminate the agreement. Further, we are responsible for all patent prosecution and maintenance fees under that agreement, and a failure to pay such fees on a timely basis could also entitle MIT to terminate the agreement. Any failure by us to satisfy our obligations under our license agreement with MIT or any other dispute or other issue relating to that agreement could cause us to lose some or all of our rights to use certain intellectual property that is material to our business and our lead product candidate, which would materially harm our product development efforts and could cause our business to fail.

If we infringe or are alleged to infringe the intellectual property rights of third parties, our business and financial condition could suffer.

Our research, development and commercialization activities, as well as any product candidates or products resulting from those activities, may infringe or be accused of infringing a patent or other intellectual property under which we do not hold a license or other rights. Third parties may own or control those patents or other rights in the U.S. or abroad, and could bring claims against us that would cause us to incur substantial time, expense, and diversion of management attention. If a patent or other intellectual property infringement suit were brought against us, we could be forced to stop or delay research, development, manufacturing or sales, if any, of the applicable product or product candidate that is the subject of the suit. In order to avoid or settle potential claims with respect to any of the patent or other intellectual property rights of third parties, we may choose or be required to seek a license from a third party and be required to pay license fees or royalties or both. Any such license may not be available on acceptable terms, or at all. Even if we or our future collaborators were able to obtain a license, the rights granted to us or them could be non-exclusive, which could result in our competitors gaining access to the same intellectual property rights and materially negatively affecting the commercialization potential of our planned products. Ultimately, we could be prevented from commercializing one or more product candidates, or be forced to cease some aspects of our business operations, if, as a result of actual or threatened infringement claims, we are unable to enter into licenses on acceptable terms or at all or otherwise settle such claims. Further, if any such claims were successful against us, we could be forced to pay substantial damages. Any of those results could significantly harm our business, prospects and operations.

Risks Related to Ownership of our Common Stock

There is not now, and there may not ever be, an active market for our Common Stock, which trades in the over-the-counter market in low volumes and at volatile prices.

There currently is a limited market for our Common Stock. Although our Common Stock is quoted on the OTCQB, an over-the-counter quotation system, trading of our Common Stock is extremely limited and sporadic and generally at very low volumes. Further, the price at which our Common Stock may trade is volatile and we expect that it will continue to fluctuate significantly in response to various factors, many of which are beyond our control. The stock market in general, and securities of small-cap companies driven by novel technologies in particular, has experienced extreme price and volume fluctuations in recent years. Continued market fluctuations could result in further volatility in the price at which our Common Stock may trade, which could cause its value to decline. To the extent we seek to raise capital in the future through the issuance of equity, those efforts could be limited or hindered by low and/or volatile market prices for our Common Stock.

We do not now meet the initial listing standards of the Nasdaq Stock Market or any other national securities exchange. We presently anticipate that our Common Stock will continue to be quoted on the OTCQB or another over-the-counter quotation system. In those venues, our stockholders may find it difficult to obtain accurate quotations as to the market value of their shares of our Common Stock, and may find few buyers to purchase their stock and few market makers to support its price.

A more active market for our Common Stock may never develop. As a result, investors must bear the economic risk of holding their shares of our Common Stock for an indefinite period of time.

Our Common Stock is a "penny stock."

The SEC has adopted regulations that generally define "penny stock" as an equity security that has a market price of less than $5.00 per share, subject to specific exemptions. The market price of our Common Stock is, and is expected to continue to be in the near term, less than $5.00 per share and is therefore a "penny stock." Brokers and dealers effecting transactions in "penny stock" must disclose certain information concerning the transaction, obtain a written agreement from the purchaser and determine that the purchaser is reasonably suitable to purchase the securities. Those rules may restrict the ability of brokers or dealers to sell our Common Stock and may affect the ability of our stockholders to sell their shares of our Common Stock. In addition, if our Common Stock continues to be quoted on the OTCQB as we expect, then our stockholders may find it difficult to obtain accurate quotations for our stock, and may find few buyers to purchase our stock and few market makers to support its price.

If we issue additional shares in the future, including issuances of shares upon exercise of the Series E Warrants, the Series D Warrants, and the Series A Warrants, our existing stockholders will be diluted.

Our articles of incorporation authorize the issuance of up to 300,000,000 shares of Common Stock. In connection with the 2016 Private Placement Financing that closed on May 26, 2016, we issued an aggregate of 9,418,334 shares of our Common Stock, which equaled approximately 8% of the 118,592,070 shares of our Common Stock that were issued and outstanding immediately prior to the commencement of the 2016 Private Placement Financing. Upon the closing of the 2016 Private Placement Financing, we also issued Series E Warrants to acquire up to an additional 7,063,748 shares of our Common Stock at an initial exercise price of $0.4380 per share.

Similarly, in connection with the 2015 Private Placement Financing that concluded on July 2, 2015, we issued an aggregate of 14,390,754 shares of our Common Stock, which equaled approximately 18% of the 78,766,487 shares of our Common Stock that were issued and outstanding immediately prior to the commencement of the 2015 Private Placement Financing. Upon the closing of the 2015 Private Placement Financing, we also issued Series D Warrants to acquire up to an additional 14,390,754 shares of our Common Stock at an initial exercise price of $0.25 per share. As of July 13, 2016, up to 11,200,163 shares may be acquired upon the exercise of the Series D Warrants.

Upon the closing of the 2014 Private Placement Financing on February 4, 2014, we issued an aggregate of 11,400,000 shares of our Common Stock, which equaled approximately 16% of our currently issued and outstanding Common Stock on the date the 2014 Private Placement Financing closed. Upon the closing of the 2014 Private Placement Financing, we also issued three series of Warrants to acquire up to an additional 34,200,000 shares of our Common Stock at initial exercise prices ranging from $0.30 per share (the Series A Warrants), $0.35 per share (the Series B Warrants), and $0.40 per share (the Series C Warrants). On December 1, 2014, the Company entered into that certain Amendment to Series A Warrants, Series B Warrants and Series C Warrants to Purchase Common Stock, dated as of December 1, 2014, with Cranshire pursuant to which, among other things, the exercise prices of the Series B Warrants

and Series C Warrants were lowered to $0.20 per share. Following the December 1, 2014 amendment, (i) 4,000,000 shares underlying the Series B Warrants were exercised, and the remaining 7,400,000 expired unexercised on January 3, 2015 when the term of the Series B Warrants expired; and (ii) all 11,400,000 shares underlying the Series C Warrants were exercised prior to the expiration of the Series C Warrants at 5:00 p.m., New York time, on July 2, 2016. As a result of the conversion price of our Convertible Notes, the closing of the Notes Offering and the subsequent issuance of the Convertible Notes triggered the Anti-Dilution Provisions of the Series A Warrants, which in turn reduced the exercise price of the Series A Warrants to $0.20 per share and increased the aggregate number of shares issuable under the Series A Warrants by 5,700,000 shares (or fifty-percent (50%)) from 11,400,000 shares to 17,100,000 shares. As of July 13, 2016, up to 3,575,000 shares may be acquired upon the exercise of the Series A Warrants.

Additionally, as of July 13, 2016, 15,051,741 shares of Common Stock were reserved for future issuance under the 2013 Plan, of which 12,772,964 shares are subject to outstanding option awards granted under the 2013 Plan at exercise prices ranging from $0.17 to $0.43 per share and with a weighted average exercise price of $0.32 per share, and the numbers issuable under the 2013 Plan will increase by up to 3 million shares on the first business day of each following fiscal year as set forth in the 2013 Plan. Finally, in addition to the Series E Warrants granted in connection with the 2016 Private Placement Financing, the Series D Warrants granted in connection with the 2015 Private Placement Financing, and the Series A Warrants granted in connection with the 2014 Private Placement Financing, there are currently outstanding warrants to acquire up to 145,985 shares of our Common Stock. Any future grants of options, warrants or other securities exercisable or convertible into our Common Stock, or the exercise or conversion of such shares, and any sales of such shares in the market, could have an adverse effect on the market price of our Common Stock.

In addition to capital raising activities, other possible business and financial uses for our authorized Common Stock include, without limitation, future stock splits, acquiring other companies, businesses or products in exchange for shares of Common Stock, issuing shares of our Common Stock to partners in connection with strategic alliances, attracting and retaining employees by the issuance of additional securities under our various equity compensation plans, compensating consultants by issuing shares or options to purchase shares of our Common Stock, or other transactions and corporate purposes that our Board of Directors deems are in the Company's best interest. By way of example, on August 6, 2015, we issued an aggregate of 600,000 shares of restricted stock in connection with our entrance into separate consulting agreements with two investor relations firms, Excelsior Global Advisors LLC and Acorn Management Partners, LLC, in each case in consideration of the services to be provided under and in accordance with the terms of each consulting agreement. Additionally, shares of Common Stock could be used for anti-takeover purposes or to delay or prevent changes in control or management of the Company. We cannot provide assurances that any issuances of Common Stock will be consummated on favorable terms or at all, that they will enhance stockholder value, or that they will not adversely affect our business or the trading price of our Common Stock. The issuance of any such shares will reduce the book value per share and may contribute to a reduction in the market price of the outstanding shares of our Common Stock. If we issue any such additional shares, such issuance will reduce the proportionate ownership and voting power of all current shareholders. Further, such issuance may result in a change of control of our corporation.

Future sales of our Common Stock or rights to purchase Common Stock, or the perception that such sales could occur, could cause our stock price to fall.

As noted above under the risk factor entitled, "***We will need substantial additional funding and may be unable to raise capital when needed, which would force us to delay, reduce or eliminate our product development programs or commercialization efforts and could cause our business to fail***," as of July 13, 2016, we believe that we will need to raise additional cash to continue operations and fund our planned future operations within the next twelve months. To raise capital, we may sell Common Stock, convertible securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time. Any such sales of our Common Stock by us or resale of our Common Stock by our existing stockholders could cause the market price of our Common Stock to decline.

FINRA sales practice requirements may limit a stockholder's ability to buy and sell our stock.

In addition to the "penny stock" rules described above, FINRA has adopted rules that require that, in recommending an investment to a customer, a broker-dealer must have reasonable grounds for believing that the investment is suitable for that customer. Prior to recommending speculative low priced securities to their non-institutional customers, broker-dealers must make reasonable efforts to obtain information about the customer's financial status, tax status, investment objectives and other information. Under interpretations of these rules, FINRA has indicated its belief that there is a high probability that speculative low priced securities will not be suitable for at least some customers. These FINRA requirements make it more difficult for broker-dealers to recommend that at least some of their customers buy

our Common Stock, which may limit the ability of our stockholders to buy and sell our Common Stock and could have an adverse effect on the market for our shares.

There may be additional risks because we completed a reverse merger transaction in June 2013.

Additional risks may exist because we completed a "reverse merger" transaction in June 2013. Securities analysts of major brokerage firms may not provide coverage of the Company because there may be little incentive to brokerage firms to recommend the purchase of our Common Stock. There may also be increased scrutiny by the SEC and other government agencies and holders of our securities due to the nature of the transaction, as there has been increased focus on transactions such as the Merger in recent years. Further, since the Company existed as a "shell company" under applicable rules of the SEC up until the closing of the Merger on June 26, 2013, there will be certain restrictions and limitations on the Company going forward relating to any potential future issuances of additional securities to raise funding and compliance with applicable SEC rules and regulations.

The Company may have material liabilities that were not discovered before the closing of the Merger.

The Company may have material liabilities that were not discovered before the consummation of the Merger. We could experience losses as a result of any such unasserted liabilities that are eventually found to be incurred, which could materially harm our business and financial condition. Although the Merger Agreement contained customary representations and warranties from the Company concerning its assets, liabilities, financial condition and affairs, there may be limited or no recourse against the Company's prior owners or principals in the event those prove to be untrue. As a result, the stockholders of the Company bear risks relating to any such unknown or unasserted liabilities.

Certain of our directors and officers own a significant percentage of our capital stock and are able to exercise significant influence over the Company.

Certain of our directors and executive officers own a significant percentage of our outstanding capital stock. As of July 13, 2016, Dr. Terrence W. Norchi, our President, Chief Executive Officer and a director, Dr. Avtar Dhillon, the Chairman of our Board of Directors, and James R. Sulat, a director, beneficially own (as determined under Section 13(d) of the Exchange Act and the rules and regulations thereunder) approximately 18.3% of our shares of Common Stock. Accordingly, these members of our Board of Directors and management team have substantial voting power to approve matters requiring stockholder approval, including without limitation the election of directors, and have significant influence over our affairs. This concentration of ownership could have the effect of delaying or preventing a change in control of our Company, even if such a change in control would be beneficial to our stockholders.

The elimination of monetary liability against our directors and officers under Nevada law and the existence of indemnification rights held by our directors, officers and employees may result in substantial expenditures by us and may discourage lawsuits against our directors, officers and employees.

Our articles of incorporation eliminate the personal liability of our directors and officers to our Company and our stockholders for damages for breach of fiduciary duty as a director or officer to the extent permissible under Nevada law. Further, our amended and restated bylaws provide that we are obligated to indemnify any of our directors or officers to the fullest extent authorized by Nevada law and, subject to certain conditions, advance the expenses incurred by any director or officer in defending any action, suit or proceeding prior to its final disposition. Those indemnification obligations could result in our Company incurring substantial expenditures to cover the cost of settlement or damage awards against our directors or officers, which we may be unable to recoup. These provisions and resultant costs may also discourage us from bringing a lawsuit against any of our current or former directors or officers for breaches of their fiduciary duties, and may similarly discourage the filing of derivative litigation by our stockholders against our directors and officers even if such actions, if successful, might otherwise benefit us or our stockholders.

We are subject to the reporting requirements of federal securities laws, compliance with which involves significant time, expense and expertise.

We are a public reporting company in the U.S., and, accordingly, are subject to the information and reporting requirements of the Exchange Act and other federal securities laws, including the obligations imposed by the Sarbanes-Oxley Act. The costs associated with preparing and filing annual, quarterly and current reports, proxy statements and other information with the SEC in the ordinary course, as well as preparing and filing audited financial statements, has caused, and could continue to cause, our operational expenses to remain at higher levels or continue to increase.

Our present management team has limited experience in managing public companies. It will be time consuming, difficult and costly for our management team to acquire additional expertise and experience in operating a public company, and to develop and implement the additional internal controls and reporting procedures required by Sarbanes-Oxley and other applicable securities laws. We will need to hire additional financial reporting, internal controls, accounting and other finance staff as well as additional IT systems in order to develop and implement appropriate internal controls and reporting procedures as required by applicable securities regulations for public companies, which we may not be able to do on a timely basis or at all.

Shares of our Common Stock that have not been registered under federal securities laws are subject to resale restrictions imposed by Rule 144. In addition, any shares of our Common Stock that are held by affiliates, including any that are registered, will be subject to the resale restrictions of Rule 144.

Rule 144 imposes requirements on us and our stockholders that must be met in order to effect a sale thereunder. As a result, it will be more difficult for us to raise funding to support our operations through the sale of debt or equity securities unless we agree to register such securities under the Securities Act, which could cause us to expend significant additional time and cash resources and which we presently have no intention to pursue. Further, it may be more difficult for us to compensate our employees and consultants with our securities instead of cash. We were a shell company prior to the closing of the Merger, and such status could also limit our use of our securities to pay for any acquisitions we may seek to pursue in the future (although none are currently planned), and could cause the value of our securities to decline. In addition, any shares held by affiliates, including shares received in any registered offering, will be subject to certain additional requirements in order to effect a sale of such shares under Rule 144.

We do not intend to pay cash dividends on our capital stock in the foreseeable future.

We have never declared or paid any dividends on our shares and do not anticipate paying any such dividends in the foreseeable future. Any future payment of cash dividends would depend on our financial condition, contractual restrictions, solvency tests imposed by applicable corporate laws, results of operations, anticipated cash requirements and other factors and will be at the discretion of our Board of Directors. In addition, under the terms of the MLSC Loan Agreement, we must obtain MLSC's prior consent before declaring or paying any dividends during the term of the MLSC Loan Agreement. As a result, our stockholders should not expect that we will ever pay cash or other dividends on our outstanding capital stock.

We are at risk of securities class action litigation that could result in substantial costs and divert management's attention and resources.

In the past, securities class action litigation has been brought against companies following periods of volatility of its securities in the marketplace, particularly following a company's initial public offering. Due to the volatility of our stock price, we could be the target of securities litigation in the future. Securities litigation could result in substantial costs and divert management's attention and resources.

FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements that involve risks, uncertainties and assumptions. In some cases, you can identify forward-looking statements by terminology such as "if," "shall," "may," "might," "will likely result," "should "expect," "plan," "anticipate," "believe," "estimate," "project," "intend," "goal," "objective," "predict," "potential" or "continu negative of these terms or other comparable terminology. All statements made in this prospectus other than statements of historical fact are statements that could be deemed forward-looking statements, including without limitation statements about our business plan, our plan of operations and our need to obtain future financing. These statements are only predictions and involve known and unknown risks, uncertainties and other factors, including the risks in the section entitled "**RISK FACTORS**" and the risks set out below, any of which may cause our or our industry's actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. These risks include, by way of example and not in limitation, risks related to:

- Our ability to continue as a going concern;

- Our ability to obtain financing necessary to operate our business;
- Our limited operating history;
- The results of our research and development activities, including uncertainties relating to the preclinical and clinical testing of our product candidates;
- The early stage of our primary product candidate presently under development;
- Our ability to develop, obtain required approvals for and commercialize our product candidates;
- Our ability to recruit and retain qualified personnel;
- Our ability to manage any future growth we may experience;
- Our ability to obtain and maintain protection of our intellectual property;
- Our dependence on third party manufacturers, suppliers, research organizations, academic institutions, testing laboratories and other potential collaborators;
- The size and growth of the potential markets for any of our approved product candidates, and the rate and degree of market acceptance of any of our approved product candidates;
- Our ability to successfully complete potential acquisitions and collaborative arrangements;
- Competition in our industry;
- General economic and business conditions; and
- Other factors discussed under the section entitled "**RISK FACTORS**".

New risks emerge in our rapidly-changing industry from time to time. As a result, it is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business. If any such risks or uncertainties materialize or such assumptions prove incorrect, our results could differ materially from those expressed or implied by such forward-looking statements and assumptions. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity or performance. These forward-looking statements speak only as of the date of this prospectus. Except as required by applicable law,

we do not intend to update any of these forward-looking statements.

SELLING SECURITYHOLDERS

This prospectus covers the resale from time to time by the selling securityholders identified in the table below of up to an aggregate of 16,482,082 shares of our Common Stock that were either previously issued or are issuable upon the exercise of our Series E Warrants. The shares of Common Stock being offered by the selling securityholders were issued in, or issuable upon the exercise of Series E Warrants issued in the 2016 Private Placement Financing, and consist of (i) 9,418,334 previously issued shares of Common Stock; and (ii) 7,063,748 shares of Common Stock that may be issuable upon exercise of our Series E Warrants. For additional information regarding the issuance of the shares of Common Stock and the Series E Warrants, see the description under "**SUMMARY | PRIVATE PLACEMENT OFFERINGS | 2016 Private Placement Financing**" elsewhere in this prospectus.

We are registering the shares of Common Stock hereby pursuant to the terms of the 2016 Registration Rights Agreement among us and the 2016 Investors in order to permit the selling securityholders identified in the table below to offer the shares for resale from time to time. Because the shares of Commons Stock issuable upon the exercise of our Series E Warrants are subject to adjustments if our shares of Common Stock are subdivided or combined (by any stock split, stock dividend, recapitalization, reorganization, scheme, arrangement or otherwise) and our Series E Warrants permit, in certain circumstances, the "cashless" exercise thereof, the number of shares that will actually be issuable upon any exercise thereof may be more or less than the number of shares being offered by this prospectus.

The table below (i) lists the selling securityholders and other information regarding the beneficial ownership (except with respect to Column 2, as determined under Section 13(d) of the Exchange Act and the rules and regulations thereunder) of our Common Stock by each of the selling securityholders (including securities issued in transactions unrelated to the 2016 Private Placement Financing, if any); (ii) has been prepared based upon information furnished to us by the selling securityholders; and, (iii) to our knowledge, is accurate as of the date of this prospectus. The selling securityholders may sell all, some or none of their shares in this offering. See the disclosure under the heading "**PLAN OF DISTRIBUTION**" elsewhere in this prospectus. The selling securityholders identified in the table below may have sold, transferred or otherwise disposed of some or all of their shares since the date of this prospectus in transactions exempt from or not subject to the registration requirements of the Securities Act. Information concerning the selling securityholders may change from time to time and, if necessary, we will amend or supplement this prospectus accordingly and as required.

Column 1 Name of Selling Securityholder	Column 2 Number of Shares of Common Stock Issued and Issuable (1)	Column 3 Number of Shares of Common Stock Beneficially Owned Prior to this Offering (2)	Column 4 Maximum Number of Shares of Common Stock to be Sold Pursuant to this Prospectus	Column 5 Number of Shares of Common Stock Beneficially Owned After This Offering (4)	Column 6 Percentage of Shares of Common Stock Beneficially Owned After This Offering (5)

			(3)			
Anson Investments Master Fund LP (6)	3,062,500	3,062,500	3,062,500	0	0.00	%
Karen Carlin (7)	349,774	349,774	122,500	227,274	0.17	%
P. Timothy Connolly (8)	481,250	481,250	481,250	0	0.00	%
CVI Investments, Inc.(9)	1,750,000	1,750,000	1,750,000	0	0.00	%
Drake Partners Equity LLC (10)	648,990	648,990	194,444	454,546	0.34	%
Empery Asset Master, Ltd (11)	666,050	666,050	666,050	0	0.00	%
Empery Tax Efficient II, LP (11)	618,800	618,800	618,800	0	0.00	%
Empery Tax Efficient, LP (11)	465,150	465,150	465,150	0	0.00	%
Jonathan Galli (12)	1,050,000	1,050,000	350,000	700,000	0.52	%
Vikas Gulati and Mirela Gulati (13)	122,500	122,500	122,500	0	0.00	%
Hudson Bay Master Fund Ltd. (14)	1,137,500	1,137,500	1,137,500	0	0.00	%
Intracoastal Capital, LLC (15)	2,910,099	2,910,099	2,430,554	479,545	0.36	%
Keyes Sulat Revocable Trust (16)	1,376,813	1,376,813	194,444	1,182,369	0.88	%
Lorraine A. Malanga (17)	349,774	349,774	122,500	227,274	0.17	%
James M. McKeone (18)	1,054,926	1,054,926	145,834	909,092	0.68	%
IRA FBO Ana B Parker (19)	3,888,890	2,222,223	3,888,890	0	0.00	%
Dr. Stephanie Plent (20)	989,769	989,769	243,055	746,714	0.56	%
Popham Management, LLC (21)	1,395,203	1,395,203	486,111	909,092	0.68	%
Total	22,317,988	20,651,321	16,482,082	5,835,906	4.36	%

(1) Reflects the total number of shares of Common Stock held or issuable to each selling securityholder including, to the extent applicable, (a) all remaining securities issued in the 2016 Private Placement Financing, in each case without regard to ownership limitations on the exercise of certain of the Series E Warrants as described in footnote (2) below; (b) all remaining securities issued in the 2015 Private Placement Financing, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part and in each case without regard to the ownership limitations on the exercise of certain of the Series D Warrants as described in footnote (2) below; (c) all shares of Common Stock underlying the remaining Series A Warrants issued in the 2014 Private Placement Financing held by such selling securityholder, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part and in each case without regard to ownership limitations on the exercise of the Series A Warrants as described in footnote (2) below; and (d) all other securities issued in transactions unrelated to the 2016 Private Placement Financing, 2015 Private Placement Financing, 2014 Private Placement Financing or Notes Offering (collectively, the "**Private Placement Financings**"), if any, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part and in each case without regard to any ownership limitations upon the exercise or conversion of such securities.

(2) Certain of the Series E and Series D Warrants issued in the 2016 Private Placement Financing and 2015 Private Placement Financing, respectively and all the Series A Warrants issued in the 2014 Private Placement Financing contain ownership limitations to prevent the exercise of such warrants in certain circumstances. In particular, certain of the Series E Warrants provide that they shall not be exercisable in the event and to the extent that the exercise thereof would result in the holder of the Series E Warrant, together with its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder's, would be deemed to beneficially own more than 4.99% of the Common Stock; *provided, however*, the (i) holder, upon notice to us, may increase or decrease this ownership limitation so long as the maximum ownership limitation does not exceed 9.99% of the Company's Common Stock; and (ii) any increase in the ownership limitation will not become effective until the 61st day after delivery of such notice. Similarly, certain of the Series D Warrants and all the Series A Warrants provide that a selling securityholder may not exercise such warrants to the extent (but only to the extent) that the exercise thereof would result in the selling securityholder or any of its affiliates beneficially owning more than 4.9% of our Common Stock after giving effect to such exercise; *provided, however*, that in the case of any Series D Warrant with an ownership limitation, the holder may waive such ownership limitation, in which case such waiver will become effective sixty-one (61) days after the holder's delivery of such wavier notice.

As a result, the number of shares of Common Stock reflected in this column as beneficially owned by each selling securityholder includes, to the extent applicable, (a) the shares of Common Stock that were issued in the 2016 Private Placement Financing held by such selling securityholder and/or issuable upon exercise of the Series E Warrants held by such selling securityholder which, in the case of any Series E Warrant with an ownership limitation that has not been previously waived, is limited to the number of shares of Common Stock that such selling securityholder has the right to acquire without it (along with any of its affiliates or any other persons whose beneficial ownership of Common Stock would be aggregated with the selling securityholder) beneficially owning more than 4.99% (or up to 9.99% at the securityholders' discretion) of our currently outstanding Common Stock, based on 133,380,265 outstanding shares of our Common Stock as of July 13, 2016; (b) the shares of Common Stock that were issued in the Closings conducted for the 2015 Private Placement Financing held by such selling securityholder and/or issuable upon exercise of the Series D Warrants held by such selling securityholder which, in the case of any Series D Warrant with an ownership limitation that has not been previously waived, is limited to the number of shares of Common Stock that such selling securityholder has the right to acquire without it or any of its affiliates beneficially owning more than 4.9% of our currently outstanding Common Stock, based on 133,380,265 outstanding shares of our Common Stock as

of July 13, 2016; (c) the number of shares of Common Stock underlying the Series A Warrants held by such selling securityholder that such selling securityholder has the right to acquire without it or any of its affiliates beneficially owning more than 4.9% of our currently outstanding Common Stock, based on 133,380,265 outstanding shares of our Common Stock as of July 13, 2016; and (d) shares of our Common Stock beneficially owned by such selling securityholder that were acquired in transactions unrelated to the Private Placement Financings.

(3) For each selling securityholder, the totals reported in this column reflect the total number of shares of Common Stock registered for resale under the 2016 Registration Statement of which this prospectus forms a part including (a) the shares of Common Stock held by such selling securityholder that were issued in connection with the 2016 Private Placement Financing and/or, to the extent applicable, acquired upon the exercise of the Series E Warrants; and (b) shares of Common Stock issuable upon exercise of the Series E Warrants held by such selling securityholder, in each case without taking into account the ownership limitations set forth in the Series E Warrants as described in footnote (2).

(4) For each selling securityholder and to the extent applicable, the totals reported in this column reflect the ownership limitations set forth in the Series D and Series A Warrants described in footnote (2), and assume that (a) all of the shares of Common Stock to be registered by the 2016 Registration Statement of which this prospectus forms a part, including the shares of Common Stock held by such selling securityholder that were issued in connection with the closing of the 2016 Private Placement Financing and the shares of Common Stock issuable upon exercise of the Series E Warrants held by such selling securityholder (in each case without taking into account the ownership limitations set forth in certain of the Series E Warrants as described in footnote (2)), are sold in this offering; (b) the selling securityholders do not (i) sell any of the securities that have been issued to them in transactions unrelated to the 2016 Private Placement Financing (including, but not limited to, the 2015 Private Placement Financing and the 2014 Private Placement Financing) and included in Column 2; and (ii) acquire additional shares of our Common Stock after July 13, 2016 and prior to completion of this offering.

(5) Percentage ownership for each selling securityholder is determined in accordance with Section 13(d) of the Exchange Act and is based on 133,380,265 outstanding shares of our Common Stock as of July 13, 2016, and assumes that all shares underlying such selling securityholder's Series E Warrants that are being offered by such selling securityholder by this prospectus have been issued and are outstanding.

(6) M5V Advisors Inc and Frigate Ventures LP ("**M5V**" and "**Frigate**"), the Co- Investment Advisers of Anson Investments Master Fund LP ("**Anson**"), hold voting and dispositive power over the Common Stock held by Anson. Bruce Winson is the managing member of Admiralty Advisors LLC, which is the general partner of Frigate. Moez Kassam and Adam Spears are directors of M5V. Mr. Winson, Mr. Kassam and Mr. Spears each disclaim beneficial ownership of these Common Shares except to the extent of their pecuniary interest therein.

Anson may be deemed to have beneficial ownership (as determined under Section 13(d) of the Exchange Act) of 3,062,500 shares of Common Stock, which consists of the following: (i) 1,750,000 shares of Common Stock issued to Anson in connection with the 2016 Private Placement Financing; and (ii) 1,312,500 shares of Common Stock issuable upon exercise of Series E Warrants issued to Anson in connection with the 2016 Private Placement Financing.

(7)

Ms. Carlin may be deemed to have beneficial ownership of 349,774 shares of Common Stock, which consists of the following: (i) 70,000 shares of Common Stock issued to Ms. Carlin in connection with the 2016 Private Placement Financing; (ii) 52,500 shares of Common Stock issuable upon exercise of Series E Warrants issued to Ms. Carlin in connection with the 2016 Private Placement Financing; (iii) 113,637 shares of Common Stock issued to Ms. Carlin and Ronald Bryan Woodard in connection with the 2015 Private Placement Financing, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part; and (iv) 113,637 shares of Common Stock issuable upon exercise of Series D Warrants issued to Ms. Carlin and Mr. Woodard in connection with the 2015 Private Placement Financing, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part.

(8) Mr. Connolly may be deemed to have beneficial ownership of 481,250 shares of Common Stock, which consists of the following: (i) 275,000 shares of Common Stock issued to Mr. Connolly in connection with the 2016 Private Placement Financing; and (ii) 206,250 shares of Common Stock issuable upon exercise of Series E Warrants issued to Mr. Connolly in connection with the 2016 Private Placement Financing.

(9) Heights Capital Management, Inc., the authorized agent of CVI Investments, Inc. ("**CVI**"), has discretionary authority to vote and dispose of the shares of Common Stock held by CVI and may be deemed to be the beneficial owner of these shares. Martin Kobinger, in his capacity as Investment Manager of Heights Capital Management, lnc., may also be deemed to have investment discretion and voting power over the shares held by CVI. Mr. Kobinger disclaims any such beneficial ownership of the shares.

CVI may be deemed to have beneficial ownership (as determined under Section 13(d) of the Exchange Act) of 1,750,000 shares of Common Stock, which consists of the following: (i) 1,000,000 shares of Common Stock issued to CVI in connection with the 2016 Private Placement Financing; and (ii) 750,000 shares of Common Stock issuable upon exercise of Series E Warrants issued to CVI in connection with the 2016 Private Placement Financing.

(10) As the managing partner of Drake Partners Equity, LLC ("**Drake**"), Laurence M. Hicks has voting and dispositive power over the securities held by Drake, which may be deemed to have beneficial ownership of 648,990 shares of Common Stock, which consists of the following:: (i) 111,111 shares of Common Stock issued to Drake in connection with the 2016 Private Placement Financing; and (ii) 83,333 shares of Common Stock issuable upon exercise of Series E Warrants issued to Drake in connection with the 2016 Private Placement Financing; (iii) 227,273 shares of Common Stock issued to Drake in connection with the 2015 Private Placement Financing, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part; and (iv) 227,273 shares of Common Stock issuable upon exercise of Series D Warrants issued to Drake in connection with the 2015 Private Placement Financing, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part. Mr. Hicks disclaims beneficial ownership of the securities held by Drake that are covered hereunder except to the extent of his pecuniary interest therein.

(11) Empery Asset Management LP, the authorized agent of Empery Asset Master Ltd ("**EAM**"), Empery Tax Efficient, LP ("**ETE"**) and Empery Tax Efficient II, LP ("**ETE II**", and together with EAM and ETE, the "**Empery Funds**"), has discretionary authority to vote and dispose of the shares held by each of the Empery Funds and may be deemed to be the beneficial owner of these shares. Martin Hoe and Ryan Lane, in their capacity as investment managers of Empery Asset Management LP, may also be deemed to have investment discretion and voting power over the shares held by each of the Empery Funds. Each of the Empery Funds, Mr. Hoe and Mr. Lane each disclaim any beneficial ownership of these shares.

EAM may be deemed to have beneficial ownership (as determined under Section 13(d) of the Exchange Act) of (i) 666,050 shares of Common Stock, which consists of the following: (i) 380,600 shares of Common Stock issued to EAM in connection with the 2016 Private Placement Financing; and (ii) 285,450 shares of Common Stock issuable upon exercise of Series E Warrants issued to EAM in connection with the 2016 Private Placement Financing.

ETE may be deemed to have beneficial ownership (as determined under Section 13(d) of the Exchange Act) of (i) 465,150 shares of Common Stock, which consists of the following: (i) 265,800 shares of Common Stock issued to ETE in connection with the 2016 Private Placement Financing; and (ii) 199,350 shares of Common Stock issuable upon exercise of Series E Warrants issued to ETE in connection with the 2016 Private Placement Financing.

ETE II may be deemed to have beneficial ownership (as determined under Section 13(d) of the Exchange Act) of (i) 618,800 shares of Common Stock, which consists of the following: (i) 353,600 shares of Common Stock issued to ETE II in connection with the 2016 Private Placement Financing; and (ii) 265,200 shares of Common Stock issuable upon exercise of Series E Warrants issued to ETE II in connection with the 2016 Private Placement Financing.

(12) Mr. Galli may be deemed to have beneficial ownership of 1,050,000 shares of Common Stock, which consists of the following: (i) 200,000 shares of Common Stock issued to Mr. Galli in connection with the 2016 Private Placement Financing; (ii) 150,000 shares of Common Stock issuable upon exercise of Series E Warrants issued to Mr. Galli in connection with the 2016 Private Placement Financing; (iii) 350,000 shares of Common Stock issued to Mr. Galli in connection with the 2015 Private Placement Financing, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part; and (iv) 350,000 shares of Common Stock issuable upon exercise of Series D Warrants issued to Mr. Galli in connection with the 2015 Private Placement Financing, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part.

(13) Mr. and Ms. Gulati may be deemed to have beneficial ownership of 122,500 shares of Common Stock, which consists of the following: (i) 70,000 shares of Common Stock issued to Mr. and Ms. Gulati in connection with the 2016 Private Placement Financing; and (ii) 52,500 shares of Common Stock issuable upon exercise of Series E Warrants issued to Mr. and Ms. Gulati in connection with the 2016 Private Placement Financing.

(14) Hudson Bay Capital Management LP, the investment manager of Hudson Bay Master Fund Ltd. ("**Hudson Bay**"), has voting and investment power over these securities. Sander Gerber is the managing member of Hudson Bay Capital GP LLC, which is the general partner of Hudson Bay Capital Management LP. Each of Hudson Bay and Sander Gerber disclaims beneficial ownership over these securities.

Hudson Bay may be deemed to have beneficial ownership (as determined under Section 13(d) of the Exchange Act) of 1,137,500 shares of Common Stock, which consists of the following: (i) 650,000 shares of Common Stock issued to Hudson Bay in connection with the 2016 Private Placement Financing; and (ii) 487,500 shares of Common Stock issuable upon exercise of Series E Warrants issued to Hudson Bay in connection with the 2016 Private Placement Financing.

(15) Mitchell P. Kopin ("**Mr. Kopin**") and Daniel B. Asher ("**Mr. Asher**"), each of whom are managers of Intracoastal Capital LLC ("**Intracoastal**"), have shared voting control and investment discretion over the securities reported herein that are held by Intracoastal. As a result, each of Mr. Kopin and Mr. Asher may be deemed to have beneficial ownership (as determined under Section 13(d) of the Exchange Act of the securities reported herein

that are held by Intracoastal.

Intracoastal may be deemed to have beneficial ownership (as determined under Section 13(d) of the Exchange Act) of 2,910,099 shares of Common Stock, which consists of the following: (i) 1,388,888 shares of Common Stock issued to Intracoastal in connection with the 2016 Private Placement Financing; (ii) 1,041,666 shares of Common Stock issuable upon exercise of Series E Warrants issued to Intracoastal in connection with the 2016 Private Placement Financing; (iii) 454,545 shares of Common Stock issuable upon exercise of Series D Warrants issued to Intracoastal in connection with the 2015 Private Placement Financing, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part; and (iv) 25,000 shares of Common Stock that became issuable under the Series A Warrant assigned to Intracoastal in May 2015 by Equitec as a result of the Anti-Dilution Provisions in the Series A Warrants that were triggered by the Notes Offering, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part.

Mr. Asher, who is a manager of Intracoastal, is also a control person of a broker-dealer. As a result of such common control, Intracoastal may be deemed to be an affiliate of a broker-dealer. Intracoastal acquired the ordinary shares being registered hereunder in the ordinary course of business, and at the time of the acquisition of the ordinary shares and warrants described herein, Intracoastal did not have any arrangements or understandings ·with any person to distribute such securities.

(16) James R. Sulat is a member of the Company's Board of Directors and a co-trustee of the Keyes Sulat Revocable Trust (the "**Trust**"), of which members of Mr. Sulat's immediate family are beneficiaries. As co-trustee, Mr. Sulat has shared voting and dispositive power over the securities held by the Trust, which may be deemed to have beneficial ownership of 1,376,813 shares of Common Stock, which consists of the following: (i) 111,111 shares of Common Stock issued to the Trust in connection with the 2016 Private Placement Financing; (ii) 83,333 shares of Common Stock issuable upon exercise of Series E Warrants issued to the Trust in connection with the 2016 Private Placement Financing; (iii) 454,546 shares of Common Stock issued to the Trust in connection with the 2015 Private Placement Financing, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part; (iv) 454,546 shares of Common Stock issuable upon exercise of Series D Warrants issued to the Trust in connection with the 2015 Private Placement Financing, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part; and (v) 273,277 shares of Common Stock acquired by the Trust upon the conversion of the $75,000 convertible promissory note that it purchased from the Company on June 19, 2013 upon the consummation of the Merger, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part. Mr. Sulat disclaims beneficial ownership of the securities held by the Trust that are covered hereunder except to the extent of his pecuniary interest therein.

The information presented for the Trust in this table excludes (a) a stock option award exercisable for 30,000 shares of Common Stock at an exercise price of $0.37 granted to Mr. Sulat on June 18, 2013 for services rendered as a consultant to the Company; (b) a stock option award exercisable for 200,000 shares of Common Stock at an exercise price of $0.27 granted to Mr. Sulat on August 19, 2015 upon his appointment to the Board of Directors; (c) a stock option award exercisable for 130,000 shares of Common Stock at an exercise price of $0.39 granted to Mr. Sulat on May 3, 2016; and (d) a stock award of 30,000 shares of Common Stock granted to Mr. Sulat on May 3, 2016.

(17) Ms. Malanga may be deemed to have beneficial ownership of 349,774 shares of Common Stock, which consists of the following: (i) 70,000 shares of Common Stock issued to Ms. Malanga in connection with the 2016 Private Placement Financing; (ii) 52,500 shares of Common Stock issuable upon exercise of Series E Warrants issued to Ms. Malanga in connection with the 2016 Private Placement Financing; (iii) 113,637 shares of Common Stock issued to Ms. Malanga in connection with the 2015 Private Placement Financing, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part; and (iv) 113,637 shares of Common Stock issuable upon exercise of Series D Warrants issued to Ms. Malanga in connection with the 2015 Private Placement Financing, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part.

(18) Mr. McKeone may be deemed to have beneficial ownership of 1,054,926 shares of Common Stock, which consists of the following: (i) 83,334 shares of Common Stock issued to Mr. McKeone in connection with the 2016 Private Placement Financing; (ii) 62,500 shares of Common Stock issuable upon exercise of Series E Warrants issued to Mr. McKeone in connection with the 2016 Private Placement Financing; (iii) 454,546 shares of Common Stock issued to Mr. McKeone in connection with the 2015 Private Placement Financing, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part; and (iv) 454,546 shares of Common Stock issuable upon exercise of Series D Warrants issued to Mr. McKeone in connection with the 2015 Private Placement Financing, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part.

(19) Ms. Parker may be deemed to have beneficial ownership of 2,222,223 shares of Common Stock, which consists of 2,222,223 shares of Common Stock issued to Ms. Parker in connection with the 2016 Private Placement Financing. The information presented for Ms. Parker in Column 3 of this table excludes (i) 1,666,667 shares of Common Stock issuable upon exercise of Series E Warrants issued to Ms. Parker in connection with the 2016 Private Placement Financing because of the ownership limitations set forth in the Series E Warrants as described in footnote (2); (ii) 1,500,961 shares of Common Stock acquired by Michael A. Parker, Ms. Parker's spouse, in transactions unrelated to the Private Placement Financings, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part; and (iii) 5,000,000 shares of Common Stock and 4,500,000 shares of Common Stock issuable upon exercise of Series D Warrants, in each case originally issued to Mr. Parker, an investor in the 2015 Private Placement Financing, and assigned in March 2016 to Tungsten III, LLC, an entity controlled by Mr. Parker, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part.

(20) Dr. Plent may be deemed to have beneficial ownership of 989,769 shares of Common Stock, which consists of the following: (i) 138,889 shares of Common Stock issued to Dr. Plent in connection with the 2016 Private Placement Financing; (ii) 104,166 shares of Common Stock issuable upon exercise of Series E Warrants issued to Dr. Plent in connection with the 2016 Private Placement Financing; (iii) 227,273 shares of Common Stock issued to Dr. Plent in connection with the 2015 Private Placement Financing, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part; (iv) 227,273 shares of Common Stock issuable upon exercise of Series D Warrants issued to Dr. Plent in connection with the 2015 Private Placement Financing, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part; and (v) 192,168 shares of Common Stock and a stock option exercisable for 100,000 shares of Common Stock acquired by Dr. Plent in transactions unrelated to the Private Placement Financings, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part.

(21) As the manager of Popham Management, LLC ("**Popham**"), Jerry K. Popham has voting and dispositive power over the securities held by Popham, which may be deemed to have beneficial ownership of 1,395,203 shares of

Common Stock, which consists of the following: (i) 277,778 shares of Common Stock issued to Popham in connection with the 2016 Private Placement Financing; (ii) 208,333 shares of Common Stock issuable upon exercise of Series E Warrants issued to Popham in connection with the 2016 Private Placement Financing; (iii) 454,546 shares of Common Stock issued to Popham in connection with the 2015 Private Placement Financing, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part; and (iv) 454,546 shares of Common Stock issuable upon exercise of Series D Warrants issued to Popham in connection with the 2015 Private Placement Financing, none of which are being registered in the 2016 Registration Statement of which this prospectus forms a part. Mr. Popham disclaims beneficial ownership of the securities held by Popham that are covered hereunder except to the extent of his pecuniary interest therein.

Except for the ownership of the Common Stock and Series E Warrants issued in the 2016 Private Placement Financing as reflected in the table above and as otherwise described in this "Selling Securityholder" section below, we have not made, and are not required to make, any potential payments regarding the 2016 Private Placement Financing to any selling securityholder, any affiliate of a selling securityholder, or any person with whom any selling securityholder has a contractual relationship, other than as described below. Additionally, neither the selling securityholders nor their affiliates holds any of our securities that have been registered under the Securities Act or that are entitled to registration rights thereunder other than (i) the shares of Common Stock issuable upon the exercise of the Series A Warrants held by CVI that were originally issued in the 2014 Private Placement Financing; and (ii) Common Stock and/or shares of Common Stock issuable upon the exercise of the Series D Warrants held by Ms. Carlin, Drake, Mr. Galli, Intracoastal, the Trust, Ms. Malanga, Mr. McKeone, affiliates of Ms. Parker, Dr. Plent and Popham that were originally issued in the 2015 Private Placement Financing. We have also been advised that none of the selling securityholders is a broker-dealer or an affiliate of a broker-dealer, other than (a) Mr. Asher, who is a manager of Intracoastal and also a control person of a broker-dealer; (b) Mr. Connolly, who is employed by UBS as a financial advisor; (c) CVI, which is an affiliate of a broker-dealer; (d) Mr. Jonathan J. Galli, who is employed by UBS as a financial advisor; (e) Ms. Carlin, who is employed by UBS as a financial advisor; (f) Ms. Malanga, who is employed by UBS as a financial advisor; and (g) Mr. James M. McKeone, who is employed by FAS Corp. as a financial advisor. Each selling securityholder that is an affiliate of a broker-dealer has advised us that it purchased its securities in the 2016 Private Placement Financing in the ordinary course of business, and at the time of the purchase, it had no agreements or understandings, directly or indirectly, with any person to distribute such securities.

The holders of the Series E Warrants issued in the 2016 Private Placement Financing have ongoing rights to exercise those Series E Warrants. We have described the material terms of the Series E Warrants elsewhere in this prospectus. In addition, the participants in the 2016 Private Placement Financing have ongoing registration rights related to the securities issued therein pursuant to the terms of the 2016 Registration Rights Agreement, which are described in more detail elsewhere in this prospectus.

We may be required to make certain payments to the investors in the 2016 Private Placement Financing under certain circumstances pursuant to the terms of the 2016 Registration Rights Agreement. These potential payments include: (i) potential partial damages for failure to register the Common Stock issued or issuable upon exercise of Series E Warrants; and (ii) payments in respect of claims for which we provide indemnification or contribution. We intend to comply with the requirements of the 2016 Registration Rights Agreement and do not currently expect to make any such payments; however, it is possible that such payments may be required.

DETERMINATION OF OFFERING PRICE

The selling securityholders will determine at what price they may sell the shares of Common Stock offered by this prospectus, and such sales may be made at prevailing market prices, at prices related to the prevailing market price or at privately negotiated prices.

PLAN OF DISTRIBUTION

We are registering (i) the shares of common stock issued; and (ii) the shares of common stock issuable upon exercise of the Series E Warrants, in each case, issued to the selling securityholders in the 2016 Private Placement Financing to permit the resale of these shares of common stock by the selling securityholders from time to time after the date of this prospectus. We will not receive any of the proceeds from the sale by the selling securityholders of the shares of common stock. We will bear all fees and expenses incident to our obligation to register the shares of common stock.

The selling securityholders may sell all or a portion of the shares of common stock held by them and offered hereby from time to time directly or through one or more underwriters, broker-dealers or agents. If the shares of common stock are sold through underwriters or broker-dealers, the selling securityholders will be responsible for underwriting discounts or commissions or agent's commissions. The shares of common stock may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale or at negotiated prices. These sales may be effected in transactions, which may involve crosses or block transactions, pursuant to one or more of the following methods:

- on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale;
- in the over-the-counter market;
- in transactions otherwise than on these exchanges or systems or in the over-the-counter market;
- through the writing or settlement of options, whether such options are listed on an options exchange or otherwise;
- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales effected after the date the registration statement of which this prospectus is a part is declared effective by the SEC;
- broker-dealers may agree with a selling securityholder to sell a specified number of such shares at a stipulated price per share;

- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The selling securityholders may also sell shares of common stock under Rule 144 promulgated under the Securities Act, if available, rather than under this prospectus. In addition, the selling securityholders may transfer the shares of common stock by other means not described in this prospectus. If the selling securityholders effect such transactions by selling shares of common stock to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive commissions in the form of discounts, concessions or commissions from the selling securityholders or commissions from purchasers of the shares of common stock for whom they may act as agent or to whom they may sell as principal (which discounts, concessions or commissions as to particular underwriters, broker-dealers or agents may be in excess of those customary in the types of transactions involved but, except as set forth in a supplement to this prospectus to the extent required, in the case of an agency transaction will not be in excess of a customary brokerage commission in compliance with FINRA Rule 5110).

In connection with sales of the shares of common stock or otherwise, the selling securityholders may enter into hedging transactions with broker-dealers, which may in turn engage in short sales of the shares of common stock in the course of hedging in positions they assume. The selling securityholders may also sell shares of common stock short and deliver shares of common stock covered by this prospectus to close out short positions and to return borrowed shares in connection with such short sales. The selling securityholders may also loan or pledge shares of common stock to broker-dealers that in turn may sell such shares.

The selling securityholders may pledge or grant a security interest in some or all of the Series E Warrants or shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock from time to time pursuant to this prospectus or any amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending, if necessary, the list of selling securityholders to include the pledgee, transferee or other successors in interest as selling securityholders under this prospectus. The selling securityholders also may transfer and donate the shares of common stock in other circumstances as permitted by the securities purchase agreement, the registration rights agreement, the Series E Warrants and all applicable law, in which case the transferees, donees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

To the extent required by the Securities Act and the rules and regulations thereunder, the selling securityholders and any broker-dealer participating in the distribution of the shares of common stock may be deemed to be "underwriters" within the meaning of the Securities Act. In such event, any commission paid, or any discounts or concessions allowed to, any such broker-dealer may be deemed to be underwriting commissions or discounts under the Securities Act. Selling securityholders who are deemed to be "underwriters" under the Securities Act (if any) will be subject to the prospectus delivery requirements of the Securities Act and may be subject to certain statutory liabilities of, including but not limited to, Sections 11, 12 and 17 of the Securities Act and Rule 10b-5 under the Exchange Act.

Each selling securityholder has informed us that it is not a registered broker-dealer and does not have any written or oral agreement or understanding, directly or indirectly, with any person to engage in a distribution of the common stock. Upon us being notified in writing by a selling securityholder that any material arrangement has been entered into with a broker-dealer for the distribution of common stock, a prospectus supplement, if required, will be distributed, which will set forth the aggregate amount of shares of common stock being distributed and the terms of the offering, including the name or names of any broker-dealers or agents, any discounts, commissions and other terms constituting compensation from the selling securityholders and any discounts, commissions or concessions allowed or re-allowed or paid to broker-dealers.

Under the securities laws of some states, the shares of common stock may be sold in such states only through registered or licensed brokers or dealers. In addition, in some states the shares of common stock may not be sold unless such shares have been registered or qualified for sale in such state or an exemption from registration or qualification is available and is complied with.

Each selling securityholder may sell all, some or none of the shares of common stock registered pursuant to the registration statement of which this prospectus forms a part. If sold under the registration statement of which this prospectus forms a part, the shares of common stock registered hereunder will be freely tradable in the hands of persons other than our affiliates that acquire such shares.

The selling securityholders and any other person participating in such distribution will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including, without limitation, to the extent applicable, Regulation M of the Exchange Act, which may limit the timing of purchases and sales of any of the shares of common stock by the selling securityholders and any other participating person. To the extent applicable, Regulation M may also restrict the ability of any person engaged in the distribution of the shares of common stock to engage in market-making activities with respect to the shares of common stock. All of the foregoing may affect the marketability of the shares of common stock and the ability of any person or entity to engage in market-making activities with respect to the shares of common stock.

We have agreed to keep this prospectus effective until the earlier of (i) the date on which all of the securities registered under the registration statement of which this prospectus is a part have been sold; and (ii) the twelve month anniversary of the date the registration statement of which this prospectus is a part is declared effective by the SEC. We have also agreed to pay all expenses of the registration of the shares of common stock pursuant to the registration rights agreement, estimated to be $150,000 in total, including, without limitation, SEC filing fees and expenses of compliance with state securities or “blue sky” laws; *provided, however*, a selling securityholder will pay all underwriting discounts and selling commissions, if any.

We have further agreed to indemnify or provide contribution to the selling securityholders with respect to certain liabilities, including some liabilities under the Securities Act, in accordance with the registration rights agreements. Each selling securityholder, severally and not jointly, has agreed to indemnify or provide contribution to us with respect to certain civil liabilities, including liabilities under the Securities Act, that may arise from any written information furnished to us by the selling securityholder specifically for use in this prospectus, in accordance with the related registration rights agreements.

USE OF PROCEEDS

We will not receive proceeds from the sale of Common Stock under this prospectus. We will, however, receive approximately $3,093,922 from the selling securityholders if they exercise all of the Series E Warrants on a cash basis (assuming, in each case, no adjustments are made to the exercise price or number of shares issuable upon exercise of the Series E Warrants), which we expect we would use primarily for working capital purposes. We also expect we may use a portion of any such proceeds we may receive to satisfy our indebtedness to MLSC.

Pursuant to the MLSC Loan Agreement, we must repay $1 million plus any unpaid accrued interest, accruing at a rate of 10% per annum, on the earlier of (a) the completion of a sale of substantially all of our assets, a change-of-control transaction or one or more financing transactions in which we receive from third parties other than our then-existing shareholders net proceeds of $5,000,000 or more in a 12-month period; (b) the occurrence of an event of default by us under the MLSC Loan Agreement; or (c) September 30, 2018. Assuming repayment of the principal amount of the MLSC Loan on September 30, 2018, we anticipate paying an aggregate amount of $610,510 in accrued interest over the term of the MLSC Loan. We obtained the proceeds of the MLSC Loan on October 4, 2013 and have used, and expect to continue to use, such proceeds for working capital purposes.

The holders of the Series E Warrants may exercise their Series E Warrants at any time at their own discretion, if at all, in accordance with the terms thereof until their expiration, as further described under "**SUMMARY | PRIVATE PLACEMENT OFFERINGS | 2016 Private Placement Financing**" and "**DESCRIPTION OF SECURITIES**." Additionally, if there is no effective registration statement registering the resale of the shares of Common Stock underlying any of the Series E Warrants as of certain time periods (as provided in the Series E Warrants), then the Series E Warrant holders may choose to exercise such Series E Warrants on a "cashless exercise" or "net exercise" basis. If they do so, we will not receive any proceeds from the exercise of the Series E Warrants. As a result, we cannot plan on receiving any proceeds from the exercise of any of the Series E Warrants, nor can we plan on any specific uses of any proceeds we may receive beyond the purposes described herein. We have agreed to bear the expenses (other than any underwriting discounts or commissions or agent's commissions) in connection with the registration of the Common Stock being offered hereby by the selling securityholders.

DESCRIPTION OF SECURITIES

Authorized Capital Stock

Effective May 24, 2013, we amended our Articles of Incorporation to increase our authorized Common Stock from 75,000,000 shares to 300,000,000 shares. Other than our Common Stock, we have no other class or series of authorized capital stock.

Also on May 24, 2013, we effected a forward stock split, by way of a stock dividend, of our issued and outstanding shares of Common Stock at a ratio of 11 shares to each one issued and outstanding share. As a result, our outstanding Common Stock increased from 3,960,000 shares to 43,560,000 shares immediately following the forward stock split.

Common Stock Issued and Outstanding; Common Stock Registered Hereby

As of July 13, 2016 there were issued and outstanding 133,380,265 shares of Common Stock. Of our issued and outstanding shares of Common Stock, we are registering under the registration statement, of which this prospectus forms a part, the 9,418,334 shares of Common Stock that were issued in connection with the 2016 Private Placement Financing.

Description of Securities

Description of Common Stock

The holders of our Common Stock, par value $0.001 per share, are entitled to one vote per share on all matters submitted to a vote of our stockholders, including the election of directors. Our articles of incorporation do not provide for cumulative voting in the election of directors, and our amended and restated bylaws provide that directors are elected by a plurality vote of the votes cast and entitled to vote on the election of directors at any meeting for the election of directors at which a quorum is present. Matters other than the election of directors to be voted on by stockholders are generally approved if, at a duly convened stockholder meeting, the number of votes cast in favor of the action exceeds the number of votes cast in opposition to the action, unless a different vote for the action is required by applicable law, our articles of incorporation or our amended and restated bylaws. Applicable Nevada law requires any amendment to our articles of incorporation to be approved by stockholders holding shares entitling them to exercise at least a majority of the voting power of the Company. The holders of our Common Stock will be entitled to cash dividends as may be declared, if any, by our Board of Directors from funds available. Upon liquidation, dissolution or winding up of our Company, the holders of our Common Stock (the "**Common Stockholders**") will be entitled to receive pro rata all assets available for distribution to the holders. All rights of our Common Stockholders described in this paragraph could be subject to any preferential voting, liquidation or other rights of any series of preferred stock that we may authorize and issue in the future. Our Common Stock is presently traded on the QB tier of the OTC Marketplace under the trading symbol "ARTH".

Warrants and Options Issued and Outstanding

As of July 13, 2016 there were issued and outstanding:

- The Series E Warrants issued to the investors in the 2016 Private Placement Financing to purchase up to an aggregate of 7,063,748 shares of Common Stock at an exercise price of $0.4380 per share;

- The Series D Warrants issued to the investors in the 2015 Private Placement Financing to purchase up to an aggregate of 11,200,163 shares of Common Stock at an exercise price of $0.25 per share;

- The Series A Warrants issued to the investors in the 2014 Private Placement Financing to purchase up to an aggregate of 3,575,000 shares of Common Stock at an exercise price of $0.20 per share;

-

The MLSC Warrant issued to MLSC in connection with the MLSC Loan Agreement to purchase up to 145,985 shares of Common Stock with an exercise price of $0.274 per share; and

- Options granted to employees, directors and consultants under the 2013 Plan to purchase up to an aggregate of 12,772,964 shares of Common Stock at exercise prices ranging from $0.17 to $0.43 per share and with a weighted average exercise price of $0.32 per share.

Description of Series E Warrants Whose Underlying Common Stock is Registered Hereby

Each of the 2016 Investors was issued a Series E Warrant to purchase up to a number of shares of our Common Stock equal to 75% of the shares of Common Stock purchased by such 2016 Investor in the 2016 Private Placement Financing. The Series E Warrants had an initial exercise price of $0.4380 per share, were exercisable immediately upon their issuance and have a term of exercise equal to five years after their issuance date. The number of shares of Common Stock into which each of the Series E Warrants is exercisable and the exercise price therefor are subject to adjustment as set forth in the Series E Warrants, including adjustments for stock subdivisions or combinations (by any stock split, stock dividend, recapitalization, reorganization, scheme, arrangement or otherwise). In addition, (i) at any time during the term of the Series E Warrants, we may reduce the then-current exercise price to any amount and for any period of time deemed appropriate by our Board; and (ii) certain of the Series E Warrants provide that they shall not be exercisable in the event and to the extent that the exercise thereof would result in the holder of the Series E Warrant, together with its affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with the holder's, would be deemed to beneficially own more than 4.99% of the Common Stock; *provided, however*, the holder, upon notice to us, may increase or decrease the ownership limitation, *provided that* any increase is limited to a maximum of 9.99% of the Company's Common Stock, and any increase in the ownership limitation will not become effective until the 61st day after delivery of such notice. In addition, if there is no effective registration statement registering the resale of the shares of Common Stock underlying the Series E Warrants as of certain time periods (as provided in the Series E Warrants), the Series E Warrant holders may choose to exercise such Series E Warrants on a "cashless exercise" or "net exercise" basis.

Description of Series D Warrants

Each of the 2015 Investors was issued a Series D Warrant to purchase up to a number of shares of our Common Stock equal to 100% of the shares of Common Stock purchased by such 2015 Investor in the 2015 Private Placement Financing. The Series D Warrants had an initial exercise price of $0.25 per share, were exercisable immediately upon their issuance and have a term of exercise equal to five years after their issuance date. The number of shares of our Common Stock into which each of the Series D Warrants is exercisable and the exercise price therefor are subject to adjustment as set forth in the Series D Warrants, including adjustments for stock subdivisions or combinations (by any stock split, stock dividend, recapitalization, reorganization, scheme, arrangement or otherwise). In addition, (i) at any time during the term of the Series D Warrants, we may reduce the then-current exercise price to any amount and for any period of time deemed appropriate by our Board; and (ii) certain of the Series D Warrants provide that they shall not be exercisable in the event and to the extent that the exercise thereof would result in the holder of the Series D Warrant or any of its affiliates beneficially owning more than 4.9% of our Common Stock, but such ownership limitation may waived at the holder's discretion, *provided that* such waiver will not become effective until the 61st day after delivery of such waiver notice. In addition, if there is no effective registration statement registering the resale of the shares of Common Stock underlying the Series D Warrants as of certain time periods (as provided in the Series D Warrants), the Series D Warrant holders may choose to exercise such Series D Warrants on a "cashless exercise" or "net exercise" basis.

Description of Series A Warrants

Upon the closing of the 2014 Private Placement Financing on February 4, 2014, we issued to each 2014 Investor a Series A Warrant, a Series B Warrant and a Series C Warrant, each to purchase up to a number of shares of our Common Stock equal to 100% of the shares of Common Stock purchased by such 2014 Investor in the 2014 Private Placement Financing. The Series A Warrants had an initial exercise price of $0.30 per share, were exercisable immediately upon their issuance and have a term of exercise equal to five years after their issuance date. The Series B Warrants had an initial exercise price of $0.35 per share, were exercisable immediately upon their issuance and had a term of exercise equal to the shorter of 12 months after their issuance date and six months after the 2014 Registration Statement Effective Date. The Series B Warrants expired on January 3, 2015. The Series C Warrants had an initial exercise price of $0.40 per share, were exercisable immediately upon their issuance and had an initial term of exercise equal to the shorter of 18 months after their issuance date and nine months after the 2014 Registration Statement Effective Date. The Series C Warrants were set to expire on April 2, 2015 and, as described later in this document, were amended to expire at 5:00 p.m., New York time, on July 2, 2016; prior to such expiration date, all 11,400,000 shares underlying the Series C Warrants were exercised. The number of shares of our Common Stock into which each of the 2014 Warrants is exercisable and the exercise price therefor were subject to adjustment as set forth in the 2014 Warrants, including, without limitation, adjustments in the event of certain subsequent issuances and sales of shares of our Common Stock (or securities convertible or exercisable into shares of our Common Stock) at a price per share lower than then-effective exercise price of the 2014 Warrants, in which case the per share exercise price of the 2014 Warrants would be adjusted to equal such lower price per share and the number of shares issuable upon exercise of the 2014 Warrants would be adjusted accordingly so that the aggregate exercise price upon full exercise of the 2014 Warrants immediately before and immediately after such per share exercise price adjustment were equal, as well as

customary adjustments in the event of stock dividends and splits, subsequent rights offerings and pro rata distributions to our Common Stockholders. The 2014 Warrants also provide that they shall not be exercisable in the event and to the extent that the exercise thereof would result in the holder of the Warrant or any of its affiliates beneficially owning more than 4.9% of our Common Stock.

Following the closing of the 2014 Private Placement Financing, we entered into a series of amendments with Cranshire on December 1, 2014, March 13, 2015, May 30, 2015 and June 22, 2015 to amend the terms of the 2014 Warrants. On December 1, 2014, the 2014 Warrants were amended to (i) reduce the exercise price of the Series B Warrants from $0.35 to $0.20; (ii) reduce the exercise price of the Series C Warrants from $0.40 to $0.20; and (iii) clarify that each Series of 2014 Warrants may be amended without having to amend all three series of 2014 Warrants. On March 13, 2015 and May 30, 2015, the Series C Warrants were amended to extend their expiration date to 5:00 p.m., New York time, on June 2, 2015, and 5:00 p.m., New York time, on July 2, 2015, respectively. On June 22, 2015, the Series A Warrants and Series C Warrants were amended to remove the Anti-Dilution Provisions contained in the Series A Warrants and Series C Warrants, and in consideration of such amendment, (a) the expiration date of the Series C Warrants was further extended to 5:00 p.m., New York time, on July 2, 2016; and (b) we agreed to issue the holders of the Series A Warrants and Series C Warrants up to an additional 570,000 Inducement Shares. In addition, as a result of the Anti-Dilution Provisions in the Series A Warrants, the exercise price of the Series A Warrants was reduced from $0.30 to $0.20 upon the closing of the Note Offering on March 13, 2015.

MLSC Warrants

In connection with and as a condition of the MLSC Loan Agreement, on September 30, 2013, we issued to MLSC the MLSC Warrant to purchase 145,985 shares of our Common Stock at an exercise price of $0.274 per share. The MLSC Warrant has been issued as partial consideration for the funding provided under the MLSC Loan Agreement and for no separate consideration. The MLSC Warrant is exercisable immediately upon its issuance and expires on the earlier of September 30, 2023 and the completion of a sale of substantially all of our assets or a change-of-control transaction.

2016 Registration Rights Agreement

On May 26, 2016, we entered into the 2016 Registration Rights Agreement pursuant to which we became obligated, subject to certain conditions, to file with the SEC within 45 days after the closing of the 2016 Private Placement Financing one or more registration statements to register the shares of Common Stock issued in the 2016 Private Placement Financing and the Series E Warrant Shares for resale under the Securities Act. As a result, we registered for resale under this registration statement an aggregate of 16,482,082 shares of Common Stock, representing the 9,418,334 shares issued in the 2016 Private Placement Financing and the 7,063,748 shares underlying the Series E Warrants. Pursuant to our filing of this registration statement, we are in compliance with such filing obligation under the 2016 Registration Rights Agreement. Our failure to satisfy certain deadlines with respect to this registration statement and certain other requirements set forth in the 2016 Registration Rights Agreement may require us to pay monetary penalties to the 2016 Investors and/or their assignees. Because the Series E Warrants are subject to certain adjustments and permit, in certain circumstances, the "cashless" exercise thereof, the number of shares that will actually be issuable upon any exercise thereof may be more or less than the number of shares being offered by this prospectus. Under the 2016 Registration Rights Agreement, subject to exception in certain circumstances, we have agreed to keep the 2016 Registration Statement effective until the earlier of the date on which all shares of Common Stock to be registered hereunder have been sold, and the twelve month anniversary of the date the 2016 Registration Statement is declared effective by the SEC. If there is not an effective registration statement covering the resale of any of the shares issued in or issuable upon exercise of the Series E Warrants issued in the 2016 Private Placement Financing, then the selling securityholders will be entitled to exercise their Series E Warrants on a "cashless exercise" or "net exercise" basis during the period when the shares issuable upon exercise of such Series E Warrants are not so registered.

Transfer Agent

The transfer agent for our Common Stock is Empire Stock Transfer. Our transfer agent's address is 1859 Whitney Mesa Drive, Henderson, Nevada 89014.

Anti-Takeover Provisions of Nevada State Law

Some features of the Nevada Revised Statutes ("**NRS**"), which are further described below, may have the effect of deterring third parties from making takeover bids for control of us or may be used to hinder or delay a takeover bid. This would decrease the chance that our stockholders would realize a premium over market price for their shares of Common Stock as a result of a takeover bid.

Acquisition of Controlling Interest

The NRS contain provisions governing acquisition of a controlling interest of a Nevada corporation. These provisions provide generally that any person or entity that acquires a certain percentage of the outstanding voting shares of a Nevada corporation may be denied voting rights with respect to the acquired shares, unless certain criteria are satisfied. Our amended and restated bylaws provide that these provisions will not apply to us or to any existing or future stockholder or stockholders.

Combination with Interested Stockholder

The NRS contain provisions governing combinations of a Nevada corporation that has 200 or more stockholders of record with an "interested stockholder." These provisions only apply to a Nevada corporation that, at the time the potential acquirer became an interested stockholder, has a class or series of voting shares listed on a national securities exchange, or has a class or series of voting shares traded in an "organized market" and satisfies certain specified public float and stockholder levels. As we do not now meet those requirements, we do not believe that these provisions are currently applicable to us. However, to the extent they become applicable to us in the future, they may have the effect of delaying or making it more difficult to affect a change in control of the Company in the future.

A corporation affected by these provisions may not engage in a combination within two years after the interested stockholder acquires his, her or its shares unless the combination or purchase is approved by the board of directors before the interested stockholder acquired such shares. Generally, if approval is not obtained, then after the expiration of the two-year period, the business combination may be consummated with the approval of the board of directors before the person became an interested stockholder or a majority of the voting power held by disinterested stockholders, or if the consideration to be received per share by disinterested stockholders is at least equal to the highest of:

- the highest price per share paid by the interested stockholder within the three years immediately preceding the date of the announcement of the combination or within three years immediately before, or in, the transaction in which he, she or it became an interested stockholder, whichever is higher;

- the market value per share on the date of announcement of the combination or the date the person became an interested stockholder, whichever is higher; or

- if higher for the holders of preferred stock, the highest liquidation value of the preferred stock, if any.

Generally, these provisions define an interested stockholder as a person who is the beneficial owner, directly or indirectly of 10% or more of the voting power of the outstanding voting shares of a corporation, and define combination to include any merger or consolidation with an interested stockholder, or any sale, lease, exchange, mortgage, pledge, transfer or other disposition, in one transaction or a series of transactions with an interested stockholder of assets of the corporation:

- having an aggregate market value equal to 5% or more of the aggregate market value of the assets of the corporation;

- having an aggregate market value equal to 5% or more of the aggregate market value of all outstanding shares of the corporation; or

- representing 10% or more of the earning power or net income of the corporation.

Liability and Indemnification of Directors and Officers

The NRS empower us to indemnify our directors and officers against expenses relating to certain actions, suits or proceedings as provided for therein. In order for such indemnification to be available, the applicable director or officer must not have acted in a manner that constituted a breach of his or her fiduciary duties and involved intentional misconduct, fraud or a knowing violation of law, or must have acted in good faith and reasonably believed that his or her conduct was in, or not opposed to, our best interests. In the event of a criminal action, the applicable director or officer must not have had reasonable cause to believe his or her conduct was unlawful.

We have not entered into separate indemnification agreements with our directors and officers. Our amended and restated bylaws provide that we shall indemnify any director or officer to the fullest extent authorized by the laws of the State of Nevada. Our amended and restated bylaws further provide that we shall pay the expenses incurred by an officer or director (acting in his capacity as such) in defending any action, suit or proceeding in advance of the final disposition of such action, suit or proceeding, subject to the delivery to us by or on behalf of such director or officer of

an undertaking to repay the amount of such expenses if it shall ultimately be determined that he or she is not entitled to be indemnified by us as authorized in our bylaws or otherwise.

The NRS further provide that a corporation may purchase and maintain insurance or make other financial arrangements on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise for any liability asserted against him and liability and expenses incurred by him in his capacity as a director, officer, employee or agent, or arising out of his status as such, whether or not the corporation has the authority to indemnify him against such liability and expenses. We have secured a directors' and officers' liability insurance policy. We expect that we will continue to maintain such a policy.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted for our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

MARKET PRICE OF AND DIVIDENDS ON COMMON STOCK AND RELATED MATTERS

Market Information

Our Common Stock is currently quoted on the OTCQB over-the-counter quotation system. Our Common Stock began quotation on the OTCBB and the OTCQB on June 27, 2013 and since that date has been primarily traded on the OTCQB. There was no trading of our Common Stock on the OTCBB, OTCQB or any other over-the-counter market prior to January 2, 2013. Although our Common Stock is currently quoted on the OTCQB, there is a limited trading market for our Common Stock and there have been few trades in our Common Stock to date. Because our Common Stock is thinly traded, any reported sale prices may not be a true market-based valuation of our Common Stock.

The table below sets forth reported high and low closing bid quotations for our Common Stock for the fiscal quarters indicated as reported on the OTCQB. The quotations reflect inter-dealer prices, without retail mark-up, mark-down or commission and may not represent actual transactions.

	High	Low
Fiscal Year Ending September 30, 2014		
First Quarter ended December 31, 2013	$0.32	$0.16
Second Quarter ended March 31, 2014	$0.44	$0.29
Third Quarter ended June 30, 2014	$0.34	$0.20
Fourth Quarter ended September 30, 2014	$0.22	$0.16
Fiscal Year Ending September 30, 2015		
First Quarter ended December 31, 2014	$0.25	$0.16
Second Quarter ended March 31, 2015	$0.24	$0.18
Third Quarter ended June 30, 2015	$0.26	$0.18
Fourth Quarter ended September 30, 2015	$0.39	$0.23
Fiscal Year Ending September 30, 2016		
First Quarter ended December 31, 2015	$0.27	$0.17
Second Quarter ended March 31, 2016	$0.32	$0.18
Third Quarter ended June 30, 2016	$0.67	$0.31

Dividends

We have never declared or paid any cash dividends or distributions on our capital stock. We currently intend to retain our future earnings, if any, to support operations and to finance expansion and therefore we do not anticipate paying

any cash dividends on our Common Stock in the foreseeable future. In addition, under the terms of the MLSC Loan Agreement, we must obtain MLSC's prior consent before declaring or paying any dividends during the term of the MLSC Loan Agreement.

Holders

As of July 13, 2016, there were approximately 100 holders of record of our Common Stock.

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

The following discussion and analysis should be read in conjunction with our unaudited interim financial statements and notes included in this prospectus and the audited financial statements and notes thereto and Management's Discussion and Analysis of Financial Condition and Results of Operations included in our Annual Report on Form 10-K for the year ended September 30, 2015 filed with the Securities and Exchange Commission ("**SEC**").

This prospectus contains forward looking statements. We make forward-looking statements, as defined by the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995, and in some cases, you can identify these statements by forward-looking words such as "if," "shall," "may," "might," "will likely result," "should," "expect," "plan," "an "believe," "estimate," "project," "intend," "goal," "objective," "predict," "potential" or "continue," or the negative of these ter other comparable terminology. Such forward-looking statements contained in this prospectus are based on various underlying assumptions and expectations and are subject to risks, uncertainties and other unknown factors, may include projections of our future financial performance based on our growth strategies and anticipated trends in our business and include risks and uncertainties relating to Arch's current cash position and its need to raise additional capital in order to be able to continue to fund its operations; the stockholder dilution that may result from future capital raising efforts and the exercise or conversion, as applicable of Arch's outstanding options, warrants and convertible notes; anti-dilution protection afforded investors in prior financing transactions that may restrict or prohibit Arch's ability to raise capital on terms favorable to the Company and its current stockholders; Arch's limited operating history which may make it difficult to evaluate Arch's business and future viability; Arch's ability to timely commercialize and generate revenues or profits from our anticipated products; Arch's ability to achieve the desired regulatory approvals in the United States or elsewhere; Arch's ability to retain its managerial personnel and to attract additional personnel; the strength of Arch's intellectual property, the intellectual property of others and any asserted claims of infringement; and other risk factors identified under the caption "**RISK FACTORS**" in this prospectus and in the documents Arch has filed, or will file with the SEC. Copies of Arch's filings with the SEC may be obtained from the SEC internet site at http://www.sec.gov. We undertake no duty to update any of these forward-looking statements after the date of filing of this prospectus to conform such forward-looking statements to actual results or revised expectations, except as otherwise required by law.

As used in this prospectus unless otherwise indicated, the "**Company**", "**we**", "**us**", "**our**", and "**Arch**" refer to Arch Therapeutics, Inc. and its consolidated subsidiary, Arch Biosurgery, Inc.

Corporate Overview

Arch Therapeutics, Inc. was incorporated under the laws of the State of Nevada on September 16, 2009 with the name "Almah, Inc." to pursue the business of distributing automobile spare parts online. Effective June 26, 2013, Arch completed a merger (the "**Merger**") with Arch Biosurgery, Inc. (formerly known as Arch Therapeutics, Inc.), a Massachusetts corporation ("**ABS**"), and Arch Acquisition Corporation ("**Merger Sub**"), Arch's wholly owned subsidiary formed for the purpose of the transaction, pursuant to which Merger Sub merged with and into ABS and ABS thereby became the wholly owned subsidiary of Arch. Prior to the completion of the Merger, Arch was a "shell company" under applicable rules of the SEC and had no or nominal assets or operations. As part of the acquisition, Almah management resigned and was replaced with ABS management. Upon its acquisition of ABS, Arch abandoned its prior business plan and changed its operations to the business of a biotechnology company.

For financial reporting purposes, the Merger represented a "reverse merger". ABS was deemed to be the accounting acquirer in the transaction and the predecessor of Arch. Consequently, the assets, liabilities, accumulated deficit and the historical operations that are reflected in the Company's consolidated financial statements are those of ABS. All

share information has been restated to reflect the effects of the Merger. The Company's financial information was consolidated with that of ABS after consummation of the Merger on June 26, 2013, and the historical financial statements of the Company before the Merger have been replaced with the historical financial statements of ABS before the Merger in this prospectus and will be so replaced in all future filings with the SEC that require financial statements to be included.

ABS was incorporated under the laws of the Commonwealth of Massachusetts on March 6, 2006 as Clear Nano Solutions, Inc., changed its name to Arch Therapeutics, Inc. on April 7, 2008, and changed its name from Arch Therapeutics, Inc. to Arch Biosurgery, Inc. upon the closing of the Merger on June 26, 2013.

Business Overview

We are a biotechnology company in the development stage with limited operations to date. We aim to develop products that make surgery and interventional care faster and safer by using a novel approach to stop bleeding (referenced as "hemostatic" or "hemostasis"), control leaking (referenced as "sealant" or "sealing"), and provide other advantages during surgery and trauma care. Our core technology is based on a self-assembling peptide that creates a physical, mechanical barrier, which could be applied to seal organs or wounds that are leaking blood and other fluids. We believe our technology could support an innovative platform of potential products in the field of stasis and barrier applications. Our lead product candidate, the AC5 Surgical Hemostatic Device™ (which we sometimes refer to as "**AC5**"), is designed to achieve hemostasis in minimally invasive and open surgical procedures, and we hope to develop other hemostatic or sealant product candidates in the future based on our self-assembling peptide technology platform. Our plan and business model is to develop products that apply that core technology to use with human bodily fluids and connective tissues.

AC5 is designed to be a biocompatible synthetic peptide comprising naturally occurring amino acids. When applied to a wound, AC5 intercalates into the interstices of the connective tissue where it self-assembles into a physical, mechanical structure that provides a barrier to leaking substances, such as blood. AC5 is designed for direct application as a liquid, which we believe will make it user-friendly and able to conform to irregular wound geometry. Additionally, AC5 is not sticky or glue-like, which we believe will enhance its utility in the setting of minimally invasive and laparoscopic surgeries. Further, in certain settings, AC5 lends itself to a concept that we call Crystal Clear Surgery™ because the transparency and physical properties of AC5 enable a surgeon to operate through it in order to maintain a clearer field of vision and prophylactically stop or lessen bleeding as it starts.

We have devoted much of our operations to date to the research and development of our core technology, including selecting our initial product composition, conducting initial safety and other related tests, generating scale-up, reproducibility and manufacturing and formulation methods, and developing and protecting the intellectual property rights underlying our technology platform. Formulation optimization is an important part of peptide development. AC5 formulation optimization, which is done with extensive collaboration among our team and partners, is focused on optimizing traditional product parameters to target specifications covering performance, physical appearance, stability, and handling characteristics, among others. Arch intends to monitor formulation optimization closely, as success or failure in setting and realizing appropriate specifications may directly impact our ability to conduct clinical trials and our subsequent commercialization timeline.

Our long-term business plan includes the following goals:

- conducting additional successful biocompatibility studies and clinical trials on AC5;
- expanding, maintaining and protecting of our intellectual property portfolio;
- developing appropriate third party relationships to manufacture, distribute, market and otherwise commercialize AC5;
- obtaining regulatory approval or certification of AC5 in the EU, the U.S., and other jurisdictions as we may determine;
- developing academic, scientific and institutional relationships to collaborate on product research and development; and
- developing additional product candidates in the hemostatic, sealant, and/or other fields.

In furtherance of our long-term business goals, we expect to continue to focus on the following activities during the next twelve months:

- seek additional funding to support the milestones described above and our operations generally;

- work with our large scale manufacturing partners to continue to scale up production of product compliant with current good manufacturing practices ("**cGMP**"), which activities will be ongoing as we seek to advance toward, enter into, and, if successful, subsequently increase commercialization activities;

- complete clinical trial protocols and Clinical Investigational Plans with principal investigators for AC5 and submit applications to Ethics Committee and required authoritative agencies for initiation of additional initial clinical trials;

- commence additional and complete our current human clinical trial(s) for AC5, the timeframe for which is dependent upon successful completion of certain manufacturing, regulatory, and biocompatibility activities;

- continue to expand and enhance our financial and operational reporting and controls;

- expand and enhance our intellectual property portfolio by filing new patent applications, obtaining allowances on currently filed patent applications, and adding to our trade secrets in self-assembly, manufacturing, analytical methods and formulation, which activities will be ongoing as we seek to expand our product candidate portfolio; and

- assess our self-assembling peptide platform in order to identify and select product candidates for advancement into development.

We believe that the Company currently has adequate capital to support operations through the initial regulatory approval process in Europe. If the regulatory authorities request additional clinical or non-clinical data prior to approval additional capital may be required. Additional European regulatory approvals could require an additional $2,000,000-$3,000,000. We further expect that the Company will require an additional $6,000,000 - $9,000,000 or more related to the initial regulatory process in the U.S. These estimated capital requirements potentially could increase significantly if a number of risks relating to conducting these activities were to occur, including without limitation those set forth under the heading "**RISK FACTORS**" in this filing.

Merger with ABS and Related Activities

As noted earlier in this document, on June 26, 2013, the Company completed the Merger with ABS, pursuant to which ABS became a wholly owned subsidiary of the Company. In contemplation of the Merger, effective May 24, 2013, the Company increased its authorized common stock, par value $0.001 per share ("**Common Stock**"), from 75,000,000 shares to 300,000,000 shares and effected a forward stock split, by way of a stock dividend, of its issued and outstanding shares of Common Stock at a ratio of 11 shares to each one issued and outstanding share. Also in contemplation of the Merger, effective June 5, 2013, the Company changed its name from Almah, Inc. to Arch Therapeutics, Inc. and changed the ticker symbol under which its Common Stock trades on the OTC Bulletin Board from "AACH" to "ARTH".

Liquidity

We are in the development stage and have generated no operating revenues to date and do not expect to do so in the foreseeable future due to the early stage nature of our current product candidates. We currently do not have any products that have obtained marketing approval in any jurisdiction. We have net losses for the three months ended March 31, 2016 and 2015 of $1,253,056 and $833,966, respectively. For the six months ended March 31, 2016 and 2015, we have net losses of $2,409,711 and $454,821, respectively. The net losses for the three and six months ended March 31, 2016 and 2015 can be attributed to general and administrative costs and research and development expenses associated with pre-clinical development expenses, manufacturing and quality management system consulting and advisory related expenses. We devote a significant amount of our efforts towards fundraising and product research.

Recent Developments

During the three months ended March 31, 2016, the Company announced that (i) it had initiated patient enrollment and treatment in its first clinical trial in Western Europe, (ii) it had received an internationally recognized ISO quality

certification, and (iii) it had obtained favorable results from a broad panel of preclinical biocompatibility tests that were performed on AC5 in support of Arch's planned filing of a CE Mark application that indicate that AC5's peptide structure and mechanism of action, which is based on the formation of a local physical-mechanical barrier at the wound site, does not promote toxicity to the overall biological system following exposure to AC5. In addition, on April 5, 2016, April 11, 2016, and May 16, 2016, the Company announced that notices of allowance from the U.S. Patent Office had been received on two broad composition-of-matter patents and a broad method of use patent that are assigned to the Massachusetts Institute of Technology (MIT) and Versitech Limited and which are exclusively licensed worldwide to Arch. The broad composition claims of the composition-of-matter patents cover Arch's present and proposed products, which contain peptides and peptidomimetics, respectively, that self-assemble into barrier structures on tissue and inhibit or prevent the passage of bodily fluids. The broad method claims of the method of use patent cover techniques for preventing the loss or unwanted movement of body fluids. Further, on May 10, 2016, the Company announced that a notice of allowance from the U.S. Patent Office had been received for a broad composition of matter and method of use patent that covers solid forms of the Company's self-assembling technology. In addition, the Company has initiated the FDA regulatory process.

From October 1, 2015 through April 2016, $605,000 of principal on the Company's outstanding convertible notes and $39,900 of associated accrued interest were converted into an aggregate of 3,224,494 shares of common stock. In addition, from October 1, 2015 through July 13, 2016, Series C Warrants had been exercised on a cash basis for an aggregate issuance of 3,400,000 shares of the Company's Common stock resulting in gross proceeds to the Company of $680,000, Series A Warrants had been exercised on a cash basis for an aggregate issuance of 3,100,000 shares of the Company's Common Stock resulting in gross proceeds to the Company of $620,000 and Series D Warrants had been exercised on a cash basis for an aggregate issuance of 3,190,591 shares of the Company's Common Stock resulting in gross proceeds to the Company of $797,648. In addition, 2,675,000 of Series A Warrants had been exercised on a cashless basis for an aggregate of 1,435,674 shares of the Company's Common Stock.

On May 3, 2016, pursuant to the approval of our Board, we issued an aggregate of 2,000,000 shares of our Common Stock pursuant to restricted stock awards granted outside of our 2013 Stock Incentive Plan to (i) Dr. Avtar Dhillon, the Chairman of our Board (737,000 shares); (ii) James R. Sulat, a member of our Board (30,000 shares); (iii) Dr. Terrence W. Norchi, our President, Chief Executive Officer and a member of our Board (1,130,000 shares); and (iv) Richard Davis, our Chief Financial Officer (103,000 shares).

Results of Operations

The following discussion of our results of operations should be read together with the unaudited interim consolidated financial statements and audited financial statements included in this prospectus. The period to period comparisons of our interim results and annual results of operations that follow are not necessarily indicative of future results.

Three Months Ended March 31, 2016 Compared to Three Months Ended March 31, 2015

	March 31, 2016 ($)	March 31, 2015 ($)	Increase (Decrease) ($)
Revenue	-	-	-
Operating Expenses			
General and administrative	868,433	853,177	15,256
Research and development	386,285	402,495	(16,210)
Loss from operations	(1,254,718)	(1,255,672)	(954)
Other income	1,662	421,706	(420,044)
Net loss	(1,253,056)	(833,966)	419,090

Revenue

We did not generate revenue in either of the three months ended March 31, 2016 and 2015.

General and Administrative Expense

General and administrative expenses during the three months ended March 31, 2016 were $868,433, an increase of $15,256 compared to $853,177 for the three months ended March 31, 2015. The increase in general and administrative expense is primarily attributable to an increase in patent-related expenses partially offset by a decrease in stock based compensation and payroll expenses.

Research and Development Expense

Research and development expenses during the three months ended March 31, 2016 were $386,285, a decrease of $16,210 compared to $402,495 for the three months ended March 31, 2015. The decrease in research and development expense is primarily attributable to an increase in expenses associated with pre-clinical development expenses and manufacturing and quality management system consulting and advisory related expenses offset primarily by a decrease in stock based compensation expenses. Research and development expenses are expected to increase as a result of our plans to expand clinical programs and clinical studies as resources permit. The Company has initiated patient enrollment and treatment in its first clinical trial in Western Europe.

Other Income (Expense)

Other income during the three months ended March 31, 2016 was $1,662 a decrease of $420,044 compared to other income of $421,706 for the three months ended March 31, 2015. This decrease resulted from a change in adjustments to derivative liabilities of $403,777 during fiscal 2016 as compared to fiscal 2015. Other income during the three months ended March 31, 2016 was attributed primarily to a net gain on adjustments of derivative liabilities related to our outstanding warrants of $68,485, partially offset by interest expense of $66,823.

Six Months Ended March 31, 2016 Compared to Six Months Ended March 31, 2015

	March 31, 2016 ($)	March 31, 2015 ($)	Increase (Decrease) ($)
Revenue	-	-	-
Operating Expenses			
General and administrative	1,733,946	1,723,533	10,413
Research and development	800,288	802,230	(1,942)
Loss from operations	(2,534,234)	(2,525,763)	8,471
Other income	124,523	2,070,942	(1,946,419)
Net loss	(2,409,711)	(454,821)	1,954,890

Revenue

We did not generate revenue in either of the six months ended March 31, 2016 and 2015.

General and Administrative Expense

General and administrative expenses during the six months ended March 31, 2016 were $1,733,946, an increase of $10,413 compared to $1,723,533 for the six months ended March 31, 2015. The increase in general and administrative expense is primarily attributable to an increase in patent-related expenses partially offset by a decrease in stock based compensation.

Research and Development Expense

Research and development expenses during the six months ended March 31, 2016 were $800,288, a decrease of $1,942 compared to $802,230 for the six months ended March 31, 2015. The decrease in research and development expense is primarily attributable to an increase in expenses associated with pre-clinical development expenses and manufacturing and quality management system consulting and advisory related expenses offset primarily by a decrease in stock based compensation expenses. Research and development expenses are expected to increase as a result of our plans to expand clinical programs and clinical studies as resources permit. The Company has initiated patient enrollment and treatment in its first clinical trial in Western Europe.

Other Income (Expense)

Other income during the six months ended March 31, 2016 was $124,523 a decrease of $1,946,419 compared to other income of $2,070,942 for the six months ended March 31, 2015. This decrease resulted from a change in adjustments to derivative liabilities of $1,814,170 during fiscal 2016 as compared to fiscal 2015. Other income during the six months ended March 31, 2016 was attributed primarily to a net gain on adjustments of derivative liabilities related to our outstanding notes of $335,092 partially offset by interest expense of $210,569.

Year Ended September 30, 2015 Compared to Year Ended September 30, 2014

	September 30, 2015	September 30, 2014	Increase (Decrease)
Revenue	$-	$-	$-
Operating Expenses			
General and Administrative	3,700,477	3,134,285	566,192
Research and Development	1,760,037	1,477,479	282,558
Loss from Operations	5,460,514	4,611,764	848,750
Other Income (Expense)	2,512,988	(3,531,059)	6,044,047
Net Loss	$2,947,526	$8,142,823	$5,195,297

Revenue

We did not generate any revenue in either of the years ended September 30, 2015 or 2014.

General and Administrative Expense

General and administrative expenses during the fiscal year ended September 30, 2015 were $3,700,477, an increase of $566,192 compared to $3,134,285 for the fiscal year ended September 30, 2014. The increase in general and administrative expense is primarily attributable to increased legal costs associated with intellectual property, patent application and prosecution costs, and general corporate legal expenses. General and administrative expenses are generally expected to increase as a result of additional staffing, increased stock based compensation as well as increased costs associated with the company's fundraising efforts.

Research and Development Expense

Research and development expense during the fiscal year ended September 30, 2015 was $1,760,037, an increase of $282,558 compared to $1,477,479 for the fiscal year ended September 30, 2014. The increase in research and development expense is primarily attributable to an increase in expenses associated with pre-clinical development expenses and manufacturing and quality management system consulting and advisory related expenses. Research and development expenses are expected to increase as a result of our plans to commence clinical studies and establish our ISO certification and move forward with the CE Mark approval process. We have submitted an application to a European regulatory authority to commence our first clinical trial of AC5, and we have received preliminary comments from such regulatory authority on our application. We have responded to those comments, and we expect to receive approval to proceed with our first clinical trial of AC5 during the first calendar quarter of 2016.

Other Income/(Expense)

Other income during the year ended September 30, 2015 was $2,512,988, an increase of $6,044,047 compared to total other expense of $3,531,059 for the year ended September 30, 2014. The increase in other income was the result of the change in derivative liabilities partially offset by an increase in interest expense.

Liquidity and Capital Resources

To date, we have not generated revenues from the sale of any products and have principally raised capital through borrowings and the issuance of convertible debt and units consisting of Common Stock and warrants to fund our operations. At March 31, 2016, we had cash of $1,669,249 and positive working capital of $1,360,367.

Cash Used in Operating Activities

Working Capital

At March 31, 2016, we had total current assets of $1,759,368 (including cash of $1,669,249) and working capital of $1,360,367. Our working capital as of March 31, 2016 and September 30, 2015 is summarized as follows:

	March 31, 2016	September 30, 2015
Total Current Assets	$1,759,368	$ 4,003,019
Total Current Liabilities	399,001	1,286,078
Working Capital	$1,360,367	$ 2,716,941

Total current assets as of March 31, 2016 were $1,759,368, a decrease of $2,243,651 compared to $4,003,019 as of September 30, 2015. The decrease in current assets is primarily attributable to general and administrative expenses resulting from intellectual property costs and research and development expenses incurred in connection with activities to develop our primary product candidate. Our total current assets as of March 31, 2016 and September 30, 2015 were comprised primarily of cash, prepaid expenses and other current assets.

Total current liabilities as of March 31, 2016 were $399,001, a decrease of $887,077 compared to $1,286,078 as of September 30, 2015. The decrease is primarily due to the conversion of $505,000 of convertible notes into equity and an adjustment to the fair value of the derivative liabilities associated with these Notes, partially offset by the timing of payments in accounts payable. Our total current liabilities as of March 31, 2016 and September 30, 2015 were comprised primarily of the current portion of the derivative liability, the convertible notes, accounts payable and accrued expenses.

Cash Flow for the Six Months Ended

	March 31, 2016	March 31, 2015
Cash Used in Operating Activities	$(2,330,851)	$(1,809,920)
Cash Used in Investing Activities	-	-
Cash Provided by Financing Activities	40,000	1,550,000
Net decrease in cash	$(2,290,851)	$(259,920)

Cash Used in Operating Activities

Cash used in operating activities increased $520,931 during the six months ended March 31, 2016 to $2,330,851 compared to $1,809,920 during the six months ended March 31, 2015. The increase was primarily due to an increase in general and administrative expense primarily attributable to increased intellectual property costs and research and development expenses incurred in connection with activities to develop our primary product candidate.

Cash Used in Investing Activities

There was no cash used in investing activities during the six months ended March 31, 2016 and 2015, respectively.

Cash Provided by Financing Activities

Cash provided by financing activities decreased $1,510,000 to $40,000 during the six months ended March 31, 2016, compared to $1,550,000 during the six months ended March 31, 2015. For the six months ended March 31, 2016, the cash provided by financing resulted from the exercise of the Series C Warrants to purchase 200,000 shares of our Common Stock. For the six months ended March 31, 2015, the cash provided by financing resulted from the $800,000 in proceeds received by us from the exercise of Series B Warrants to purchase 4,000,000 shares of our Common Stock and proceeds received of $750,000 from the issuance of the 8% Convertible Note.

Cash Requirements

We anticipate that our operating and other expenses will increase significantly as we continue to implement our business plan and pursue our operational goals. We estimate that our cash requirements for our fiscal year ending September 30, 2016 will be approximately $5,500,000. As of July 13, 2016, we estimate that we will need to raise additional cash within the next twelve months. We will require additional financing to fund our planned future operations, including the continuation of our ongoing research and development efforts, seeking to license or acquire new assets, and researching and developing any potential patents, the related compounds and any further intellectual property that we may acquire. In addition, our estimates of the amount of cash necessary to operate our business may prove to be wrong and we could spend our available financial resources much faster than we currently expect. Further, our estimates regarding our use of cash could change if we encounter unanticipated difficulties or other issues arise, in which case our current funds may not be sufficient to operate our business for the period we expect.

We do not presently have, nor do we expect in the near future to have, revenue to fund our business from our operations, and will need to obtain all of our necessary funding from external sources for the foreseeable future. We do not have any commitments for future capital. Significant additional financing will be required to fund our planned operations in the near term and in future periods, including research and development activities relating to our principal product candidate, seeking regulatory approval of that or any other product candidate we may choose to develop, commercializing any product candidate for which we are able to obtain regulatory approval or certification, seeking to license or acquire new assets or businesses, and maintaining our intellectual property rights and pursuing rights to new technologies. We may not be able to obtain additional financing on commercially reasonable or acceptable terms when needed, or at all. We are bound by certain contractual terms and obligations that may limit or otherwise impact our ability to raise additional funding in the near-term including, but not limited to, provisions in the MLSC Loan Agreement (i) restricting our ability to incur certain types of additional indebtedness, and (ii) that would cause all amounts under the MLSC Loan Agreement to become immediately due and payable if we receive net proceeds of $5,000,000 or more in one or more financing transactions in any 12-month period from third parties other than our then existing shareholders. These restrictions and provisions could make it more challenging for us to raise capital through the incurrence of debt or through equity issuances. If we cannot raise the money that we need in order to continue to develop our business, we will be forced to delay, scale back or eliminate some or all of our proposed operations. If any of these were to occur, there is a substantial risk that our business would fail and our stockholders could lose all of their investments.

As previously noted, since inception we have funded our operations primarily through equity and debt financings and we expect to continue to seek to do so in the future. If we obtain additional financing by issuing equity securities, our existing stockholders' ownership will be diluted. Additionally, the terms of securities we may issue in future capital-raising transactions may be more favorable for our new investors, and in particular may include preferences, superior voting rights and the issuance of warrants or other derivative securities, which may have additional dilutive effects. If we obtain additional financing by incurring debt, we may become subject to significant limitations and restrictions on our operations pursuant to the terms of any loan or credit agreement governing the debt, which would be in addition to those currently imposed by the MLSC Loan Agreement. Further, obtaining any loan, assuming a loan would be available when needed on acceptable terms, would increase our liabilities and future cash commitments. We may also seek funding from collaboration or licensing arrangements in the future, which may require that we relinquish potentially valuable rights to our product candidates or proprietary technologies or grant licenses on terms that are not favorable to us. Moreover, regardless of the manner in which we seek to raise capital, we may incur substantial costs in those pursuits, including investment banking fees, legal fees, accounting fees, printing and distribution expenses and other related costs.

Going Concern

From inception through March 31, 2016 we have not earned operating revenues from sales of products or services, and have recurring losses from operations. The continuation of our business as a going concern is dependent upon raising additional capital and eventually attaining and maintaining profitable operations. As of March 31, 2016, there is substantial doubt about the Company's ability to continue as a going concern. The unaudited interim consolidated financial statements and audited financial statements included in this prospectus do not include any adjustments that might be necessary should operations discontinue.

Critical Accounting Policies and Significant Judgments and Estimates

Pursuant to certain disclosure guidance issued by the SEC, the SEC defines "critical accounting policies" as those that require the application of management's most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain and may change in subsequent periods. Our critical accounting policies that we anticipate will require the application of our most difficult, subjective or complex judgments are as follows:

Basis of Presentation

The unaudited interim consolidated financial statements and audited financial statements included in this prospectus include the accounts of Arch Therapeutics, Inc. and its wholly owned subsidiary, Arch Biosurgery, Inc., a

biotechnology company. All intercompany accounts and transactions have been eliminated in consolidation.

The Company is in the development stage and is devoting substantially all of its efforts to developing technologies, raising capital, establishing customer and vendor relationships, and recruiting new employees.

Income Taxes

In accordance with FASB ASC 740, *Income Taxes*, we recognize deferred tax assets and liabilities for the expected future tax consequences or events that have been included in our financial statements and/or tax returns. Deferred tax assets and liabilities are based upon the differences between the financial statement carrying amounts and the tax bases of existing assets and liabilities and for loss and credit carryforwards using enacted tax rates expected to be in effect in the years in which the differences are expected to reverse. Deferred tax assets are reduced by a valuation allowance if it is more likely than not that some portion or all of the deferred tax asset will not be realized.

We provide reserves for potential payments of tax to various tax authorities related to uncertain tax positions when management determines that it is probable that a loss will be incurred related to these matters and the amount of the loss is reasonably determinable. We have no reserves related to uncertain tax positions as of March 31, 2016 and September 30, 2015.

Accounting for Stock-Based Compensation

The Company accounts for employee stock-based compensation in accordance with ASC 718, *Compensation-Stock Compensation* ("**ASC 718**") which requires all share-based payments to employees, including grants of employee stock options, to be recognized in the consolidated financial statements based on their fair values. The Company accounts for non-employee stock-based compensation in accordance with the guidance of ASC 505, *Equity* ("**ASC 505**"), which requires that companies recognize compensation expense based on the estimated fair value of options granted to non-employees over their vesting period, which is generally the period during which services are rendered by such non-employees. ASC 505 requires the Company to re-measure the fair value of stock options issued to non-employees at each reporting period during the vesting period or until services are complete.

In accordance with ASC 718, the Company has elected to use the Black-Scholes option pricing model to determine the fair value of options granted and recognizes the compensation cost of share-based awards on a straight-line basis over the vesting period of the award.

The determination of the fair value of share-based payment awards utilizing the Black-Scholes model is affected by the fair value of the Common Stock and a number of other assumptions, including expected volatility, expected life, risk-free interest rate and expected dividends. The Company does not have a history of market prices of its Common Stock, and as such volatility is estimated in accordance with ASC 718-10-S99 and Staff Accounting Bulletin ("**SAB**") No. 107, *Share-Based Payment* ("**SAB No. 107**"), using historical volatilities of similar public entities. For the life term for awards, the Company uses the simplified method for all "plain vanilla" options, as defined in SAB No. 107 and the contractual term for all other employee and non-employee awards. The risk-free interest rate assumption is based on observed interest rates appropriate for the terms of our awards. The dividend yield assumption is based on history and the expectation of paying no dividends. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. Stock-based compensation expense, when recognized in the consolidated financial statements, is based on awards that are ultimately expected to vest.

Derivative Liabilities

The Company accounts for its warrants and other derivative financial instruments as either equity or liabilities based upon the characteristics and provisions of each instrument, in accordance with ASC 815, *Derivatives and Hedging*. Warrants classified as equity are recorded at fair value as of the date of issuance on the Company's consolidated balance sheets and no further adjustments to their valuation are made. Warrants classified as derivative liabilities and other derivative financial instruments that require separate accounting as liabilities are recorded on the Company's consolidated balance sheets at their fair value on the date of issuance and will be revalued on each subsequent balance sheet date until such instruments are exercised or expire, with any changes in the fair value between reporting periods recorded as other income or expense. Management estimates the fair value of these liabilities using option pricing

models and assumptions that are based on the individual characteristics of the warrants or instruments on the valuation date, as well as assumptions for future financings, expected volatility, expected life, yield, and risk-free interest rate.

Recent Accounting Guidance

Accounting Standards Update (ASU) 2016-09, “Compensation—Stock Compensation (Topic 718) Improvements to Employee Share-Based Payment Accounting” was issued by the Financial Accounting Standards Board (FASB) in March 2016. The purpose of this amendment is to simplify 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 amendments in this Update are effective for public business entities for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2016. Early adoption is permitted. The Company does not believe that this guidance will have a material impact on its consolidated results of operations, financial position or disclosures.

ASU 2016-02, “Leases (Topic 842)” was issued by the FASB in February 2016. The purpose of this amendment requires the recognition of lease assets and lease liabilities by lessees for those leases previously classified as operating leases. The amendments in this Update are effective for public business entities for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2018. Early adoption is permitted. The Company does not believe that this guidance will have a material impact on its consolidated results of operations, financial position or disclosures.

ASU 2015-17, “Income Taxes (Topic 740) – Balance Sheet Classification of Deferred Taxes” was issued by the FASB in November 2015. The purpose of this amendment requires deferred tax assets and liabilities to be classified as noncurrent in a classified statement of financial position. The amendments in this Update are effective for public business entities for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2017. Early adoption is permitted. The Company does not believe that this guidance will have a material impact on its consolidated results of operations, financial position or disclosures.

ASU 2015-03, “Interest – Imputation of Interest (Subtopic 835-30) Simplifying the Presentation of Debt Issuance Costs” was issued by the FASB in April 2015. The purpose of this amendment requires that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with debt discounts. The amendments in this Update are effective for public business entities for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2015. Early adoption is permitted. The Company does not believe that this guidance will have a material impact on its consolidated results of operations, financial position or disclosures.

ASU 2015-02, “Consolidation (Topic 810) – Amendments to the Consolidation Analysis”, was issued by the FASB in February 2015. The purpose of this amendment is to change the analysis that a reporting entity must perform to determine whether it should consolidate certain types of legal entities. The amendments in this Update are effective for public business entities for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2015. Early adoption is permitted. The Company does not believe that this guidance will have a material impact on its consolidated results of operations or financial position or disclosures.

ASU 2014-16, “Derivatives and Hedging (Topic 815)” was issued by the FASB in November 2014. The primary purpose of the ASU is to determine whether the host contract in a Hybrid Financial Instrument issued in the form of a share is more akin to debt or equity. ASU 2014-16 is effective for public entities for the fiscal years and interim periods within those fiscal years, beginning after December 15, 2015. Early adoption is permitted. The Company does not believe that this guidance will have a material impact on its consolidated results of operations or financial position or disclosures.

ASU 2014-15, “Presentation of Financial Statements-Going Concern (Subtopic 205-40) – Disclosure of Uncertainties about an Entity’s Ability to ‘Continue as a Going Concern” was issued by the FASB in August 2014. The primary purpose of the ASU is to provide guidance in GAAP about management’s responsibility to evaluate whether there is substantial doubt about an entity’s ability to continue as a going concern and to provide related footnote disclosures. The amendments should reduce diversity in the timing and content of footnote disclosure. ASU 2014-15 is effective for the annual period ending after December 15, 2016, and for the annual periods and interim periods thereafter. Early adoption is permitted. The Company is currently assessing the impact of this guidance, but does not believe that it will have a material impact on its consolidated results of operations, financial position or disclosures.

ASU 2014-12, “Compensation-Stock Compensation (Topic 718) – Accounting for Share-Based Payments When the Terms of an Award Provide That a Performance Target Could Be Achieved after the Requisite Service Period” was issued by the FASB in June 2014. ASU 2014-12 requires that compensation cost should be recognized in the period in which it becomes probable that the performance target will be achieved and should represent the compensation cost attributable to the period(s) for which the requisite service has already been rendered. ASU 2014-12 is effective for public business entities for annual periods and interim periods within the annual periods beginning after December 15, 2015. Early adoption is permitted. The Company is currently assessing the impact of this guidance, but does not believe that it will have a material impact on its consolidated results of operations, financial position or disclosures.

ASU 2014-09, “Revenue from Contracts with Customers (Topic 606) was issued by the FASB in May 2014. The primary purpose of the ASU is to develop a common revenue standard for revenue recognition between the FASB and the International Accounting Standards Board (IASB). The ASU removes inconsistencies and weaknesses in revenue requirements, provides a more robust framework for addressing revenue issues, and improves comparability of revenue recognition practices across entities, industries, jurisdictions and capital markets, among other items. We are a development stage company and do not currently generate revenue. ASU 2014-09 is effective for public business entities for annual periods beginning after December 15, 2017. While we are a development stage company and do not currently generate revenue, we currently anticipate generating revenue by the effective date of this ASU and therefore will be subject to this guidance. The Company is currently assessing the impact of this guidance, but does not believe that it will have a material impact on its consolidated results of operations, financial position or disclosures.

Off-Balance Sheet Arrangements

We have no significant off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that is material to stockholders.

OUR BUSINESS

The following discussion should be read in conjunction with our consolidated financial statements and the related notes and other financial information included in this prospectus.

Corporate Overview

We were incorporated under the laws of the State of Nevada on September 16, 2009 with the name "Almah, Inc." to pursue the business of distributing automobile spare parts online. Effective June 26, 2013, we completed a merger (the "**Merger**") with Arch Biosurgery, Inc. (formerly known as Arch Therapeutics, Inc.), a Massachusetts corporation ("**ABS**"), and Arch Acquisition Corporation ("**Merger Sub**"), our wholly owned subsidiary formed for the purpose of the transaction, pursuant to which Merger Sub merged with and into ABS and ABS thereby became our wholly owned subsidiary. Prior to the completion of the Merger, we were a "shell company" under applicable rules of the SEC and had no or nominal assets or operations. As part of the acquisition, Almah management resigned and was replaced with ABS management. Upon our acquisition of ABS, we abandoned our prior business plan and changed our operations to the business of a biotechnology company.

For financial reporting purposes, the Merger represented a "reverse merger". ABS was deemed to be the accounting acquirer in the transaction and our predecessor. Consequently, the assets, liabilities, accumulated deficit and the historical operations that are reflected in our consolidated financial statements are those of ABS. All share information has been restated to reflect the effects of the Merger. Our financial information was consolidated with that of ABS after consummation of the Merger on June 26, 2013, and our historical financial statements before the Merger have been replaced with the historical financial statements of ABS before the Merger in this prospectus and will be so replaced in all future filings with the SEC that require financial statements to be included.

ABS was incorporated under the laws of the Commonwealth of Massachusetts on March 6, 2006 as Clear Nano Solutions, Inc., changed its name to Arch Therapeutics, Inc. on April 7, 2008, and changed its name from Arch Therapeutics, Inc. to Arch Biosurgery, Inc. upon the closing of the Merger on June 26, 2013.

Our Current Business

Our Company is in the development stage, has generated no operating revenues to date, and is devoting substantially all of its operational efforts to the development of our core technology. We aim to develop products that make surgery and interventional care faster and safer by using a novel approach to stop bleeding (referenced as "**hemostatic**" or "**hemostasis**"), control leaking (referenced as "**sealant**" or "**sealing**"), and provide other advantages during surgery and trauma care. Our core technology is based on a self-assembling peptide that creates a physical, mechanical barrier, which could be applied to seal organs or wounds that are leaking blood and other fluids. We believe our technology could support an innovative platform of potential products in the field of stasis and barrier applications. Our plan and business model is to develop products that apply that core technology for use with bodily fluids and tissues.

To date, the Company has principally raised capital through borrowings and the issuance of convertible debt and units consisting of Common Stock and warrants. The Company expects to incur substantial expenses for the foreseeable future relating to the research, development, clinical trials, and commercialization of its potential products. As of July 13, 2016, the Company believes that it will need to raise additional cash within the next twelve months. The Company will be required to raise the additional capital in order to continue to fund operations. However, there can be no assurance that the Company will be successful in securing additional resources when needed on terms acceptable to the Company, if at all. Therefore, there exists substantial doubt about the Company's ability to continue as a going concern.

Our Core Technology

Our primary product, AC5 Surgical Hemostatic Device™ (which we sometimes refer to as "**AC5**"or "**AC5™**", "**AC5 Surgical Hemostat**" or "**AC5 Surgical Hemostat™**"), relies on our self-assembling peptide technology and is designed to achieve hemostasis in minimally invasive and open surgical procedures. We intend to develop other product candidates based on our technology platform for use in a range of indications. AC5 is a synthetic peptide comprising L amino acids, commonly referred to as naturally occurring amino acids. When applied to a wound, AC5 intercalates into the interstices of the connective tissue where it self-assembles into a physical, mechanical nanoscale structure that provides a barrier to leaking substances, such as blood. We believe that the results of early data from preclinical tests have shown quick and effective hemostasis with the use of AC5 relative to that reported with other types of hemostatic agents, and that time to hemostasis is comparable among test subjects regardless of whether such test subject had or had not been treated with therapeutic doses of anticoagulant or antiplatelet medications, commonly called "blood thinners". Based on testing results to date, we believe that AC5 is biocompatible. AC5 is designed for application as a liquid, which we believe will make it user-friendly and able to conform to irregular wound geometry. Additionally, AC5 does not possess sticky or glue-like handling characteristics, which we believe will enhance its utility in several settings including, minimally invasive surgical procedures. Further, in certain settings, AC5 lends itself to a concept that we call Crystal Clear Surgery™; the transparency and physical properties of AC5 enable a surgeon to operate through it in order to maintain a clearer field of vision and prophylactically stop or lessen bleeding as it starts.

We have devoted much of our operational effort to date to the research and development of our core technology, including selecting our initial product composition, conducting initial safety and other related tests, generating scale-up, reproducibility and manufacturing and formulation methods, and developing and protecting the intellectual property rights underlying our technology platform. Manufacturing method and formulation optimization are important parts of peptide development. Manufacturing and formulation optimization for our product candidates, including AC5, has been and continues to be done with extensive collaboration among our team and partners. The processes are focused on optimizing traditional product parameters to target specifications covering performance, biocompatibility, physical appearance, stability, and handling characteristics, among others. We and our partners intend to monitor manufacturing and formulation methods closely, as success or failure in both setting and realizing appropriate specifications may directly impact the anticipated clinical trial and subsequent commercialization timelines for AC5.

Preclinical Development

We have recently completed the components of our planned preclinical program for AC5 that were requried before we started our first human safety and performance trial, which was initiated in early 2016. We are focused on scale-up of selected manufacturing methods and formulation optimization. In parallel, we are conducting further *in vivo* and *in vitro* tests, while additional testing will continue after completion of manufacturing scale-up and formulation optimization steps and the clinical trial. Self-assembling peptide manufacturing and formulation optimization are

challenging, and any delays could negatively impact anticipated clinical trial and subsequent commercialization timelines. In order to market and sell AC5 and other Arch planned products, successful human clinical trials, additional testing, and regulatory approvals and certifications will be required. A co-founding inventor of certain of our technology, Dr. Rutledge Ellis-Behnke, performed a significant portion of the early preclinical animal experimentation conducted on our technology. Some of the most significant findings from Dr. Ellis-Behnke's studies have been published. Additionally, through collaboration with the National University of Ireland system, preclinical bench-top and animal studies have been performed in Dublin and Cork, Ireland. As a continuation of our commitment to our product development we entered into a collaboration agreement with National University of Ireland Galway ("**NUIG**") in Galway, Ireland on May 28, 2015 (the "**Project Agreement**"). Pursuant to the Project Agreement, NUIG will provide, via the CÚRAM Centre for Research in Medical Devices ("**CÚRAM**"), a new major national research center headquartered at NUIG that was established in January 2015 as part of a six-year grant from the Irish government, personnel, infrastructure support and grant funding in connection with a research program intended to facilitate the continued development of the Company's core technology (the "**Project**"). Under the terms of the Project Agreement, which has a term that will end upon the earlier of the completion of the Project or the sixth anniversary of the execution date of the Project Agreement, we may contribute up to a maximum of two hundred and fifty thousand euro (€250,000) to the Project per year, and NUIG will match such funds at a 2:1 ratio using funds allocated to NUIG by Science Foundation Ireland's ("**SFI**") Research Centres Programme. In addition, while NUIG will initially retain ownership of all intellectual property developed in connection with the Project (collectively, "**Project IP**"), any such Project IP that was either based on or derived from our existing intellectual property ("**Derivative IP**") will be assigned back to us for a nominal fee. For any Project IP that does not constitute Derivative IP ("**Non-Derivative IP**"), we will have a right of first negotiation for an exclusive license to such Non-Derivative IP on customary terms for agreements of that nature including royalties on net sales in the low single-digits, in each case subject to a grant-back to NUIG for research and academic purposes. We have also engaged, on a fee for service basis, several private third party facilities in the United States and abroad to perform certain preclinical bench-top and animal studies, which are often conducted with assistance from our scientific team, and we continue to engage third parties for such services as needed and as appropriate.

In the preclinical animal tests conducted to date, AC5 has demonstrated rapid average time to hemostasis ("**TTH**") when applied to a range of animal tissues. Certain studies have tested TTH when using AC5 during surgical procedures compared to TTH when using a control substance, a saline control substance, a control peptide, and a cautery control substance during those same procedures. The results of those tests have shown a TTH of approximately 10 – 30 seconds when AC5 was applied, compared to a TTH ranging from 80 to significantly more than 300 seconds when various control substances were applied, depending on the nature of the control substance and procedure performed. In several studies comparing AC5 to popular commercially available branded hemostatic agents (absorbable cellulose, flowable gelatin with and without thrombin, and fibrin) applied to stop the bleeding from full thickness penetrating wounds surgically created in rat livers, AC5 achieved hemostasis in significantly less than 30 seconds, whereas the control products took from 50% to over 400% longer than AC5 to achieve hemostasis.

Additionally, the preclinical tests that have been conducted to date provide evidence that AC5 can stop bleeding in models of liver bleeding in animals that had been treated with therapeutic amounts of anticoagulant and antiplatelet medications, commonly called "blood thinners." In one preclinical study, an independent third-party research group obtained positive data assessing the use of AC5 in animals that had been treated with therapeutic doses of the antiplatelet medications Plavix® (clopidogrel) and aspirin, alone and in combination. The results of the study were consistent with data obtained from two prior preclinical studies, in which AC5 quickly stopped bleeding from surgical wounds created in rats following treatment with clinically relevant doses of the anticoagulant medication heparin. In these studies, the average TTH after AC5 was applied to bleeding liver wounds of animals that had been medicated with anticoagulants was comparable to the average TTH as measured in their non-anticoagulated counterparts. Similar results were obtained in independent third-party studies assessing the use of AC5 in patients on the anticoagulant heparin and in patients on the anti-platelet medication, ticagrelor (Brilinta® in the US, Brilique in Europe®.)

Finally, in preclinical tests conducted to date, AC5 has demonstrated biocompatibility and normal healing of tissue treated with the product. Further, animals whose liver, spleen, femoral artery, eye or brain was treated with AC5 have shown no ill effects. We believe that the peptide degrades into the amino acids from which it was originally synthesized, which are molecules that already exist in large quantities in the human body.

Our current and planned near-term activities are focused on manufacturing scale-up, formulation optimization, and other preclinical activities, and conducting clinical trial testing of AC5. On December 16, 2015, we announced that we had received clearance from a regulatory authority in Western Europe to initiate a human clinical trial to assess the safety and performance of AC5 in humans. The initial patient was treated in the first quarter of 2016 and on June 6, 2016, we announced that we had completed patient enrollment in this study.

Development and Commercialization Strategy

Our present business model is to operate with a relatively small internal team of key personnel and engage third party service providers to conduct larger scale research, development and manufacturing activities. Our internal team collectively has a broad range of expertise and experience working with and managing third party vendors. This general approach enables us to use the services of third party entities, which are expert, in various aspects of our operations, while preserving capital and efficiencies by avoiding certain internal scale-up costs and resource duplication.

Research and Development; Manufacturing

Use of Third Party Relationships

To date, we have engaged third party laboratory facilities run by experts in the U.S. and abroad to perform both research and preclinical and clinical development activities. Those engagements have assisted in our development of our primary product candidate, as well as our generation of appropriate analytical methods, scale-up, and other procedures for use as a "blueprint" for third party manufacturers to produce the product on a larger scale for purposes of further preclinical and clinical testing and ultimately, if required approvals are obtained, commercialization.

We have initiated the transition to traditional contract manufacturing and related organizations. We have commenced relationships and work with manufacturers operating with the current good manufacturing practices ("**cGMP**") required by applicable regulatory agencies in order to scale up and produce formulation material to be used for final preclinical testing and clinical trials.

Manufacturing Methods

We believe that the manufacturing methods used for a product, including the type and source of ingredients and the burden of waste byproduct elimination, are important determinants of its opportunity for profitability. Industry participants are keenly aware of the downsides of technologies that rely on expensive biotechnology techniques and facilities for manufacture, onerous and expensive programs to eliminate complex materials, or ingredients that are sourced from the complicated process of human or other animal plasma separation, since those products typically are expensive, burdensome to produce, and at greater risk for failing regulatory oversight.

The manufacturing methods that we intend to use to produce AC5 and other potential future product candidates rely on detailed, complex and difficult to manage synthetic organic chemistry processes. Although use of those methods requires that we engage manufacturers that possess the expertise, skill and know-how involved with those methods, the required equipment to use those methods is widely available. Furthermore, improvements in relevant synthetic manufacturing techniques over the past decade have reduced their complexity and cost, while increasing large-scale cGMP capacity. Moreover, our planned product candidates, including AC5, will be synthesized from naturally occurring ingredients that are not sourced from humans or other animals, but do exist in their natural state in humans. That type of ingredient may be more likely to be categorized as "generally recognized as safe", or "**GRAS**", by the U.S. Food and Drug Administration ("**FDA**").

Regulatory

Medical Device Classification

In February of 2015, we announced that The British Standards Institution ("**BSI**"), a Notified Body (which is a private commercial entity designated by the national government of a European Union ("**EU**") member state as being competent to make independent judgments about whether a medical device complies with applicable regulatory requirements) in the EU, confirmed that AC5 fulfills the definition of a medical device within the EU and will be classified as such in consideration for CE mark designation. The FDA and other regulatory authorities or related bodies finally determine the classification of AC5, and we anticipate that they will rule similarly to BSI. We believe that our primary product candidate meets the criteria for a medical device. Generally, a product is a medical device if it requires neither metabolic nor chemical activity to achieve the desired effect. Furthermore, a medical device can achieve its desired effects without requiring a body (animal/human), whereas a drug or a biologic requires a body in order to operate. The AC5 mechanism of assembly into a barrier can occur outside of a body and is accordingly consistent with the medical device definition.

Medical devices in the EU and the U.S. are classified along a spectrum. Class III status, which is the higher-level classification for devices compared to Classes II and I, involves additional procedures and regulatory scrutiny of the product candidate to obtain approvals. AC5 could be regulated as either a Class III or a Class II medical device in these jurisdictions, depending upon the application, subject to the process for obtaining a CE mark in the EU and the premarketing authorization process in the U.S.

Biocompatibility Tests and Clinical Trials

Before initiating our European or most other human clinical trials, we are required to have completed the biocompatibility assessment of AC5. Standard required tests to assess biocompatibility, as set forth in ISO 10993 issued by the International Organization for Standardization, may include:

- in vitro cytotoxicity;
- in vitro blood compatibility;
- in vitro Ames assay (mutagenic activity);
- irritation/intracutaneous reactivity;
- sensitization (allergenic reaction);
- implantation (performed on devices that contact the body’s interior);

- pyrogenicity (causing fever or inflammation);
- systemic toxicity; and
- in vitro chromosome aberration assay (structural chromosome changes).

We have completed the biocompatibility studies required to initiate our first human trial of AC5 in Western Europe, for which we announced on June 6, 2016, that enrollment is complete. Assuming successful trial results, we expect that we will pursue a CE mark, which is required in order to market and commercialize a medical device such as AC5 in Europe, prior to pursuing approval by the U.S. FDA. In addition, we will continue biocompatibility tests for AC5, as necessary, for additional indications, classifications, and/or jurisdictions.

We expect that we will pursue approvals for use of AC5 as a hemostatic agent in surgical and dermatological settings, and we may also seek to obtain approvals for additional potential indications for use of the product, which we may pursue either opportunistically or once initial regulatory approval for the product is obtained.

Commercialization

Our long-term commercialization plan for at least some of our product candidates could entail entering into one or more collaboration agreements or strategic partnerships. Based on our current general approach and strategy of utilizing the expertise and resources of third party service providers and maintaining a relatively small internal team, we currently expect that we may pursue some degree of strategic collaborations or partnerships with third parties, which could include licensing arrangements, distribution and supply partnerships, engagement of external regulatory experts and/or marketing and sales teams, among other types of potential relationships. We presently believe that certain relationships could improve our ability to obtain regulatory approval for our product candidates and attain market acceptance for and profitable sales of those product candidates, and that our current and planned activities and milestones relating to AC5 are well-aligned with the needs of the market and potential partners and collaborators that may wish to enter or expand their presence in our target markets.

We envision the potential future customers in the marketplace for AC5 and any other hemostatic or sealant agent we may pursue will include surgeons and other doctors, government agencies such as the Department of Defense, hospital and operating room management and ambulance and other trauma specialists.

Plan of Operations

Our long-term business plan includes the following goals:

- conducting required biocompatibility studies and, subsequently, clinical trials on AC5;
- expanding and maintaining protection of our intellectual property portfolio;
- developing appropriate third party relationships to manufacture, distribute, market and otherwise commercialize AC5;
- obtaining regulatory approval or certification of AC5 in the EU, the U.S., and other jurisdictions as we may determine;
- continuing or developing academic, scientific and institutional relationships to collaborate on product research and development; and
- developing additional product candidates in the hemostatic, sealant, and/or other fields.

In furtherance of our long-term business goals, we expect to continue to focus on the following activities during the next twelve months:

- seek additional funding as required to support the milestones described previously and our operations generally;
- work with our large scale manufacturing partners to scale up production of product compliant with cGMP, which activities will be ongoing as we seek to advance toward, enter into, and, if successful, subsequently increase commercialization activities;
- complete our first human clinical trial for AC5, which is currently underway;
- continue to expand and enhance our financial and operational reporting and controls;

- expand and enhance our intellectual property portfolio by filing new patent applications, obtaining allowances on currently filed patent applications, and/or adding to our trade secrets in self-assembly, manufacturing, analytical methods and formulation, which activities will be ongoing as we seek to expand our product candidate portfolio; and

- assess our self-assembling peptide platform in order to identify and select product candidates for advancement into development.

We believe that the Company currently has adequate capital to support operations through the initial regulatory approval process in Europe. If the regulatory authorities request additional clinical or non-clinical data prior to approval additional capital may be required. Additional European regulatory approvals could require an additional $2,000,000-$3,000,000. We further expect that the Company will require an additional $6,000,000 - $9,000,000 or more related to the initial regulatory process in the U.S. These estimated capital requirements potentially could increase significantly if a number of risks relating to conducting these activities were to occur, including without limitation those set forth under the heading "**RISK FACTORS**" in this filing. We anticipate that our operating and other expenses will continue to increase as we continue to implement our business plan and pursue and achieve these goals. After giving effect to the funds received in past equity and debt financings and assuming our use of that funding at the rate we presently anticipate, as of July 13, 2016, we believe that we will need to raise additional cash within the next twelve months. We could spend our financial resources much faster than we expect, in which case our current funds may not be sufficient to operate our business for the entire duration of that period.

We have no commitments for any future capital. As indicated above, we will require significant additional financing to fund our planned operations, including further research and development relating to AC5, seeking regulatory approval of that or any other product we may choose to develop, commercializing any product for which we are able to obtain regulatory approval or certification, seeking to license or acquire new assets or business, and maintaining our intellectual property rights, pursuing new technologies and for financing the investor relations and incremental administrative costs associated with being a public corporation. We do not presently have, nor do we expect in the near future to have, revenue to fund our business from operations, and we will need to obtain all of our necessary funding from external sources for the foreseeable future. We may not be able to obtain additional financing on commercially reasonable or acceptable terms when needed, or at all. If we cannot raise the money that we need in order to continue to develop our business, we will be forced to delay, scale back or eliminate some or all of our proposed operations. If any of these were to occur, there is a substantial risk that our business would fail and our stockholders could lose all of their investment.

Since inception, we have funded our operations primarily through debt borrowings and the issuance of convertible debt and units consisting of Common Stock and warrants, and we may continue to seek to do so in the future. If we obtain additional financing by issuing equity securities, our existing stockholders' ownership will be diluted. The terms of securities we may issue in future capital-raising transactions may be more favorable for our new investors. Further, newly issued securities may include preferences, superior voting rights and the issuance of warrants or other derivative securities, which may have additional dilutive effects. If we obtain additional financing by incurring debt, we may become subject to significant limitations and restrictions on our operations pursuant to the terms of any loan or credit agreement governing the debt. Further, obtaining any loan, assuming a loan would be available when needed

on acceptable terms, would increase our liabilities and future cash commitments. We may also seek funding from additional collaboration or licensing arrangements in the future, which may require that we relinquish potentially valuable rights to our product candidates or proprietary technologies or grant licenses on terms that are not favorable to us. Moreover, regardless of the manner in which we seek to raise capital, we may incur substantial costs in those pursuits, including investment-banking fees, legal fees, accounting fees, printing and distribution expenses and other related costs.

Industry and Competition

According to a 2012 report produced by MedMarket Diligence, LLC, approximately 114 million surgical and procedure-based wounds occur annually worldwide, including 36 million from surgery in the U.S. Since the early days of modern minimally invasive surgery in the 1990s, the percent of surgeries performed minimally invasively has increased significantly such that it is now widespread and common. Minimally invasive surgery is often called laparoscopic surgery, although there are additional types. Minimally invasive surgical procedures often present the surgeon with fewer margins for potential error and less capacity to deal with certain risks, such as excessive bleeding, without converting the surgery to a traditional open procedure. We believe that the performance and safety of both minimally invasive and traditional surgeries and other procedures could benefit from newer hemostatic agents and sealants, because surgical and trauma patients are at significant risk for morbidity and mortality from bleeding and/or leaking body fluid.

Additional trends that support a demand for hemostatic and sealant products include the following:

- overall procedure volume growth;
- ambulatory same day surgery volume growth;
- minimally invasive surgery procedure volume growth;
- efforts to reduce operating room time; and
- increased prevalence of anticoagulant use, which predispose patients to bleeding.

As a result of this demand, use of hemostatic agents and sealants is increasing. According to MedMarket Diligence, the market for these products achieved approximately $3.4 billion in worldwide sales in 2010 and is projected to reach $5.5 billion in 2015 and surpass $6.5 billion in 2017. Over two-thirds of those sales are for hemostats. Further, the projected growth rate and incremental demand for sealants may be even higher than that for hemostats due to a general lack of available products and potentially larger unmet need.

In spite of the large size of the market for these products, many available hemostatic agents and sealants possess a combination of limitations, including slow onset of action, general unreliability, user-unfriendliness, and risk for adverse effects, such as healing problems, adhesion formation, infection and other safety concerns. Many of the deficiencies of currently available hemostatic agents and sealants are comparable to those of their earlier-generation counterparts, as revolutionary advances in underlying technologies have been elusive.

In the course of developing AC5, we engaged commercial strategy and marketing consultants to understand the needs of potential customers and to assess product feature preferences. As we expected, better efficacy and reliability were identified as product features important to those customers, and we discovered that other product features are important to achieving broad market acceptance. Surgeons, operating room managers, sales representatives for currently available hemostatic products, and hospital decision-makers identified the following as desirable characteristics of a hemostatic agent, which we carefully considered in developing AC5 and which we believe are well satisfied by our primary product candidate:

- laparoscopic friendly;

- easily handled and applied;
- promotes a clear field of vision and does not obstruct view;
- non-viscous and flowable;
- non-sticky (to tissue or equipment);
- permits normal healing;
- indifferent to status of coagulation cascade or “blood thinning” drugs;
- non-toxic; and
- contains neither blood nor tissue components from either humans or other animals.

We anticipate that AC5 will meet these particular market demands, and we anticipate its use in minimally invasive or laparoscopic surgery as well as open surgery. While open surgery represents the more established market for hemostatic agents, the number of surgeries performed by minimally invasive techniques, including laparoscopic surgery, has been growing over the past two decades and is significant. Less invasive laparoscopic procedures tend to result in shorter recovery times, faster discharges, less scarring, less pain and less need for pain medications. Many of the hemostasis products currently available do not possess certain features and handling characteristics that are ideal for use in a laparoscopic setting. For instance, many available products are difficult to use laparoscopically because they tend to be sticky, powdery, fabric-based or are otherwise difficult to control and/or insert into the small tubes used during many laparoscopic procedures. We believe that the novel features and differentiating characteristics of AC5 will make it more suitable for laparoscopic surgeries than many or most presently available alternatives.

Further, available data indicates that there may be increased pressure to perform more complex surgeries at reduced costs, including conducting operations in less expensive outpatient settings. Although accurate current statistics are difficult to obtain, a National Health Statistics Report from 2006 and updated in 2009 indicates that outpatient surgery volume was increasing by approximately 5% annually, and a 2009 report covering U.S. surgical procedures suggests that inpatient surgery volume was declining 1% per year. We believe that a motivating factor of this trend may be the increased costs associated with hospital inpatient procedures performed in operating rooms, which, according to MedMarket Diligence, have been estimated to cost between $2,000 and $10,000 per hour. These costs likely motivate increased operating room throughput and increased volume of procedures performed in outpatient settings. Both of those trends highlight the need for highly effective hemostatic agents and sealants that can decrease operating room time for inpatient procedures and help to increase the safety of performing more types of procedures in less expensive outpatient settings.

Participants in the hemostatic and sealant market currently include large companies, such as Johnson & Johnson and its affiliated companies, Covidien plc and Baxter Healthcare Corporation, as well as various smaller companies such as The Medicines Company and a range of wound care companies.

Commercially available products in the hemostasis field with which we would expect AC5 to compete if it obtains required regulatory approvals can cost between $50 and $500 per procedure, with the higher value added products generally priced at the upper end of that range. Production costs of many of those products are significant, as they may require biotechnology or plasma separation technologies to manufacture, and they may require ingredients or other materials that are expensive to obtain. We believe that, assuming receipt of required regulatory approvals, AC5 will be well positioned to compete against currently available products as a result of its broad applicability in various types of surgical settings and its features that address drawbacks seen in many available hemostatic agents. Furthermore, our planned use of a manufacturing method that we expect will be relatively simple and cost-effective compared to methods used to manufacture many currently available hemostatic products could enable any future sales to be made at competitive price points within the market range.

Potential Disadvantages of AC5 Compared to the Competition

Some potential disadvantages of AC5 compared to the hemostatic agents currently on the market with which we would expect AC5 to compete if it obtains required regulatory approvals are as follows:

- The favorable handling characteristics of AC5 are the result of its non-sticky and non-glue-like nature. However, if a surgeon or healthcare provider requires a product to adhere tissues together, or provide similar glue-like action, then AC5 in its current form would not achieve that effect.

- While we project that AC5 will be relatively economical to manufacture at scale, it may not be able to compete from a price perspective with inexpensive means to stop bleeding, such as application of pressure or use of bandages or other inexpensive hemostatic agents.

- We have not completed preclinical and clinical human trials required to commercialize AC5, whereas the competition has done so where required for their marketed products. Accordingly, the safety and efficacy of AC5 still remains to be demonstrated to and accepted by required regulatory agencies prior to commercialization.

Research and Development Expenditures

Our research and development expenses to date have primarily included labor, third party consulting costs inclusive of manufacturing process development costs relating to our core technology and AC5 and costs related to clinical development. Research and development expense during the six month period ended March 31, 2016 was $800,288, a decrease of $1,942 compared to $802,230 for the six month period ended September 30, 2015. We expect our research and development activities and expenses to increase significantly as we execute on our business plan and pursue clinical trials.

Regulation by the FDA and Similar Foreign Agencies

Our research, development and clinical programs, as well as our manufacturing and marketing operations that may be performed by us or third party service providers on our behalf, are subject to extensive regulation in the U.S. and other countries. Most notably, we believe that AC5 will be subject to regulation as a medical device under the U.S. Food Drug and Cosmetic Act (the "**FDCA**") as implemented and enforced by the FDA and equivalent regulations enforced by foreign agencies in any other countries in which we desire to pursue commercialization. The FDA and its foreign counterparts generally govern the following activities that we do or will perform or that will be performed on our behalf, as well as potentially additional activities, to ensure that products we may manufacture, promote and distribute domestically or export internationally are safe and effective for their intended uses:

- product design, preclinical and clinical development and manufacture;

- product premarket clearance and approval;
- product safety, testing, labeling and storage;
- record keeping procedures;
- product marketing, sales and distribution; and
- post-marketing surveillance, complaint handling, medical device reporting, reporting of deaths, serious injuries or device malfunctions and repair or recall of products.

Pre-Marketing Regulation by the U.S. FDA

Medical Device Classification

As described previously, we expect that AC5 will be classified as a medical device because its primary desired activity does not depend on metabolic or chemical activity in a body. The FDA classifies medical devices into one of the following three classes on the basis of the amount of risk associated with the medical device and the controls deemed necessary to reasonably ensure their safety and effectiveness:

- Class I, requiring general controls, including labeling, device listing, reporting and, for some products, adherence to good manufacturing practices through the FDA's quality system regulations and pre-market notification;
- Class II, requiring general controls and special controls, which may include performance standards and post-market surveillance; or
- Class III, requiring general controls and approval of a premarket approval application ("**PMA**"), which may include post-market approval conditions and post-market surveillance.

Class III devices are those that are deemed by the FDA to pose the greatest risks, such as life-sustaining, life-supporting or implantable devices, or that have a new intended use or use advanced technology that is not substantially equivalent to that of a legally marketed device. As a result of the intended use of AC5 and the novel technology on which is it based, we anticipate that the FDA will classify it as a Class III or Class II medical device.

As described previously, AC5 fulfills the definition of a medical device in Europe. We anticipate that the FDA will rule similarly. We further anticipate that AC5 could be regulated as either a Class III or a Class II medical device in these jurisdictions, depending upon the application.

PMA Approval Process

A PMA must be submitted to the FDA if a device cannot be cleared through another approval process or is not otherwise exempt from the FDA's premarket clearance and approval requirements. A PMA is required for most Class III medical devices. A PMA must generally be supported by extensive data, including without limitation technical, preclinical, clinical trial, manufacturing and labeling data, to demonstrate to the FDA's satisfaction the safety and efficacy of the device for its intended use. During the review period, the FDA will typically request additional information or clarification of the information previously provided. Also, an advisory panel of experts from outside the FDA may be convened to review and evaluate the PMA and provide recommendations to the FDA as to the approvability of the device, although the FDA may or may not accept any such panel's recommendation. In addition, the FDA will generally conduct a pre-approval inspection of the manufacturing facility or facilities involved with producing the device to ensure compliance with the cGMP regulations. Upon approval of a PMA, the FDA may require that certain conditions of approval, such as conducting a post-market approval clinical trial, be met.

The PMA approval process can be lengthy and expensive and requires an applicant to demonstrate the safety and efficacy of the device based, in part, on data obtained from clinical trials. The PMA process is estimated to take from one to three years or longer, from the time the PMA application is submitted to the FDA until an approval is obtained.

Further, if post-approval modifications are made that affect the safety or efficacy of the device, including, for example, certain types of modifications to the device's indication for use, manufacturing process, labeling or design, then new PMAs or PMA supplements would be required. PMA supplements often require submission of the same type of information as a PMA, except that the supplement is typically limited to information needed to support the changes from the device covered by the original PMA and accordingly may not require as extensive clinical and other data.

We expect that we will need to obtain PMA approval in order to sell AC5 in the U.S., but the FDA will ultimately determine whether a PMA is the appropriate approval to be obtained. We have not submitted to the FDA any PMA covering AC5 or commenced the required clinical trials. If we are able to conduct successful preclinical studies and submit a PMA, the FDA may not grant PMA approval of AC5 for the desired indications of use, on a timely basis, or at all. Our inability to achieve regulatory approval for AC5 in the U.S., a large market for hemostatic products, would materially adversely affect our ability to grow our business.

Clinical Trials

Obtaining PMA approval requires the completion of human clinical trials that produce successful results demonstrating the safety and efficacy of the product. Clinical trials for a Class III medical device typically require an application for an investigational device exemption ("**IDE**"), which would need to be approved in advance by the FDA for a specified number of patients and study sites. Human clinical trials are subject to extensive monitoring, recordkeeping and reporting requirements, and must be conducted under the oversight of an institutional review board ("**IRB**") for the relevant clinical trial sites and comply with applicable FDA regulations, including those relating to good clinical practices ("**GCP**").

In order to complete a clinical trial, we would be required to enroll a sufficient number of patients to conduct the trial after obtaining each patient's informed consent in a form and substance that complies with both FDA requirements and state and federal privacy and human subject protection regulations. Many factors could lead to delays or inefficiencies in conducting clinical trials, some of which are discussed under the heading "**RISK FACTORS**" in this prospectus. Further, we, the FDA or the IRB could suspend a clinical trial at any time for various reasons, including a belief that the risks to the subjects of the trial outweigh the anticipated benefits. Even if a trial is completed, the results of clinical testing may not adequately demonstrate the safety and efficacy of the device or may otherwise not be sufficient to obtain FDA clearance or approval to market the product in the U.S.

On December 16, 2015, we announced that we had received clearance from a regulatory authority in Western Europe to initiate a human clinical trial to assess the safety and performance of AC5 in humans. The initial patient was treated in the first quarter of 2016 and on June 6, 2016, we announced we had completed patient enrollment in this study.

Pre-Marketing Regulation in the EU

Medical Device Classification

Similar to the U.S., the EU recognizes different classes of medical devices. The EU recognizes Class I, Class IIa, Class IIb or Class III medical devices, with the classification determination depending on the amount of potential risk to the patient associated with use of the medical device. Classification involves rules found in the EU's Medical Device Directive. Key questions of relevance include the degree of the device's contact with the patient, invasiveness, active nature, and indications for use. The medical device classes recognized in the EU are as follows:

- Class I, which are considered low risk devices, such as wheelchairs and stethoscopes, and require pre-market notification prior to placing the devices onto the EU market;
- Class IIa, which are considered low-medium risk devices and require certification by a Notified Body;
- Class IIb, which are considered medium-high risk devices and require certification by a Notified Body; and
- Class III, which are considered high-risk devices and require certification by a Notified Body.

In February of 2015, we announced that BSI confirmed that AC5 fulfills the definition of a medical device within the EU and will be classified as such in consideration for CE mark designation. We anticipate that AC5 could be regulated as either a Class III or a Class II medical device in these jurisdictions, depending upon the application.

CE Mark Approval Process

The EU has adopted numerous directives and standards regulating the design, manufacture, clinical trials, labeling, and adverse event reporting for medical devices. Each EU member state has implemented legislation applying these directives and standards at a national level. Many countries outside of the EU have also voluntarily adopted laws and regulations that mirror those of the EU with respect to medical devices.

Under applicable EU medical device directives, a CE mark is a symbol placed on a product that declares the product's compliance with the essential requirements of applicable EU health, safety and environmental protection legislation. In order to receive a CE mark for a product candidate, the company producing the product candidate must select a country in which to apply. Each country in the EU has one competent authority ("**CA**") that implements the national regulations by interpreting the EU directives. CAs also designate and regulate Notified Bodies. An assessment by a Notified Body in the selected country within the EU is required in order to commercially distribute the device. In addition, compliance with ISO 13485 issued by the International Organization for Standardization, among other standards, establishes the presumption of conformity with the essential requirements for CE marking. Certification to the ISO 13485 standard demonstrates the presence of a quality management system that can be used by a manufacturer for design and development, production, installation and servicing of medical devices and the design, development and provision of related services.

Devices that comply with the requirements of the laws of the selected member state applying the applicable EU directive are entitled to bear a CE mark and can be distributed throughout the member states of the EU, as well as in other countries that have mutual recognition agreements with the EU or have adopted the EU's regulatory standards.

We have identified several potential countries through which we may pursue a CE mark for AC5.

Clinical Trials

As with U.S. Class III and certain Class II medical device approvals, EU Class III and certain Class II medical device approvals require the successful completion of human clinical trials. However, there are several key differences between the jurisdictions with respect to the approvals and processes. Obtaining a CE mark is not equivalent to obtaining FDA approval, in that a CE mark confirms the safety, but not the effectiveness, of a product. Furthermore, a CE mark affixed to a product serves as a declaration by the responsible party that the product conforms to applicable provisions and that relevant conformity assessment procedures have been completed with respect to the product. Accordingly, we anticipate that the required EU clinical trial(s) for AC5 will be smaller, faster, and less expensive than what we expect would be required for AC5 to obtain equivalent approvals in the U.S.

Post-Approval Regulation

After a medical device obtains approval from the applicable regulatory agency and is launched in the market, numerous post-approval regulatory requirements would apply. Many of those requirements are similar in the U.S. and in member states of the EU, and include:

- product listing and establishment registration;

- requirements that manufacturers, including third-party manufacturers, follow stringent design, testing, control, documentation and other quality assurance procedures during all aspects of the design and manufacturing process;

- labeling and other advertising regulations, including prohibitions against the promotion of products for uncleared, unapproved or off-label use or indication;

- approval of product modifications that affect the safety or effectiveness of any of our devices that may achieve approval;

- post-approval restrictions or conditions, including post-approval study commitments;

- post-market surveillance regulations, which apply, when necessary, to protect the public health or to provide additional safety and effectiveness data for the device;

- the recall authority of the applicable government agency and regulations pertaining to voluntary recalls; and

- reporting requirements, including reports of incidents in which a product may have caused or contributed to a death or serious injury or in which a product malfunctioned, and notices of corrections or removals.

Failure by us or by our third-party manufacturers and other suppliers to comply with applicable regulatory requirements could result in enforcement action by various regulatory authorities, which may result in monetary fines, the imposition of operating restrictions, product recalls, criminal prosecution or other sanctions.

Regulation by Other Foreign Agencies

International sales of medical devices outside the EU may be subject to government regulations in each country in which the device is marketed and sold, which vary substantially from country to country. The time required to obtain approval by a non-EU foreign country may be longer or shorter than that required for FDA or CE mark clearance or approval, and the requirements may substantially differ.

Other Governmental Regulations and Environmental Matters

We are or may become subject to various laws and regulations regarding laboratory practices and the use of animals in testing, as well as environmental laws and regulations governing, among other things, any use and disposal by us of hazardous or potentially hazardous substances in connection with our research. At this time, costs attributable to environmental compliance are not material. In each of these areas, applicable U.S. and foreign government agencies have broad regulatory and enforcement powers, including, among other things, the ability to levy fines and civil penalties, suspend or delay issuance of approvals, seize or recall products, and withdraw approvals, any one or more of which could have a material adverse effect on our business. Additionally, if we are able to successfully obtain approvals for and commercialize our product candidates, then the Company and our products may become subject to various federal, state and local laws targeting fraud, abuse, privacy and security in the healthcare industry.

Intellectual Property

We are focused on the development of self-assembling compositions, particularly self-assembling peptide compositions, and methods of making and using such compositions in medical and non-medical applications. Suitable applications of these compositions include limiting or preventing the movement of bodily fluids and contaminants within or on the human body, preventing adhesions, treatment of leaky or damaged tight junctions, and reinforcement of weak or damaged vessels, such as aneurysms. Our strategy to date has been to develop an intellectual property portfolio in high-value jurisdictions that tend to uphold intellectual property rights.

Our patent portfolio, which covers self-assembling peptides and methods of use thereof, includes four granted patents, and eighteen pending applications in nine jurisdictions.

We have also entered into a license agreement with MIT pursuant to which we have been granted exclusive rights under one portfolio of patents and non-exclusive rights under another portfolio of patents. The portfolio exclusively licensed from MIT and Versitech Limited includes thirteen patents that have been either allowed, issued or granted and nine applications that are pending in nine jurisdictions. The portfolio non-exclusively licensed from MIT includes

a number of PCT applications which have now entered the national and regional phases outside of the US, including nine issued patents in three jurisdictions that expire between 2016 and 2027 (absent patent term extension), and two pending patent applications in two jurisdictions. Because a portion of our patent portfolio has been in-licensed on a non-exclusive basis, other parties may be able to develop, manufacture, market and sell products with similar features covered by the same patent rights and technologies, which in turn could significantly undercut the value of any of our product candidates and adversely affect our business. One of our licensed MIT European patents was recently opposed, however this patent was maintained in amended form following an administrative hearing.

Our license agreement with MIT imposes certain diligence, capital raising, and other obligations on us, including obligations to raise certain amounts of capital by specific dates. Additionally, we are responsible for all patent prosecution and maintenance fees under that agreement. Our breach of any material terms of our license agreement with MIT could permit the counterparty to terminate the agreement, which could result in our loss of some or all of our rights to use certain intellectual property that is material to our business and our lead product candidate. Our loss of any of the rights granted to us under our license agreement with MIT could materially harm our product development efforts and could cause our business to fail.

We also were granted a non-exclusive sub-license of a patent assigned to MIT and in turn licensed by MIT to the sub-licensing third party. This patent expired in 2014. This sub-license was a fully-paid and royalty-free license and did not provide any outbound license grant to any ABS owned or exclusively licensed intellectual property. We presently do not anticipate any material impact on our business or operations resulting from the expiration of this patent in 2014.

Our trademarks include AC5 Surgical Hemostatic Device™, AC5 Surgical Hemostat™, AC5™, Crystal Clear Surgery™, NanoDrape™ and NanoBioBarrier™.

Employees

We presently have six full-time employees and one part-time employee, and make extensive use of third party contractors, consultants, and advisors to perform many of our present activities. We expect to increase the number of our employees as we increase our operations.

Properties

We do not own any real property. In October 2013, we entered into a one and one-half year operating sublease agreement pursuant to which we leased the office space of our relocated headquarters in Wellesley, Massachusetts for a base annual rent equal to $5,031 per month. In April 2015, we moved our corporate offices to a property in Framingham, Massachusetts. We entered into a month-to-month operating lease agreement, pursuant to which we are obligated to pay monthly rent of $2,000, with a minimum six month commitment. We believe our present offices are suitable for our current and planned near-term operations.

Legal Proceedings

In the ordinary course of business, we may become a party to legal proceedings involving various matters. We are unaware of any such legal proceedings presently pending to which we or our subsidiary is a party or of which any of our property is the subject that management deems to be, individually or in the aggregate, material to our financial condition or results of operations.

DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Set forth below is certain information regarding our current directors and executive officers:

Name	Position	Age	Director/Officer Since
Dr. Avtar Dhillon	Chairman of the Board of Directors	55	April 2013
James R. Sulat	Director	65	August 2015
Dr. Terrence W. Norchi	President, Chief Executive Officer and Director	51	April 2013
Richard E. Davis	Chief Financial Officer	58	July 2014

Business Experience

The following is a brief account of the education and business experience of our current directors and executive officers during at least the past five years, indicating their principal occupation during the period, and the name and principal business of the organization by which they were employed:

Dr. Avtar Dhillon. Dr. Dhillon has served as the Chairman of our Board of Directors since April 2013 and has been on the Board of Directors of ABS since May 2011. Previously, Dr. Dhillon was the President and Chief Executive Officer of Inovio Pharmaceuticals, Inc. (formerly Inovio Biomedical Corporation) (NYSE Euronext: INO) from October 2001 to June 2009, as President and Chairman of Inovio from June 2009 until October 2009, as Executive Chairman until August 2011, and as Chairman from September 2011. During his tenure at Inovio, Dr. Dhillon led the successful turnaround of the company through a restructuring, acquisition of technology from several European and North American companies, and a merger with VGX Pharmaceuticals to develop a vertically integrated DNA vaccine development company with one of the strongest development pipelines in the industry. Dr. Dhillon led multiple successful financings for Inovio and concluded several licensing deals that included global giants, Merck and Wyeth (now Pfizer). Prior to joining Inovio, Dr. Dhillon was vice president of MDS Capital Corp. (now Lumira Capital Corp.), one of North America's leading healthcare venture capital organizations. In July 1989, Dr. Dhillon started a medical clinic and subsequently practiced family medicine for over 12 years. Dr. Dhillon has been instrumental in successfully turning around struggling companies and influential as an active member in the biotech community. From March 1997 to July 1998, Dr. Dhillon was a consultant to Cardiome Pharma Corp. (NASDAQ: CRME), where he lead a turnaround based on three pivotal financings, establishing a clinical development strategy, and procuring a new management team. In his role as a founder and board member of companies, Dr. Dhillon has been involved in several early stage healthcare focused companies listed on U.S. or Canadian stock exchanges, which have successfully matured through advances in their development pipeline and subsequent M&A transactions. Most recently, he was a founding board member (May 2003) of Protox Therapeutics, Inc. (TSX-V: SHS) (now Sophiris Bio Inc.), a publicly traded specialty pharmaceutical company. Dr. Dhillon maintained his board position until the execution of a financing of up to $35 million with Warburg Pincus in November 2010. Dr. Dhillon currently sits on the Board of Directors of BC Advantage Funds, a Venture Capital Corporation in British Columbia, and since March 2012 has been the Chairman of the Board of Directors of Stevia First Corp. (OTCQB: STVF), an agricultural biotechnology company

engaged in the cultivation and harvest of stevia leaf and the development of stevia products. Since March 2011, Dr. Dhillon has also served as the Chairman of the Board of Directors of OncoSec Medical, Inc. (OTCQB: ONCS), a company developing its advanced-stage ImmunoPulse DNA-based immunotherapy to treat solid tumor and metastatic cancers. Dr. Dhillon adds value to our Board of Directors with his extensive experience as a member of boards of directors and senior management of other public companies and with his experience in company building, financing, and licensing with large industry partners.

James R. Sulat.

Mr. Sulat served as Chief Executive Officer and Chief Financial Officer of Maxygen Inc., a biopharmaceutical company focused on developing improved versions of protein drugs, from October 2009 to June 2013. Prior to this, he was Chief Executive Officer, Chief Financial Officer and a member of the Board of Directors at Memory Pharmaceuticals Corp., which developed innovative drug candidates for the treatment of debilitating central nervous system disorders, from 2005 to 2008. He previously served in senior executive roles for R.R. Donnelley & Sons, Co., Chiron Corporation, Stanford Health Services, Inc., and Esprit de Corp, Inc. He currently serves as Chairman of the Board of Directors of Momenta Pharmaceuticals, Inc., a biotechnology company focused on the analysis, characterization and design of complex pharmaceutical products. He also currently serves as a member of the Board of Directors of Valneva SE, AMAG Pharmaceuticals, Inc. and DiaDexus, Inc. Mr. Sulat received a BS in Administrative Sciences from Yale University and an MBA and MS in Health Services Administration from Stanford University. Mr. Sulat brings to our Board of Directors extensive experience with public and financial accounting matters, experience as a chief executive officer and chief financial officer, and experience serving on other boards of directors in the biopharmaceutical industry.

Dr. Terrence W. Norchi. Terrence W. Norchi, MD, our co-founder, serves as our President and Chief Executive Officer, and he is a director on our Board of Directors. Dr. Norchi also served as our Interim Chief Financial Officer through June 26, 2013. Dr. Norchi has served in similar positions since co-founding ABS, our predecessor company in 2006. Prior to ABS, Dr. Norchi was a portfolio manager of one of the world's largest healthcare mutual funds and a pharmaceutical analyst at Putnam Investments from April 2002 to September 2004. Prior to that, he served as the senior global biotech and international pharmaceutical equity analyst at Citigroup Asset Management, and as a sell-side analyst covering non-U.S. pharmaceutical equities at Sanford C. Bernstein in New York City. Dr. Norchi earned an M.B.A. from the Massachusetts Institute of Technology, Sloan School of Management in 1996. Dr. Norchi earned an M.D. degree in 1990 from Northeast Ohio Medical University and completed his internal medicine residency in 1994 at Baystate Medical Center, Tufts University School of Medicine, where he was selected to serve as the Chief Medical Resident. Dr. Norchi brings to our Board of Directors and management team invaluable experience and knowledge of our core technology and proposed product candidates as a result of his first-hand experience with the development of that technology, having ushered it from the research laboratory to its current stage of development. His investing experience as a former public company analyst and a portfolio manager provides further insights and value as the company advances toward commercialization. Dr. Norchi serves on the Board of Overseers of the Boston Museum of Science.

Richard E. Davis. Mr. Davis brings a proven and successful record of more than 25 years of progressive and diversified business, financial and operational leadership within both publicly traded and privately held, domestic and multinational companies. From July 2001 through July 2014, he has been an advisor to small and mid-size companies assisting them in their strategizing, accounting, financial reporting, and investor and banking needs. From February 2001 until June 2011, he was President, Chief Operating Officer and Chief Financial Officer at NMT Medical, Inc., a NASDAQ-traded medical device company. Mr. Davis also served on its Board of Directors. In this role he developed and executed strategic and operational plans that resulted in revenue growth of 35 percent, 13 consecutive quarters of profitability, increased stock price and analyst coverage from five major investment firms; directed the stabilization of a French subsidiary and led successful efforts in raising $6 million from institutional investors to fund ongoing FDA-approved clinical trials. Prior to that, he was Vice President and Chief Financial Officer at Q-Peak, Inc., where he oversaw all financial and administrative functions. Earlier, he worked in a variety of senior level positions at the Coleman Company, The TJX Companies, Inc. and Wang Laboratories. He holds a Master of Business Administration degree with a Finance concentration from Babson College and a Bachelor of Business Administration degree from the University of Massachusetts Amherst.

Term of Office of Directors

Our directors are elected at each annual meeting of stockholders and serve until the next annual meeting of stockholders or until their successor has been duly elected and qualified, or until the earlier of their death, resignation or removal.

Family Relationships

No family relationships exist between any of our current or former directors or executive officers.

Involvement in Certain Legal Proceedings

No director, executive officer or control person of the Company has been involved in any legal proceeding listed in Item 401(f) of Regulation S-K in the past 10 years.

Audit Committee

Our Board of Directors has not established a separate standing audit committee within the meaning of Section 3(a)(58)(A) of the Exchange Act. Instead, the entire Board of Directors presently acts as the audit committee within the meaning of that section and will continue to do so upon the appointment of any new directors until such time as a separate standing audit committee has been established. Our Board of Directors has determined that Mr. Sulat is an "audit committee financial expert" as defined by applicable SEC rules.

EXECUTIVE COMPENSATION

The following table summarizes all compensation recorded by us in each of the fiscal years ended September 30, 2015 and September 30, 2014 for (i) our principal executive officer; (ii) our two next most highly compensated executive officers whose total compensation exceeded $100,000 during our last completed fiscal year; and (iii) certain of our other executive officers, whose compensation is voluntarily provided.

Summary Compensation Table

Name	Fiscal Year	Salary ($)	Bonus $	Option Awards ($) (4)	All other Compensation ($)	Total ($)
Dr. Terrence W. Norchi	2015	325,000	77,000	138,865		540,865
President and Chief Executive Officer (1)	2014	308,333	82,500	157,475	—	548,308
William M. Cotter,	2015	230,000	—	—		230,000
Chief Operating Officer (2)	2014	218,333	35,000	110,232	—	363,565
Richard E. Davis	2015	212,500	55,000	117,205		384,705
Chief Financial Officer (3)	2014	87,199	—	94,168	—	181,367

(1) Dr. Norchi was the President and Chief Executive Officer of ABS since its inception in 2006, and was appointed as our President, Chief Executive Officer and Interim Chief Financial Officer on April 23, 2013. Dr. Norchi resigned as our Interim Chief Financial Officer on June 26, 2013.

(2) Mr. Cotter was appointed as our Chief Operating Officer on July 2, 2013, and resigned as both an employee of the Company and as its Chief Operating Officer on June 15, 2015. Salary amounts reflected include amounts earned by Mr. Cotter in connection with his service as an executive officer of the Company during the fiscal years ended September 30, 2015 and 2014 and, for the fiscal year ended September 30, 2015, $60,000 paid to Mr. Cotter in connection with his Separation Agreement.

(3) Effective July 7, 2014, Mr. Davis was appointed as the Company's Chief Financial Officer. Salary amounts reflected for the fiscal year ended September 30, 2014 include $45,833 earned by Mr. Davis in connection with his service as an executive officer of the Company and $41,366 for consulting services provided prior to his appointment as Chief Financial Officer.

(4) Represents the aggregate grant date fair values of awards granted during the fiscal years ended September 30, 2015 and 2014 under ASC Topic 718, which is calculated as of the grant date using a Black-Scholes option-pricing model. Accordingly, the dollar amounts listed do not necessarily reflect the dollar amount of compensation that may be realized by our executive officers. For information on the valuation assumptions with respect to option grants made during the fiscal years ended September 30, 2015 and 2014, refer to Note 9 "Stock-Based Compensation" in our consolidated financial statements included in this filing. In its prior filings, the Company reported the value of the option awards for the fiscal year ended September 30, 2014 based on the fair value of the option grants that were recognized during such fiscal year, which were as follows: $56,412, $260,777 and $29,019 for Dr. Norchi, Mr. Cotter and Mr. Davis, respectively.

Employment Agreements with Named Executive Officers

Terrence W. Norchi

On June 25, 2013, we entered into an executive employment agreement with Dr. Terrence W. Norchi, our President and Chief Executive Officer and a member of our Board of Directors, which became effective as of June 26, 2013. Dr. Norchi's employment agreement continues until terminated by Dr. Norchi, or us and provided for an initial annual base salary of $275,000 and eligibility to receive an annual cash bonus in an amount up to 30% of Dr. Norchi's then-current annual base salary. Annual bonuses are awarded at the sole discretion of our Board of Directors. If Dr. Norchi's employment is terminated by us (unless such termination is "For Cause" (as defined in his employment agreement)), or by Dr. Norchi for "Good Reason" (as defined in his employment agreement), then Dr. Norchi, upon signing a release in favor of the Company, will be entitled to severance in an amount equal to 12 months of Dr. Norchi's then-current annual base salary, payable in the form of salary continuation, plus, if Dr. Norchi elects and subject to certain other conditions, payment of Dr. Norchi's premiums to continue his group health coverage under COBRA until the earlier of (i) 12 months following the date of such termination; or (ii) the date Dr. Norchi becomes covered under another employer's health plan. In addition, Dr. Norchi's employment agreement provides that, in the event of a change of control of the Company, termination by Dr. Norchi for Good Reason, termination by the Company for any reason other than For Cause, or termination as a result of Dr. Norchi's death, all unvested shares under outstanding equity grants to Dr. Norchi, if any, shall automatically accelerate and become fully vested. On March 13, 2014, Mr. Norchi's employment agreement was amended to increase his annual base salary by $50,000 to $325,000, retroactively effective as of February 1, 2014, and increase his cash bonus eligibility from 30% of his annual base salary to 35% of his annual base salary.

Dr. Norchi's employment agreement provides the following definitions of "For Cause" and "Good Reason": (a) "For Cause" is (i) the commission by the executive of a crime involving dishonesty, breach of trust, or physical harm to any person, (ii) executive's engagement by the executive in conduct that is in bad faith and materially injurious to the Company, (iii) commission by the executive of a material breach of the employment agreement which is not cured within 20 days after the executive receives written notice of such breach, (iv) willful refusal by the executive to implement or follow a lawful policy or directive of the Company, which breach is not cured by the executive within 20 days after receiving written notice from the Company, (v) or executive's engagement in misfeasance or malfeasance demonstrated by a pattern of failure to perform job duties diligently and professionally (other than any such failure resulting from Executive's incapacity due to physical or mental illness); and (b) "Good Reason" is, without the executive's written consent, (1) a material reduction in executive's annual base salary, except for reductions that are comparable to reductions generally applicable to similarly-situated executives of the Company, (2) the relocation of executive to a facility or location that is more than 50 miles from his primary place of employment and such relocation results in an increase in executive's one-way driving distance by more than 50 miles, or (3) a material and adverse change in executive's authority, duties, or responsibilities with the Company or a material and adverse change in executive's reporting relationship within the Company.

In connection with our entry into the executive employment agreement with Dr. Norchi, effective on June 26, 2013, Dr. Norchi's former employment agreement with ABS was terminated pursuant to a termination agreement and release between Dr. Norchi and ABS.

William M. Cotter

On July 2, 2013, we entered into an executive employment agreement with Mr. Cotter, our Chief Operating Officer. The agreement continues until terminated by us or by Mr. Cotter. Pursuant to the terms of Mr. Cotter's employment agreement, Mr. Cotter was entitled to an initial annual base salary of $175,000 and was eligible to receive an annual cash bonus in an amount of up to 20% of Mr. Cotter's then-current annual base salary. Annual bonuses are awarded at the sole discretion of our Board of Directors. If Mr. Cotter's employment is terminated by us (unless such termination is "For Cause" (as defined in his employment agreement)), or by Mr. Cotter for "Good Reason" (as defined in his employment agreement), then Mr. Cotter, upon signing a release in favor of the Company, would be entitled to severance in an amount equal to six months of Mr. Cotter's then-current annual base salary payable in the form of salary continuation, plus monthly reimbursement of up to $1,200 for Mr. Cotter's health, dental and vision benefits coverage premiums until the earlier of (i) 12 months following the date of such termination, or (ii) the date Mr. Cotter becomes covered under another employer's health plan. In addition, in the event of a change of control of the Company, termination by Mr. Cotter for Good Reason, or termination as a result of Mr. Cotter's death or disability, the agreement provides that all unvested shares under outstanding equity grants to Mr. Cotter, if any, shall accelerate and become fully vested. On March 13, 2014, Mr. Cotter's employment agreement was amended to increase his annual base salary by $65,000 to $240,000, retroactively effective as of February 1, 2014, and increase his cash bonus eligibility from 20% of his annual base salary to 25% of his annual base salary.

The agreement provides the following definitions of “For Cause” and “Good Reason”: (a) “For Cause” is (i) the commission by the executive of a crime involving dishonesty, breach of trust, or physical harm to any person, (ii) executive’s engagement by the executive in conduct that is in bad faith and materially injurious to the Company, (iii) commission by the executive of a material breach of the employment agreement which is not cured within 20 days after the executive receives written notice of such breach, (iv) willful refusal by the executive to implement or follow a lawful policy or directive of the Company, which breach is not cured by the executive within 20 days after receiving written notice from the Company, (v) or executive’s engagement in misfeasance or malfeasance demonstrated by a pattern of failure to perform job duties diligently and professionally; and (b) “Good Reason” is, without the executive’s written consent, (1) a material reduction in the executive’s annual base salary (except for reductions that are comparable to reductions generally applicable to similarly-situated executives of the Company), (2) a relocation of the executive to a facility or location that is more than 50 miles from his primary place of employment and results in an increase in one-way driving distance by more than 50 miles (provided that any such relocation shall not constitute Good Reason if the executive is permitted to perform his duties remotely from or near his home for two weeks per month), or (3) a material and adverse change in the executive’s authority, duties, or responsibilities with the Company or reporting relationship within the Company.

On June 15, 2015, the Company and Mr. Cotter entered into a Separation Agreement (the "**Separation Agreement**") pursuant to which Mr. Cotter resigned as an employee and as the Company's Chief Operating Officer, agreed to the termination of his executive employment agreement, as amended, and agreed to provide certain advisory services to the Company. Under the terms of the Separation Agreement, which also contains customary post-employment covenants, the Company has agreed to (i) pay Mr. Cotter $60,000 (less applicable withholding and customary payroll deductions), which was paid over three months in accordance with the Company's pay policies; and (ii) provide Mr. Cotter healthcare reimbursements for a three-month period at an amount of up to $2,500 per month.

Richard E. Davis

On July 7, 2014, we entered into an executive employment agreement with Mr. Davis, our Chief Financial Officer and Treasurer. The agreement continues until terminated by us or by Mr. Davis. Pursuant to the terms of the agreement, Mr. Davis is entitled to an initial annual base salary of $200,000 and is eligible to receive an annual cash bonus in an amount of up to 25% of Mr. Davis' then-current annual base salary. Annual bonuses are awarded at the sole discretion of our Board of Directors. If Mr. Davis' employment is terminated by us at any time after August 7, 2014 (unless such termination is "For Cause" (as defined in his employment agreement)), or by Mr. Davis for "Good Reason" (as defined in his employment agreement), then Mr. Davis, upon signing a release in favor of the Company, would be entitled to severance in an amount equal to six months of Mr. Davis' then-current annual base salary, payable in the form of salary continuation, plus, if Mr. Davis elects and subject to certain other conditions, payment of Mr. Davis' premiums to continue his group health coverage under COBRA until the earlier of (i) 12 months following the date of such termination; or (ii) the date Mr. Davis becomes covered under another employer's health plan. In addition, Mr. Davis' employment agreement provides that, in the event of a change of control of the Company or his employment is terminated by the Company for any reason other than For Cause, all unvested shares under outstanding equity grants to Mr. Davis, if any, shall automatically accelerate and become fully vested. On July 27, 2015, Mr. Davis's employment agreement was amended to increase his annual base salary by $50,000 to $250,000, retroactively effective as of July 1, 2015.

The agreement provides the following definitions of "For Cause" and "Good Reason": (a) "For Cause" is (i) the commission by the executive of a crime involving dishonesty, breach of trust, or physical harm to any person, (ii) executive's engagement by the executive in conduct that is in bad faith and materially injurious to the Company, (iii) commission by the executive of a material breach of the employment agreement which is not cured within 20 days after the executive receives written notice of such breach, (iv) willful refusal by the executive to implement or follow a lawful policy or directive of the Company, which breach is not cured by the executive within 20 days after receiving written notice from the Company, (v) or executive's engagement in misfeasance or malfeasance demonstrated by a pattern of failure to perform job duties diligently and professionally; and (b) "Good Reason" is, without the executive's written consent, (1) a reduction in the executive's annual base salary comparable to reductions generally applicable to similarly-situated executives of the Company if such reduction occurs during the first 365 days of employment and is greater than 15%, (2) a relocation of the executive to a facility or location that is more than 50 miles from his primary place of employment and results in an increase in one-way driving distance by more than 50 miles (provided that any such relocation shall not constitute Good Reason if the executive is permitted to perform his duties remotely from or near his home for two weeks per month), or (3) a material and adverse change in the executive's authority, duties, or

responsibilities with the Company or reporting relationship within the Company.

Outstanding Equity Awards At Fiscal Year-End

The following table summarizes the aggregate number of option awards held by our named executive officers at September 30, 2015:

Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable		Option Exercise Price ($)	Option Expiration Date
Dr. Terrence W. Norchi	312,500	187,500	(1)	0.35	03/22/2024
	100,000	300,000	(2)	0.19	01/21/2025
	96,146	258,854	(3)	0.28	08/17/2025
William M. Cotter	171,875	78,125	(4)	0.40	09/09/2023
	189,583	160,417	(5)	0.35	03/22/2024
Richard E. Davis	171,875	328,125	(6)	0.22	07/06/2024
	125,000	375,000	(7)	0.19	01/21/2025
	47,396	127,604	(8)	0.28	08/17/2025

(1) Represents an option to purchase 500,000 shares of Common Stock with a grant date of March 23, 2014. The vesting period of the shares underlying the option commenced on the date of grant, with 25% of the shares vested immediately on the date of grant, 25% of the shares shall vest 12 months following the date of grant and 1/24th of the remaining shares shall vest on each of the monthly anniversaries of the grant date, commencing April 23, 2015.

(2) Represents an option to purchase 400,000 shares of Common Stock with a grant date of January 22, 2015. The vesting period of the shares underlying the option commenced on the date of grant, with 25% of the shares vested immediately on the date of grant, 25% of the shares shall vest 12 months following the date of grant and 1/24th of the remaining shares shall vest on each of the monthly anniversaries of the grant date, commencing February 22, 2016.

(3) Represents an option to purchase 355,000 shares of Common Stock with a grant date of June 18, 2015. The vesting period of the shares underlying the option commenced on the date of grant, with 25% of the shares vested immediately on the date of grant, and 1/36th of the remaining shares shall vest on each of the monthly anniversaries of the grant date, commencing September 18, 2015.

(4) Represents an option to purchase 250,000 shares of Common Stock granted on September 9, 2013. The vesting period of the shares underlying the option commenced on the date of grant, with 25% of the shares vested immediately on the date of grant, 25% of the shares to vest 12 months following the date of grant, and the remaining 50% of the shares to vest thereafter in 24 equal installments on each monthly anniversary of the date of

grant.

(5) Represents an option to purchase 350,000 shares of Common Stock with a grant date of March 23, 2014. The vesting period of the shares underlying the option commenced on the date of grant, with 25% of the shares vested immediately on the date of grant, 25% of the shares shall vest 12 months following the date of grant, and the remaining 50% of the shares to vest thereafter in 24 equal installments on each monthly anniversary of the date of grant.

(6) Represents an option to purchase 500,000 shares of Common Stock with a grant date of July 7, 2014. The vesting period of the shares underlying the option commenced on the date of grant, with 25% of the shares vested immediately on the date of grant and the remaining shares to vest in 24 equal installments commencing on the first anniversary on the date of grant.

(7) Represents an option to purchase 500,000 shares of Common Stock with a grant date of January 22, 2015. The vesting period of the shares underlying the option commenced on the date of grant, with 25% of the shares vested immediately on the date of grant, 25% of the shares shall vest 12 months following the date of grant and 1/24th of the remaining shares shall vest on each of the monthly anniversaries of the grant date, commencing February 22, 2015.

(8) Represents an option to purchase 175,000 shares of Common Stock with a grant date of June 18, 2015. The vesting period of the shares underlying the option commenced on the date of grant, with 25% of the shares vested immediately on the date of grant, and 1/36th of the remaining shares shall vest on each of the monthly anniversaries of the grant date, commencing September 18, 2015.

Compensation of Directors

On March 23, 2014, our Board of Directors adopted a director compensation policy for non-employee directors. That policy provides that effective the first calendar quarter of 2014, the person serving as the Chairman of our Board of Directors receives an aggregate annual cash fee of $190,000 for that chairperson role, and all other non-employee directors receive an annual cash fee of $50,000. Prior to the adoption of the revised director compensation policy, the person serving as the Chairman of our Board of Directors received an aggregate annual cash fee of $110,000 for that chairperson role, and all other non-employee directors received an annual cash fee of $35,000.

The following table summarizes all compensation paid to our non-employee directors during the fiscal year ended September 30, 2015:

Director Compensation Table

	Fees Earned or Paid In Cash ($)	Stock Awards ($)	Option Awards ($)(1)	All other Compensation ($)	Total ($)
Dr. Avtar Dhillon (2)	190,000	—	138,865	—	328,865
Dr. Arthur Rosenthal (3)	33,333	—	16,099	—	49,432
James R. Sulat (4)	5,972	—	40,456	—	46,428

(1) The values listed represent the fair value of the option grants that was recognized during the fiscal year ended September 30, 2015 under ASC Topic 718, which is calculated as of the grant date using a Black-Scholes option-pricing model. Accordingly, the dollar amounts listed do not necessarily reflect the dollar amount of compensation that may be realized by our non-employee directors. For information on the valuation assumptions with respect to option grants made during the fiscal year ended September 30, 2015, refer to Note 9 “Stock-Based Compensation” in our consolidated financial statements included in this filing.

(2) The aggregate number of shares of Common Stock underlying stock options outstanding as of September 30, 2015 held by Mr. Dhillon was 955,000.

(3) Dr. Rosenthal resigned as a director effective May 28, 2015, but continues to provide consulting services to the Company as a scientific advisor. The aggregate number of shares of Common Stock underlying stock options outstanding as of September 30, 2015 held by Dr. Rosenthal was 800,000.

(4)

Mr. Sulat was appointed as a member of the Board on August 19, 2015. The aggregate number of shares of Common Stock underlying stock options outstanding as of September 30, 2015 held by Mr. Sulat was 230,000.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Related Party Transactions

Except for Dr. Terrence Norchi, our President, Chief Executive Officer, former Interim Chief Financial Officer and a director, and Dr. Dhillon, the Chairman of our Board of Directors, who each became executive officers and/or directors of our Company shortly following the Company's and ABS's entry into a binding letter of intent regarding the terms of the Merger (the "**LOI**"), none of the current directors and executive officers were directors or executive officers of the Company prior to the closing of the Merger, nor did any hold any position with the Company prior to the closing of the Merger, nor have any been involved in any material proceeding adverse to the Company or any transactions with the Company or any of its directors, executive officers, affiliates or associates that are required to be disclosed pursuant to the rules and regulations of the SEC.

Dr. Terrence Norchi and Dr. Avtar Dhillon were appointed to their officer and director positions with us on April 23, 2013, shortly following the entry into the LOI between the Company and ABS relating to the Merger. Each of Dr. Avtar Dhillon and Dr. Terrence Norchi also held, and continue to hold, positions with ABS, with Dr. Norchi serving as the President, Chief Executive Officer and a director of ABS and Dr. Dhillon serving as a director of ABS. As a result, each of Dr. Norchi and Dr. Dhillon were directors and/or officers of us and of ABS upon the signing of the Merger Agreement on May 10, 2013. Further, it was a condition to the closing of the Merger that Dr. Norchi and Dr. Dhillon, or their respective designees, each receive, on or before the closing of the Merger, 10,000,000 shares of our Common Stock in private transfers from the former holders thereof. As a result of those transfers and other shares of our Common Stock to which Dr. Norchi and Dr. Dhillon became entitled in exchange for their former shares and convertible notes of ABS, as of the closing of the Merger, Dr. Norchi and Dr. Dhillon collectively held or otherwise controlled approximately 18,579,449 shares of our Common Stock, or 26.3% of our shares on a fully diluted basis and approximately 31.6% of our outstanding Common Stock. As of July 13, 2016, Dr. Norchi and Dr. Dhillon collectively held or otherwise controlled approximately 24,736,449 shares of our Common Stock or securities convertible into our Common Stock, or 14.7% of our shares on a fully diluted basis and approximately 18.5% of our Common Stock outstanding. The number of shares of our Common Stock received by Dr. Norchi and Dr. Dhillon in connection with the Merger was negotiated by the parties to the LOI and was determined without input from any independent third party.

On June 19, 2013, Dr. Terrence Norchi purchased from ABS an aggregate amount of $15,397 of certain promissory note and warrant positions (the "**Repurchased Securities**"). The Repurchased Securities had originally been issued by ABS to third parties in June 2009, were repurchased by ABS from the original holders on April 30, 2013, and were resold to Dr. Norchi and other third party purchasers effective June 19, 2013. The Repurchased Securities were first issued by ABS to the original holders thereof in a bridge loan transaction in expectation of potential financings of ABS's capital stock. In contemplation of the Merger, any such potential financing of ABS's capital stock was abandoned and such Repurchased Securities were amended and restated to provide for (i) the conversion of all amounts owed under the promissory notes into an aggregate of 1,349,614 shares of the Company's Common Stock upon the closing of the Merger, calculating to approximately one share of the Company's Common Stock for each $0.27 outstanding under the notes, and (ii) the cancellation of the warrants in full upon the closing of the Merger. Accordingly, Dr. Norchi became entitled to receive 56,103 shares of the Company's Common Stock upon the closing of the Merger as a result of his purchase of $15,397 worth of the Repurchased Securities.

Pursuant to the terms of Dr. Norchi's former employment agreement with ABS, Dr. Norchi was entitled to receive a cash bonus in the amount of $500,000 and certain warrants to acquire ABS's capital stock upon the closing of a capital raise by ABS of at least $1,000,000. Dr. Norchi agreed to defer his right to receive such cash bonus and warrants at the time they became due and issuable upon ABS's satisfaction of that capital raise condition. In connection with the closing of the Merger on June 26, 2013 and the concurrent entry into an executive employment agreement with the Company, Dr. Norchi and ABS entered into a termination agreement and release pursuant to which Dr. Norchi's employment agreement with ABS has been terminated by mutual agreement effective as of the closing of the Merger and Dr. Norchi has agreed to waive in full any and all right to receive such cash bonus and warrants.

Commencing in February 2009, Dr. Norchi loaned ABS an aggregate amount of $275,200 in several installments. On January 21, 2010, ABS issued a promissory note to Dr. Norchi in exchange for that loan in principal amount of $275,200, which promissory note, as amended, bore interest at the rate of 6% per annum through December 31, 2009 and at the rate of 10% per annum thereafter, was due upon demand and was unsecured. On June 24, 2013, ABS paid to Dr. Norchi all amounts due and owing under such promissory note, which totaled $373,488 as of such date.

James R. Sulat, who was appointed as a member of our Board of Directors on August 19, 2015, is a co-trustee of the Keyes Sulat Revocable Trust (the "**Trust**"). Prior to Mr. Sulat's appointment to our Board of Directors, both the Trust and Mr. Sulat, in his capacity as a consultant to the Company, purchased or received securities of the Company, in each case in transactions that were approved by the full Board of Directors in effect at the time of such transactions. In particular, on June 19, 2013, the Trust purchased from ABS Repurchased Securities in the aggregate principal amount of $75,000. As noted above, the amounts owed under the Repurchased Securities were converted into shares of the Company's Common Stock upon the closing of the Merger, calculating to approximately one share of the Company's Common Stock for each $0.27 outstanding under the notes, and warrants issued in connection with the notes were cancelled in full upon the closing of the Merger. Accordingly, the Trust became entitled to receive 273,277 shares of the Company's Common Stock upon the closing of the Merger as a result of its purchase of $75,000 worth of the Repurchased Securities. On June 18, 2013, Mr. Sulat was awarded a stock option award to purchase 30,000 shares of our Common Stock at an exercise price of $0.37 per share in consideration for services rendered to us as a consultant, and on August 19, 2015, we awarded Mr. Sulat an additional stock option award to purchase 200,000 shares of Common Stock at an exercise price of $0.27 per share in connection with his appointment to our Board of Directors. In addition and as noted elsewhere in this prospectus, in exchange for a payment of (i) $100,000, the Trust received 454,546 shares of our Common Stock upon the Initial Closing of the 2015 Private Placement Financing on June 30, 2015, and a Series D Warrant exercisable for the same number of shares at an exercise price of $0.25; and (ii) $40,000, the Trust received 111,111 shares of our Common Stock upon the closing of the 2016 Private Placement Financing on May 26, 2016, and a Series E Warrant exercisable for 83,333 shares at an exercise price of $0.4380. Regarding the latter and as noted elsewhere in this prospectus, Mr. Sulat disclosed his interest in the 2016 Private Placement Financing to the Disinterested Directors in accordance with the Company's policies governing related party transactions (which is described below), and recused himself from discussing or voting on matters related to the 2016 Private Placement Financing. The Disinterested Directors unanimously approved the 2016 Private Placement Financing.

Upon his resignation from our Board of Directors on May 28, 2015, the Company and Dr. Arthur Rosenthal entered into an oral agreement pursuant to which Dr. Rosenthal agreed to continue providing services to the Company as a scientific advisor. On October 15, 2015, the Company and Dr. Rosenthal entered into a written agreement to memorialize this agreement.

Review, Approval or Ratification of Transactions with Related Persons

Due to the small size of our Company, at this time we have determined to rely on our full Board of Directors to review related party transactions and identify and prevent conflicts of interest. Our Board of Directors reviews a transaction in light of the affiliations of the director, officer, employee or stockholder and the affiliations of such person's immediate family. Transactions are presented to our Board of Directors for approval before they are entered into or, if that is not possible, for ratification after the transaction has occurred. If our Board of Directors finds that a conflict of interest exists, then it will determine the appropriate remedial action, if any. Our Board of Directors approves or ratifies a transaction if it determines that the transaction is consistent with the best interests of the Company and its stockholders. The procedures described above have been approved by resolutions adopted by our Board of Directors.

Director Independence

Our Board of Directors has determined that Dr. Avtar Dhillon and Mr. James R. Sulat would qualify as "independent" as that term is defined by Nasdaq Listing Rule 5605(a)(2). Further, although we have not established separately designated audit, nominating or compensation board committees, Dr. Dhillon and Mr. Sulat would qualify as "independent" under Nasdaq Listing Rules applicable to all such board committees. Dr. Terrence W. Norchi would not qualify as "independent" under Nasdaq Listing Rules applicable to the Board of Directors generally or to separately designated board committees because he currently serves as our President and Chief Executive Officer.

Subject to some exceptions, Nasdaq Listing Rule 5605(a)(2) provides that an independent director is a person other than an executive officer or other employee of the Company or any other individual having a relationship which, in the opinion of our Board of Directors, would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. Under Nasdaq Listing Rule 5605(a)(2) and subject to certain exceptions, a director will not be deemed to be independent if (a) the director is, or at any time during the past three years was, an employee of ours; (b) the director or a member of the director's immediate family or a person living with such director (collectively, a "**Related Party**") has received more than $120,000 in compensation from us during any twelve-month period within the preceding three years, other than compensation for service as a director or as a non-executive employee (in the case of Related Party), benefits under a tax-qualified retirement plan or non-discretionary compensation; (c) a Related Party is, or in the past three years has been, an executive officer of ours; (d) the director or a Related Party is an executive officer, partner or controlling shareholder of a company that makes payments to, or receives payments from, us in an amount which, in any twelve-month period during our past three fiscal years, exceeds the greater of 5% of the recipient's consolidated gross revenues for that year or $200,000 (except for payments arising solely from investments in our securities or payments under non-discretionary charitable contribution matching programs); (e) the director or a

Related Party is employed as an executive officer of another company where at any time during the preceding three years one of our executive officers served on the compensation committee of such company; and (f) the director or a Related Party is a current partner of our independent public accounting firm, or has worked for such firm in any capacity on our audit at any time during the past three years.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The following table sets forth certain information regarding the beneficial ownership of our Common Stock by (i) each person who, to our knowledge, beneficially owns more than 5% of our Common Stock; (ii) each of our directors and named executive officers; and (iii) all of our directors and executive officers as a group. Unless otherwise indicated in the footnotes to the following table, the address of each person named in the table is: c/o Arch Therapeutics, Inc., 235 Walnut St., Suite #6, Framingham, Massachusetts 01702. The information set forth in the table below is based on 133,380,265 shares of our Common Stock outstanding on July 13, 2016. Shares of our Common Stock subject to options, warrants, or other rights currently exercisable or exercisable within 60 days of July 13, 2016 are deemed to be beneficially owned and outstanding for computing the share ownership and percentage of the person holding such options, warrants or other rights, but are not deemed outstanding for computing the percentage of any other person. The following table is presented after taking into account (a) the 4.9% ownership limitation to which Intracoastal is subject to as a result of the terms of the Series A Warrants issued in the 2014 Private Placement Financing; (b) the 4.9% ownership limitation (which may waived at the holder's discretion, provided that such waiver will not become effective until the 61st day after delivery of such waiver notice) to which Intracoastal and Tungsten III, LLC ("**Tungsten**"), an entity controlled by Michael Parker, are subject to under the terms of the Series D Warrants issued to them or their affiliates in the 2015 Private Placement Financing; and (c) the 4.99% ownership limitation (which may be increased to 9.99% at the holder's discretion, *provided that* such increase will not become effective until the 61st day after delivery of the notice in which the holder informs us of this increase) to which 2016 Investors are subject under the terms of the Series E Warrants issued to them in the 2016 Private Placement Financing. As a result of the foregoing ownership limitations, the table below does not include any of the investors from the Private Placement Financings other than Mr. Parker. For a further description of the Series E Warrants, the Series D Warrants and Series A Warrants, please see the disclosure under the heading "**SUMMARY | PRIVATE PLACEMENT OFFERINGS | 2016 Private Placement Financing**", "**SUMMARY | PRIVATE PLACEMENT OFFERINGS | 2015 Private Placement Financing**", and "**SUMMARY | PRIVATE PLACEMENT OFFERINGS | 2014 Private Placement Financing**" respectively.

Name of Beneficial Owner	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned (1)	
5%+ Stockholders:			
Twelve Pins Partners (2)	10,000,000	7.50	%
Michael A. Parker (3)	8,723,184	6.54	%
Directors and Executive Officers			
Avtar Dhillon (4)	9,129,040	6.78	%
Terrence Norchi (5)	13,828,659	10.27	%
James R. Sulat (6)	1,650,146	1.23	%
William Cotter (7)	0	0.00	%
Richard E. Davis (8)	922,792	0.69	%
Current Directors and Named Executive Officers as a Group (5 persons)	25,530,637	18.57	%

Shares of our Common Stock subject to options, warrants, or other rights currently exercisable or exercisable within 60 days of July 13, 2016, are deemed to be beneficially owned and outstanding for computing the share ownership and percentage of the person holding such options, warrants or other rights, but are not deemed outstanding for computing the percentage of any other person.

(1) Except as otherwise indicated, we believe that each of the beneficial owners of the Common Stock listed previously, based on information furnished by such owners, has sole investment and voting power with respect to the shares listed as beneficially owned by such owner, subject to community property laws where applicable. Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities.

(2) Dr. Norchi is the sole member of Twelve Pins Partners, LLC and has sole voting and investment control with respect to the shares it holds. Dr. Norchi disclaims beneficial ownership of these securities except to the extent of his pecuniary interest therein.

(3) Represents (i) 5,000,000 shares of Common Stock originally issued to Mr. Parker, an investor in the 2015 Private Placement Financing, and assigned in March 2016 to Tungsten, an entity controlled by Mr. Parker; (ii) 2,222,223 shares of Common Stock issued to Ms. Parker, Mr. Parker's spouse with whom he resides, in connection with the 2016 Private Placement Financing; and (iii) 1,500,961 shares of Common Stock acquired by Mr. Parker in transactions unrelated to the Private Placement Financings. Excludes (a) 4,500,0000 shares of our Common Stock issuable upon the exercise of the Series D Warrant originally issued to Mr. Parker upon the Closing of the 2015 Private Placement Financing and subsequently assigned to Tungsten as a result of the ownership limitation that Tungsten is subject to under the terms of Tungsten's Series D Warrant; and (b) 1,666,667 shares of Common Stock issuable upon exercise of Series E Warrants issued to Ms. Parker in connection with the 2016 Private Placement Financing as a result of the ownership limitation that Ms. Parker is subject to under the terms of her Series E Warrant.

(4) Represents (a) 7,897,373 shares of our Common Stock; and (b) 1,231,667 shares subject to options exercisable within 60 days after July 13, 2016

(5) Represents (a) 10,000,000 shares of our Common Stock held by Twelve Pins Partners, LLC, with respect to which Dr. Norchi holds sole voting and investment control; (b) 1,419,076 shares issued to Dr. Norchi upon the closing of the Merger in exchange for the cancellation of shares of Common Stock and convertible notes of ABS owned by him immediately prior to the closing of the Merger; (c) 1,130,000 shares of restricted stock granted to Dr. Norchi on May 3, 2016; and (d) 1,279,583 shares subject to options exercisable within 60 days after July 13, 2016. Dr. Norchi disclaims beneficial ownership of the securities held by Twelve Pins Partners, LLC except to the extent of his pecuniary interest therein.

(6) Represents (a) 838,934 shares of our Common Stock, a Series D Warrant exercisable for 454,546 shares of our Common Stock, and a Series E Warrant exercisable for 83,333 shares of our Common Stock held by Keyes Sulat Revocable Trust; (b) 30,000 shares of our Common Stock held directly by Mr. Sulat; and (c) 243,333 shares subject to options exercisable within 60 days after July 13, 2016. Excludes 30,000 shares subject to an option granted to Mr. Sulat in his capacity as a consultant on June 18, 2013 that can only be exercised upon the earlier of (i) calendar year 2018, or (ii) a corporate transaction or change of control which also constitutes a “change in the ownership or effective control, or in the ownership of a substantial portion of the assets” within the meaning of Section 409A. Mr. Sulat disclaims beneficial ownership of the securities held by Keyes Sulat Revocable Trust except to the extent of his pecuniary interest therein.

(7) Mr. Cotter’s outstanding option grants expired unexercised effective June 15, 2016.

(8) Represents (a) 103,000 shares of our Common Stock; and (b) 819,792 shares subject to options exercisable within 60 days after July 13, 2016.

LEGAL MATTERS

The validity of the Common Stock being offered hereby has been passed upon for us by McDonald Carano Wilson LLP, Reno, Nevada.

EXPERTS

Moody, Famiglietti & Andronico, LLP, an independent registered public accounting firm, has audited our consolidated financial statements for the years ended September 30, 2015 and 2014, as stated in its report appearing herein, and such audited consolidated financial statements have been so included in reliance upon the report of such

firm given upon its authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read or obtain a copy of these reports at the SEC's public reference room at 100 F Street, N.E., Washington, D.C. 20549, on official business days during the hours of 10:00 am to 3:00 pm. You may obtain information on the operation of the public reference room and its copy charges by calling the SEC at 1-800-SEC-0330. The SEC maintains a website, at http://www.sec.gov, that contains registration statements, reports, proxy information statements and other information regarding registrants that file electronically with the SEC, including us. Our website address is http://www.archtherapeutics.com. We have not incorporated by reference into this prospectus the information on our website, and you should not consider it to be a part of this document.

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of Common Stock being offered by this prospectus. This prospectus is part of that registration statement. This prospectus does not contain all of the information set forth in the registration statement or the exhibits to the registration statement. For further information with respect to us and the shares we are offering pursuant to this prospectus, you should refer to the registration statement and its exhibits. Statements contained in this prospectus as to the contents of any contract, agreement or other document referred to are not necessarily complete, and you should refer to the copy of that contract or other documents filed as an exhibit to the registration statement. You may read or obtain a copy of the registration statement at the SEC's public reference room and website referred to above.

ARCH THERAPEUTICS, INC.

CONSOLIDATED FINANCIAL STATEMENTS

Index to Consolidated Financial Statements

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors of Arch Therapeutics, Inc.

Framingham, Massachusetts

We have audited the accompanying consolidated balance sheets of Arch Therapeutics, Inc. and subsidiary (the "Company") as of September 30, 2015 and 2014, and the related consolidated statements of operations, changes in stockholders' equity (deficit) and cash flows for the years then ended. 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 audit.

We conducted our audit 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 consolidated financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall consolidated financial statement presentation. We believe that our audit provides 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 Arch Therapeutics, Inc. and subsidiary as of September 30, 2015 and 2014, and the results of their operations and their cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

The accompanying consolidated financial statements have been prepared assuming that Arch Therapeutics, Inc. and subsidiary will continue as a going concern. As discussed in Notes 1 and 2 to the consolidated financial statements, the Company has an accumulated deficit, has suffered significant net losses and negative cash flows from operations, and has limited working capital that raises substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Notes 1 and 2. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty

/s/ Moody, Famiglietti & Andronico, LLP

Tewksbury, MA

December 11, 2015

F-2

Arch Therapeutics, Inc.

Consolidated Balance Sheets

As of September 30, 2015 and 2014

	September 30, 2015	September 30, 2014
ASSETS		
Current assets:		
Cash	$3,960,100	$833,520
Prepaid expenses and other current assets	42,919	43,470
Total current assets	4,003,019	876,990
Total assets	$4,003,019	$876,990
LIABILITIES AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	$231,761	$175,832
Accrued expenses and other liabilities	245,478	267,835
Convertible notes, net of unamortized discount	473,747	-
Current derivative liabilities	335,092	2,280,000
Total current liabilities	1,286,078	2,723,667
Long-term liabilities:		
Note payable, net of unamortized discount	966,824	955,766
Accrued interest, net of current portion	210,000	100,000
Derivative liabilities, net of current portion	-	3,990,000
Total long-term liabilities	1,176,824	5,045,766
Total liabilities	2,462,902	7,769,433
Commitments and contingencies (see Note 12)		
Stockholders' equity (deficit):		
Common stock, $0.001 par value, 300,000,000 shares authorized, 107,542,205 and 72,076,487 shares issued and outstanding as of September 30, 2015 and September 30, 2014, respectively	107,392	72,051
Additional paid-in capital	17,154,945	5,810,200
Accumulated deficit	(15,722,220)	(12,774,694)
Total stockholders' equity (deficit)	1,540,117	(6,892,443)
Total liabilities and stockholders' equity (deficit)	$4,003,019	$876,990

The accompanying notes are an integral part of these consolidated financial statements

Arch Therapeutics, Inc.

Consolidated Statements of Operations

For the Years Ended September 30, 2015 and 2014

	Fiscal Year Ended September 30, 2015	Fiscal Year Ended September 30, 2014
Revenues	$ -	$ -
Operating expenses:		
General and administrative expenses	3,700,477	3,134,285
Research and development expenses	1,760,037	1,477,479
Total operating expenses	5,460,514	4,611,764
Operating loss	(5,460,514)	(4,611,764)
Other income (expense):		
Interest expense	(377,805)	(111,059)
Fair value of derivative liabilities in excess of proceeds	-	(7,541,693)
Gain on exercise of warrants and conversion of debt	386,612	-
Loss on warrant derivative modification, net of inducement shares	(1,032,113)	-
Decrease to fair value of derivative	3,536,294	4,121,693
Total other income (expense)	2,512,988	(3,531,059)
Net Loss	$ (2,947,526)	$ (8,142,823)
Earnings per share - basic and diluted		
Net loss per common share - basic and diluted	$ (0.04)	$ (0.12)
Weighted common shares - basic and diluted	81,394,873	67,492,823

The accompanying notes are an integral part of these consolidated financial statements

Arch Therapeutics, Inc.

Consolidated Statements of Changes in Stockholders' Equity (Deficit)

For the years ended September 30. 2015 and 2014

	Common Stock Shares	Amount	Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Equity (Deficit)
Balance at September 30, 2013	60,145,237	$60,145	$4,758,742	$(4,631,871)	$187,016
Net loss	-	-	-	(8,142,823)	(8,142,823)
Issuance of restricted stock for services	275,000	275	94,600	-	94,875
Exercise of stock options	231,250	231	92,269	-	92,500
Issuance of stock in private placement funding	11,400,000	11,400	(236,697)	-	(225,297)
Stock based compensation expense	-	-	1,101,286	-	1,101,286
Balance at September 30, 2014	72,051,487	$72,051	$5,810,200	$(12,774,694)	$(6,892,443)
Net loss	-	-	-	(2,947,526)	(2,947,526)
Issuance of restricted stock for services	475,000	475	165,682	-	166,157
Reclassification of Series A and C Warrants	-	-	3,263,753		3,263,753
Shares issued for the exercise of warrants	18,686,801	18,687	3,581,313	-	3,600,000
Shares issued for the exercise of stock options	462,298	462	(462)	-	-
Shares issued in consideration for extending the Series C Warrants and eliminating the Ratchet Provision	570,000	570	134,782	-	135,352
Issuance of stock in private placement funding	14,390,754	14,391	3,001,575	-	3,015,966
Shares issued for the conversion of the convertible notes	755,865	756	150,417	-	151,173

Stock based compensation expense	-	-	1,047,685	-	1,047,685
Balance at September 30, 2015	107,392,205	$107,392	$17,154,945	$(15,722,220)	$1,540,117

The accompanying notes are an integral part of these consolidated financial statements

Arch Therapeutics, Inc.
Consolidated Statements of Cash Flows
For the Years Ended September 30, 2015 and 2014

	Fiscal Year Ended September 30, 2015	Fiscal Year Ended September 30, 2014
Cash flows from operating activities:		
Net loss	$ (2,947,526)	$ (8,142,823)
Adjustments to reconcile net loss to cash used in operating activities:		
Depreciation expense	-	322
Stock-based compensation	1,047,685	1,101,286
Noncash interest expense on notes payable	377,805	111,059
Issuance of restricted stock for services	166,157	94,875
Gain on exercise of warrants and conversion of debt	(386,612)	-
Loss on warrant derivative modification, net of inducement shares	1,032,113	-
Decrease to fair value of derivative	(3,536,294)	(4,121,693)
Fair value of derivative liabilities in excess of proceeds	-	7,541,693
Issuance of common stock for services	-	92,500
Changes in operating assets and liabilities:		
(Increase) decrease in:		
Prepaid expenses and other current assets	551	(13,779)
Increase (decrease) in:		
Accounts payable	55,929	(138,937)
Accrued expenses and other liabilities	(49,194)	126,995
Net cash used in operating activities	(4,239,386)	(3,348,502)
Cash flows from financing activities:		
Proceeds from exercise of warrants	3,600,000	-
Proceeds from issuance of common stock and warrants	3,015,966	2,624,703
Proceeds from issuance of convertible notes	750,000	-
Proceeds from issuance of notes payable	-	1,000,000
Net cash provided by financing activities	7,365,966	3,624,703
Net increase in cash and cash equivalents	3,126,580	276,201
Cash and cash equivalents, beginning of period	833,520	557,319
Cash and cash equivalents, end of period	$ 3,960,100	$ 833,520
Non-cash financing activities		
Issuance of inducement shares	$ 135,352	$ -
Conversion of 8% convertible notes and accrued interest to common stock	$ 151,173	$ -
Reclassification of Series A and C Warrants from derivative liabilities to equity	$ 3,263,753	$ -

Conversion feature embedded in convertible note	$ 354,988	$ -

The accompanying notes are an integral part of these consolidated financial statements

Notes to the Consolidated Financial Statements

1. DESCRIPTION OF BUSINESS

Arch Therapeutics, Inc., (together with its subsidiary, the "Company") was incorporated under the laws of the State of Nevada on September 16, 2009, under the name "Almah, Inc." to pursue the business of distributing automobile spare parts online. Effective June 26, 2013, the Company completed a merger (the "Merger") with Arch Biosurgery, Inc. (formerly known as Arch Therapeutics, Inc.), a Massachusetts corporation ("ABS"), and Arch Acquisition Corporation ("Merger Sub"), the Company's wholly owned subsidiary formed for the purpose of the transaction, pursuant to which Merger Sub merged with and into ABS and ABS thereby became the wholly owned subsidiary of the Company. As a result of the acquisition of ABS, the Company abandoned its prior business plan and has changed its operations to the business of a life science medical device company. Our current principal offices are located in Framingham, Massachusetts.

For financial reporting purposes, the Merger represented a "reverse merger". ABS was deemed to be the accounting acquirer in the transaction and the predecessor of Arch. Consequently, the accumulated deficit and the historical operations that are reflected in the Company's consolidated financial statements prior to the Merger are those of ABS. All share information has been restated to reflect the effects of the Merger. The Company's financial information has been consolidated with that of ABS after consummation of the Merger on June 26, 2013, and the historical financial statements of the Company before the Merger have been replaced with the historical financial statements of ABS before the Merger in this report.

ABS was incorporated under the laws of Commonwealth of Massachusetts on March 6, 2006 as Clear Nano Solutions, Inc. On April 7, 2008, ABS changed its name from Clear Nano Solutions, Inc. to Arch Therapeutics, Inc. Effective upon the closing of the Merger, ABS changed its name from Arch Therapeutics, Inc. to Arch Biosurgery, Inc.

The Company has generated no operating revenues to date, and is devoting substantially all of its efforts toward product research and development. To date, the Company has principally raised capital through borrowings and the issuance of convertible debt and units consisting of common stock and warrants.

The Company expects to incur substantial expenses for the foreseeable future relating to research, development and commercialization of its potential products. The Company will be required to raise additional capital, obtain alternative means of financial support, or both, prior to or during May 2016 in order to continue to fund operations. However, there can be no assurance that the Company will be successful in securing additional resources when needed, on terms acceptable to the Company, if at all. Therefore, there exists substantial doubt about the Company's ability to continue as a going concern. The consolidated financial statements do not include any adjustments that

might be necessary despite this uncertainty.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

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

Basis of Accounting

The consolidated financial statements include the accounts of Arch Therapeutics, Inc. and its wholly owned subsidiary, Arch Biosurgery, Inc., a life science medical device company. All intercompany accounts and transactions have been eliminated in consolidation.

Use of Estimates

Management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the dates of the financial statements and the reported amounts of revenue and expenses during the reporting periods. Actual results could differ from those estimates.

Cash

The Company considers all highly liquid investments with an original maturity of three months or less to be cash equivalents.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentration of credit risk consist primarily of cash. The Company maintains its cash in bank deposits accounts, which, at times, may exceed federally insured limits. The Company has not experienced any losses in such accounts. The Company believes it is not exposed to any significant credit risk on cash.

Property and Equipment

Property and equipment are recorded at cost and depreciated using the straight-line method over the estimated useful life of the related asset. Upon sale or retirement, the cost and accumulated depreciation are eliminated from their respective accounts, and the resulting gain or loss is included in income or loss for the period. Repair and maintenance expenditures are charged to expense as incurred.

Impairment of Long-Lived Assets

Long-lived assets are reviewed for impairment when circumstances indicate the carrying value of an asset may not be recoverable in accordance with ASC 360, *Property, Plant and Equipment*. For assets that are to be held and used, impairment is recognized when the estimated undiscounted cash flows associated with the asset or group of assets is less than their carrying value. If impairment exists, an adjustment is made to write the asset down to its fair value, and a loss is recorded as the difference between the carrying value and fair value. Fair values are determined based on quoted market values, discounted cash flows or internal and external appraisals, as applicable. Assets to be disposed of are carried at the lower of carrying value or estimated net realizable value. For the years ended September 30, 2015 and 2014 there has not been any impairment of long-lived assets.

Convertible Debt

The Company records a discount to convertible notes for the intrinsic value of conversion options embedded in debt instruments based upon the differences between the fair value of the underlying common stock at the commitment date of the note transaction and the effective conversion price embedded in the note. Debt discounts under these arrangements are amortized to noncash interest expense using the effective interest rate method over the term of the related debt to their date of maturity. If a security or instrument becomes convertible only upon the occurrence of a future event outside the control of the Company, or, is convertible from inception, but contains conversion terms that

change upon the occurrence of a future event, then any contingent beneficial conversion feature is measured and recognized when the triggering event occurs and contingency has been resolved.

Income Taxes

In accordance with ASC 740, *Income Taxes*, the Company recognizes deferred tax assets and liabilities for the expected future tax consequences or events that have been included in the Company's consolidated financial statements and/or tax returns. Deferred tax assets and liabilities are based upon the differences between the financial statement carrying amounts and the tax bases of existing assets and liabilities and for loss and credit carryforwards using enacted tax rates expected to be in effect in the years in which the differences are expected to reverse. Deferred tax assets are reduced by a valuation allowance if it is more likely than not that some portion or all of the deferred tax asset will not be realized.

The Company provides reserves for potential payments of tax to various tax authorities related to uncertain tax positions when management determines that it is probable that a loss will be incurred related to these matters and the amount of the loss is reasonably determinable. The Company has no reserves related to uncertain tax positions as of September 30, 2015 and 2014.

Research and Development

The Company expenses internal and external research and development costs, including costs of funded research and development arrangements, in the period incurred.

Accounting for Stock-Based Compensation

The Company accounts for employee stock-based compensation in accordance with the guidance of FASB ASC Topic 718, *Compensation-Stock Compensation* ("FASB ASC Topic 718"), which requires all share-based payments to employees, including grants of employee stock options, to be recognized in the consolidated financial statements based on their fair values. The Company accounts for non-employee stock-based compensation in accordance with the guidance of FASB ASC Topic 505, *Equity* ("FASB ASC Topic 505"), which requires that companies recognize compensation expense based on the estimated fair value of options granted to non-employees over their vesting period, which is generally the period during which services are rendered by such non-employees. FASB ASC Topic 505 requires the Company to re-measure the fair value of stock options issued to non- employee at each reporting period during the vesting period or until services are complete.

In accordance with FASB ASC Topic 718, the Company has elected to use the Black-Scholes option pricing model to determine the fair value of options granted and recognizes the compensation cost of share-based awards on a straight-line basis over the vesting period of the award.

The determination of the fair value of share-based payment awards utilizing the Black-Scholes model is affected by the fair value of the common stock and a number of other assumptions, including expected volatility, expected life, risk-free interest rate and expected dividends. The Company does not have a history of market prices of the common stock, and as such volatility is estimated in accordance with ASC 718-10-S99 Staff Accounting Bulletin ("SAB") No. 107, *Share-Based Payment* ("SAB No. 107"), using historical volatilities of similar public entities. The life term for awards uses simplified method for all "plain vanilla" options, as defined in SAB No. 107 and the contractual term for all other employee and non-employee awards. The risk-free interest rate assumption is based on observed interest rates appropriate for the terms of our awards. The dividend yield assumption is based on history and the expectation of paying no dividends. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. Stock-based compensation expense, when recognized in the consolidated financial statements, is based on awards that are ultimately expected to vest.

Fair Value Measurements

The Company measures both financial and nonfinancial assets and liabilities in accordance with FASB ASC Topic 820, *Fair Value Measurements and Disclosures*, except those that are recognized or disclosed in the consolidated financial statements at fair value on a recurring basis. The standard created a fair value hierarchy which prioritizes the inputs to valuation techniques used to measure fair value into three broad levels as follows: Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities; Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly; and Level 3 inputs are unobservable inputs that reflect the Company's own assumptions about the assumptions market participants

would use in pricing the asset or liability.

The Company's financial instruments include cash and notes payable. Because of their short maturity, the carrying amount of cash and notes payable are considered to approximate fair value.

Subsequent Events

The Company evaluated all events or transactions that occurred through December 10, 2015 the date which these consolidated financial statements were available to be issued. The Company disclosed material subsequent events in Note 15.

Going Concern Basis of Accounting

The Company does not currently believe its existing cash resources are sufficient to meet its anticipated needs during the next twelve months. As reflected in the consolidated financial statements, the Company has an accumulated deficit, has suffered significant recurring net losses and negative cash flows from operations, and has limited working capital. In addition, the Company does not have sufficient cash and cash equivalents to support its current operating plan. The continuation of our business as a going concern is dependent upon raising additional capital and eventually attaining and maintaining profitable operations. As of September 30, 2015, there is substantial doubt about our ability to continue as a going concern. The Company expects to incur substantial expenses for the foreseeable future for the research, development and commercialization of its potential products. In addition, the Company will require additional financing in order to seek to license or acquire new assets, research and develop any potential patents and the related compounds, and obtain any further intellectual property that the Company may seek to acquire. Historically, the Company has funded its operations primarily through equity and debt financings.

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern, which contemplates the realization of assets and the settlement of liabilities and commitments in the normal course of business. The consolidated financial statements do not include any adjustments that might result from this uncertainty.

Correction of an Immaterial Error

The Company has determined that there had been an immaterial error in its accounting for the Series A Warrants, Series C Warrants, and Series D Warrants contained in its consolidated financial statements for the three and nine months ended June 30, 2015 filed with the Securities Exchange Commission on August 7, 2015. The Company determined that the Series A Warrants, Series C Warrants and Series D Warrants should have been presented in stockholders' equity instead of as a liability.

The Company assessed the materiality of this error in accordance with Staff Accounting Bulletin No. 99, *Materiality*, and the Company determined that, qualitatively, the amounts would have no bearing on the decision making process of a reasonable investor. The Company intends to revise its consolidated financial statements for the periods ended June 30, 2015 through subsequent periodic filings

3. PROPERTY AND EQUIPMENT

At September 30, 2015 and 2014, property and equipment consisted of:

	Estimated Useful Life	2015	2014
Furniture and fixtures	5 years	$2,925	$2,925
Lab equipment	5 years	1,000	1,000
		3,925	3,925
Less - accumulated depreciation		3,925	3,925
		$-	$-

4. INCOME TAXES

The principal components of the Company's net deferred tax assets consisted of the following at September 30:

	2015	2014
Net operating loss carryforwards	$3,748,426	$2,731,492
Capitalized expenditures	802,769	381,872
Research and experimentation credit carryforwards	164,252	63,368
Stock based compensation	1,014,654	501,175
Property and Equipment	1,569	1,568
Accrued expenses	124,716	46,230
Gross deferred tax assets	5,856,386	3,725,705
Deferred tax asset valuation allowance	(5,856,386)	(3,725,705)
Net deferred tax assets	$-	$-

As of September 30, 2015 and 2014, the Company had federal net operating loss carryforwards of approximately $9,509,000 and $6,230,000, respectively, which may be available to offset future taxable income and which would begin to expire in 2026. As of September 30, 2015 and 2014, the Company had federal research and experimentation credit carryforwards of $139,744 and $44,112, respectively, which may be available to offset future income tax liabilities and which would begin to expire in 2029.

As of September 30, 2015 and 2014, the Company had state net operating loss carryforwards of approximately $8,487,000 and $5,271,000, respectively, which may be available to offset future taxable income and which would begin to expire in 2015. As of September 30, 2015 and 2014, the Company had state research and experimentation credit carryforwards of $37,000 and $19,000, respectively, which may be able to offset future income tax liabilities and which would begin to expire in 2023.

As the Company has not yet achieved profitable operations, management believes the tax benefits as of September 30, 2015 and 2014 did not satisfy the realization criteria set forth in FASB ASC Topic 740, Income Taxes, and therefore has recorded a valuation allowance for the entire deferred tax asset. The valuation allowance increased in 2015 and 2014 by approximately $2,130,000 and $2,202,000, respectively. The Company's effective income tax rate differed from the federal statutory rate due to state taxes and the Company's full valuation allowance, the latter of which reduced the Company's effective federal income tax rate to zero.

The Company experienced an ownership change as a result of the Merger described in Note 6, causing a limitation on the annual use of the net operating loss carryforwards, which are subject to a substantial annual limitation due to the ownership change limitations set forth in Internal Revenue Code Section 382 and similar state provisions.

As of September 30, 2015, the Company is open to examination in the U.S. federal and certain state jurisdictions for tax years ended September 30, 2015, 2014, 2013 and 2012.

5. 2014 PRIVATE PLACEMENT FINANCING

On January 30, 2014, the Company entered into a Securities Purchase Agreement (the "Securities Purchase Agreement") with nine separate accredited investors ("2014 Investors") providing for the issuance and sale by the Company to the 2014 Investors, in a private placement, of an aggregate of 11,400,000 shares of common stock (collectively, the "2014 Shares") at a purchase price of $0.25 per share and three series of warrants, the Series A warrants, the Series B warrants and the Series C warrants, to purchase up to an aggregate of 34,200,000 shares of the Company's common stock (collectively, the "2014 Warrants," and the shares issuable upon exercise of the 2014 Warrants, collectively, the "2014 Warrant Shares"), for aggregate gross proceeds to the Company of approximately $2,850,000 (the "2014 Private Placement Financing").

Upon the closing of the 2014 Private Placement Financing on February 4, 2014 (the "Closing Date"), the Company entered into a registration rights agreement (the "2014 Registration Rights Agreement") with the 2014 Investors, pursuant to which the Company became obligated, subject to certain conditions, to file with the Securities and Exchange Commission ("SEC") on or before March 21, 2014 one or more registration statements to register for resale under the Securities Act of 1933, as amended, (i) the 2014 Shares and the 2014 Warrant Shares, plus (ii) an additional number of shares of common stock equal to 33% of the total number of 2014 Shares and 2014 Warrant Shares, to account for adjustments, if any, to the number of 2014 Warrant Shares issuable pursuant to the terms of the 2014 Warrants (the securities set forth in this clause (ii), the "Additional Shares"). Under the terms of the 2014 Registration Rights Agreement, the Company is permitted to reduce the number of shares covered by a registration statement if such reduction is required by the SEC as a condition for permitting such registration statement to become effective and treated as a resale registration statement (the "Cutback Provisions"). In response to comments received from the SEC and in accordance with the terms of the 2014 Registration Rights Agreement, the Company reduced the number of shares included in its draft resale registration statement by the number of Additional Shares. The Company's failure

to satisfy certain other obligations and deadlines set forth in the 2014 Registration Rights Agreement may subject the Company to payment of monetary penalties as discussed below, including liquidated damages. The resale registration statement was declared effective on July 2, 2014. The 2014 Warrants were exercisable immediately upon issuance. The Series A warrants had an initial exercise price of $0.30 per share and expire five years from the date of their issuance. The Series B warrants had an initial exercise price of $0.35 per share and expired on the earlier of 12 months after their issuance date and six months after the first date on which the resale of all Registrable Securities (as defined in the 2014 Registration Rights Agreement) is covered by one or more effective registration statements. The Series B warrants expired on January 2, 2015. The Series C warrants had an initial exercise price of $0.40 per share and an initial expiration on the earlier of 18 months after their issuance date and nine months after the first date on which the resale of all Registrable Securities (as defined in the 2014 Registration Rights Agreement) is covered by one or more effective registration statements. The Series C warrants were set to expire on April 2, 2015 and, as described below, have been amended to expire on July 2, 2016. The number of shares of the Company's common stock into which each of the 2014 Warrants is exercisable and the exercise price therefore were subject to adjustment as set forth in the 2014 Warrants, including, without limitation, adjustment to both the exercise price of the 2014 Warrants in the event of certain subsequent issuances and sales of shares of the Company's common stock (or securities convertible or exercisable into shares of common stock) at a price per share lower than then-effective exercise price of the 2014 Warrants, in which case the per share exercise price of the 2014 Warrants would be adjusted to equal such lower price per share and the number of shares issuable upon exercise of the 2014 Warrants would be adjusted accordingly so that the aggregate exercise price upon full exercise of the 2014 Warrants immediately before and immediately after such per share exercise price adjustment were equal. The 2014 Warrants are also subject to customary adjustments in the event of stock dividends and splits, subsequent rights offerings and pro rata distributions to the Company's common stockholders, and provide that they shall not be exercisable in the event and to the extent that the exercise thereof would result in the holder of the Warrant or any of its affiliates beneficially would then own more than 4.9% of the Company's common stock. The 2014 Warrants also provide that they shall not be exercisable in the event and to the extent that the exercise thereof would result in the holder of the Warrant or any of its affiliates beneficially owning more than 4.9% of our common stock.

The Company may be required to make certain payments to the 2014 Investors under certain circumstances in the future pursuant to the terms of the Securities Purchase Agreement and the 2014 Registration Rights Agreement. These potential future payments include: (a) potential partial damages for failure to register the common stock issued or issuable upon exercise of 2014 Warrants (in a cash amount equal to 1% of the price paid to the Company by each investor in the 2014 Private Placement Financing on the date of and on each 30-day anniversary of such failure until the cure thereof; (b) amounts payable if the Company and its transfer agent fail to timely remove certain restrictive legends from certificates representing shares of common stock issued in the 2014 Private Placement Financing or issuable upon exercise of the 2014 Warrants; (c) expense reimbursement for the lead investor in the 2014 Private Placement Financing; and (d) payments in respect of claims for which the Company provides indemnification. There is no cap to the potential consideration. On July 2, 2014, we received from the SEC a Notice of Effectiveness of our Registration Statement related to the 2014 Private Placement Financing which satisfied some of our obligation to register these securities with the SEC.

On December 1, 2014, the Company agreed to amend certain provisions of the 2014 Warrants (the “December 2014 Amendment”). Under the terms of the December 2014 Amendment, the affected 2014 Warrants were amended to (i) reduce the exercise price of the Series B Warrants from $0.35 to $0.20, (ii) reduce the exercise price of the Series C Warrants from $0.40 to $0.20, and (iii) clarify that each series of 2014 Warrants may be amended individually, without having to amend all three series of 2014 Warrants. The number of shares of the Company’s common stock which may be purchased from the Company upon exercise of each 2014 Warrant remained unchanged. In conjunction with the December 2014 Amendment, the Company recognized a loss on the modification of the 2014 Warrants in the amount of $1,300,170, which was determined using Monte Carlo Simulation.

As of December 2, 2014, Series B Warrants had been exercised for an aggregate issuance of 4,000,000 shares of the Company’s Common Stock resulting in gross proceeds to the Company of $800,000. In conjunction with the exercise of the Series B Warrants, their corresponding fair value at the exercise dates of $224,000 were extinguished from the derivative liabilities balance and recognized as a gain in the Company’s statements of operations.

On March 13, 2015, the Company issued unsecured 8% Convertible Notes, (the “Notes”), in the aggregate principal amount of $750,000, see footnote 7. The Company’s issuance of the Notes triggered the anti-dilution provisions of the Series A Warrants and, as a result, the exercise price of the Series A Warrants was reduced to $0.20 per share and the aggregate number of shares issuable under the Series A Warrants increased by 5,700,000 shares from 11,400,000 shares to 17,100,000 shares. In addition, on March 13, 2015 and May 30, 2015, respectively the expiration date of the Series C Warrants was extended to June 2, 2015 and July 2, 2016, respectively. In conjunction with these amendments, the Company recognized a loss on the modification of warrants in the amount of $624,016, which was determined using Monte Carlo Simulation.

Prior to June 22, 2015, Series C Warrants had been exercised for an aggregate issuance of 2,255,000 shares of the Company’s common stock resulting in gross proceeds to the Company of $451,000. In conjunction with the exercise of the Series C Warrants, their corresponding fair value at the exercise dates of $75,321 were extinguished from the

derivative liabilities balance and recognized as a gain in the Company's statements of operations.

During the year ended September 30, 2015, Series A Warrants, and Series C Warrants had been exercised for an aggregate issuance of 6,000,000, and 8,000,000, respectively, shares of the Company's common stock resulting in gross proceeds to the Company of $2,800,000. For the year ended September 30, 2015, 1,750,000 of Series A Warrants were exercised through cashless transactions resulting in 686,801 shares of common stock being issued. The Company recorded the par value of the shares issued through cashless transactions of $687 (at par value of $0.001 per share) with a corresponding reduction in additional paid-in capital.

On June 22, 2015 the Company entered into the Amendment to the Series A Warrants and Series C Warrants to purchase Common Stock (the "June 2015 Amendment"), with Cranshire Capital Master Fund, Ltd. ("Cranshire"), to (i) delete the full ratchet anti-dilution provisions set forth in the Series A Warrants and Series C Warrants; and (ii) extend the expiration date of the Series C Warrants from 5:00 p.m., New York time, on July 2, 2015 to 5:00 p.m., New York time, on July 2, 2016. In consideration of Cranshire's entrance into the June 2015 Amendment (and for no additional consideration), the Company agreed to issue to the holders of the 2014 Warrants up to 570,000 shares of Company's common stock subject to the delivery by each such holder of an investor certificate to the Company (such shares of common stock, the "Inducement Shares"). In conjunction with the modifications to the Series A and Series C Warrants in the June 2015 Amendment, the Company recognized a loss on modification of warrants, net of Inducement Shares, in the amount of $927,373 which was determined using the Black Scholes model. As of June 22, 2015, the company determined that its Series A and C Warrants were eligible for equity classification due to the elimination of the full ratchet anti-dilution provision. As a result, for the period ended September 30, 2015 the derivative liabilities were reclassified as equity within the company's consolidated financial statements at a fair value of $3,263,753.

As of September 30, 2015, all 570,000 Inducement Shares had been issued.

Derivative Liabilities

The Company initially accounted for the 2014 Warrants relating to the aforementioned 2014 Private Placement Financing in accordance with ASC 815-10, *Derivatives and Hedging*. Because the 2014 Warrants were not indexed to the Company's stock and were not classified within stockholders' equity, they were recorded as liabilities at fair value. They were marked to market each reporting period through the consolidated statement of operations. As of June 22, 2015, the Company determined that its Series A and C Warrants were eligible for equity classification due to the elimination of the full ratchet anti-dilution provision. As a result, as of June 22, 2015, the derivative liabilities were reclassified as equity within the Company's consolidated financial statements at the then current fair value of $3,263,753.

On February 4, 2014, the closing date of the 2014 Private Placement Financing, the derivative liabilities were recorded at fair value of $10,391,693. Given that the fair value of the derivative liabilities exceeded the total proceeds of the 2014 Private Placement Financing of $2,850,000, no net amounts were available to be allocated to the Common Stock. The $7,541,693 amount by which the recorded liabilities exceeded the proceeds was charged to other expense as of the February 4, 2014 closing date.

The values of the derivative liability as of September 30, 2015 and 2014 were $0 and $6,270,000, respectively. As a result of a change in the estimated fair value of the derivative liability we recorded other expense of $896,763 and $4,121,693 for the years ended September 30, 2015 and 2014, respectively. In addition, during the year ended September 30, 2015, we recorded a gain on modification of warrants, net of Inducement Shares in the amount of

$2,980,829. The Company recognized a gain on the exercise of warrants in the amount of $299,321, for the year ended September 30, 2015 as described above. As of June 22, 2015, the Company determined that its Series A and C Warrants were eligible for equity classification due to the elimination of the full ratchet anti-dilution provision and as a result reclassified $3,263,753 from derivative liabilities to equity. For the year ended September 30, 2015, the change in the estimated fair value was primarily due to the elimination of the full ratchet anti-dilution provisions of the Series A Warrants and Series C Warrants and extending the expiration date of the Series C Warrants to July 2, 2016. The change in the estimated fair value was primarily due to the reduction of the exercise prices of the 2014 Warrants, the exercise of 4,000,000 shares of the Series B Warrants.

Fair Value Measurements Using Significant Unobservable Inputs (Level 3)

	Warrant Derivative Liability	
	2015	2014
Beginning balance at September 30,	$ 6,270,000	$ -
Issuances	-	10,391,693
Modification of warrants, net of Inducement Shares	896,763	-
Exercises of warrants	(299,321)	-
Adjustments to estimated fair value	(3,603,689)	(4,121,693)
Reclass of Derivative Liability to Equity	(3,263,753)	-
Ending balance at September 30, 2015	$ -	$ 6,270,000

The derivative liabilities were valued as of September 30, 2014, December 1, 2014, and March 15, 2015 using Monte Carlo Simulation. The derivative liabilities as of June 22, 2015, June 30, 2015, and September 30, 2015 as well as the exercises during 4th quarter of fiscal 2015 were valued using Black Scholes.

	September 30, 2014	**December 1, 2014**	**March 15, 2015**	**June 22, 2015**
Closing price per share of Common Stock	$ 0.18	$0.25	$0.21	$0.23
Exercise price per share	$ 0.30 - 0.40	$0.20 - $0.30	$0.20 - $0.30	$0.20
Expected volatility	85 - 90 %	80 – 90 %	80 – 110 %	55- 85 %
Risk-free interest rate	0.02 - 1.55 %	.01 – 1.39 %	0.03 – 1.41 %	0.27 - 1.68 %
Dividend yield	—	—	—	—
Remaining expected term of underlying securities (years)	0.33 - 4.33	0.33 – 4.6	0.22 – 4.3	1.03 – 4.03

	As of June 30, 2015	**Exercises during 4th Quarter 2015**	As of September 30, 2015
Closing price per share of Common Stock	$ 0.26	$ 0.23-0.27	$ 0.27
Exercise price per share	$ 0.20	$ 0.20	$ 0.20
Expected volatility	75-85 %	75- 85 %	75-85 %
Risk-free interest rate	1.63 %	0.23-1.36 %	0.21-1.09 %
Dividend yield	—	—	—
Remaining expected term of underlying securities (years)	1.01	0.80-3.96	0.76-3.76

Common Stock

At the February 4, 2014 closing date of the 2014 Private Placement Financing, the Company issued 11,400,000 shares of common stock and recorded the par value of the shares issued of $11,400 (at par value of $0.001 per share) with a corresponding reduction in additional paid-in capital, given that the fair value of the warrant liability recorded exceeded the total consideration received as of February 4, 2014.

6. 2015 PRIVATE PLACEMENT FINANCING

Beginning June 22, 2015 and through June 30, 2015, the Company entered into a series of substantially similar subscription agreements (each a "Subscription Agreement") with 20 accredited investors (collectively, the "2015 Investors") providing for the issuance and sale by the Company to the 2015 Investors, in a private placement, of an aggregate of 14,390,754 Units ("Unit") at a purchase price of $0.22 per Unit (the "2015 Private Placement Financing"). Each Unit consisted of a share of Common Stock (the "2015 Shares") and a Series D Warrant to purchase a share of Common Stock at an exercise price of $0.25 per share at any time prior to the fifth anniversary of the issuance date of the Series D Warrant (the "Series D Warrants," and the shares issuable upon exercise of the Series D Warrants, collectively, the "2015 Warrant Shares"). The Company did not engage any underwriter or placement agent in connection with the 2015 Private Placement Financing, and the aggregate gross proceeds raised by the Company in the 2015 Private Placement Financing totaled approximately $3,200,000.

The Company's obligation to issue and sell the 2015 Shares and the Series D Warrants and the corresponding obligation of the 2015 Investors to purchase such 2015 Shares and Series D Warrants were subject to a number of conditions precedent including, but not limited to, the amendment of the Company's Series A Warrants and Series C Warrants to delete certain of the anti-dilution provisions contained therein, as described in Footnote 5, Private Placement Financing, and other customary closing conditions. The conditions precedent were satisfied June 30, 2015 (the "Initial Closing Date"), and the Company conducted an initial closing (the "Initial Closing") pursuant to which it sold and 19 of the 2015 Investors (the "Initial Investors") purchased 13,936,367 Units at an aggregate purchase price of $3,066,000. On July 2, 2015, the Company conducted a second closing (the "Second Closing" and together with the Initial Closing, the "Closings") pursuant to which it sold and one of the 2015 Investors purchased 454,387 Units at an aggregate purchase price of approximately $100,000.

On the Initial Closing Date, the Company entered into a registration rights agreement with the Initial Investors (the " 2015 Registration Rights Agreement"), pursuant to which the Company was obligated, subject to certain conditions, to file with the Securities and Exchange Commission within 90 days after the closing of the 2015 Private Placement Financing one or more registration statements (any such registration statement, a "Resale Registration Statement") to register the 2015 Shares and the 2015 Warrant Shares for resale under the Securities Act of 1933, as amended (the "Securities Act"). The remaining 2015 Investor became a party to the 2015 Registration Rights Agreement upon the consummation of the Second Closing. The Company's failure to satisfy certain filing and effectiveness deadlines with respect to a Resale Registration Statement and certain other requirements set forth in the 2015 Registration Rights Agreement may subject the Company to payment of monetary penalties. On October 27, 2015, we received from the SEC a Notice of Effectiveness of our Registration Statement related to the 2015 Private Placement Financing which satisfied some of our obligation to register these securities with the SEC.

Following each Closing, each 2015 Investor was also issued Series D Warrants to purchase shares of the Company's Common Stock up to 100% of the 2015 Shares purchased by such 2015 Investor under such 2015 Investor's Subscription Agreement. The Series D Warrants have an exercise price of $0.25 per share, are exercisable immediately after their issuance and have a term of exercise equal to five years after their issuance date. The number of shares of the Company's Common Stock into which each of the Series D Warrants is exercisable and the exercise price therefore are subject to adjustment, as set forth in the Series D Warrants, including adjustments for stock subdivisions or combinations (by any stock split, stock dividend, recapitalization, reorganization, scheme, arrangement or otherwise). In addition, at any time during the term of the Series D Warrants, the Company may reduce the then current exercise price to any amount and for any period of time deemed appropriate by the Board of Directors of the Company.

Common Stock

At the June 30, 2015 Initial Closing Date of the 2015 Private Placement Financing, the Company issued 13,936,367 shares of Common Stock and recorded the par value of the shares issued of $13,936 (at par value of $0.001 per share) with the remaining proceeds of $3,052,064 allocated to additional paid-in capital. On July 2, 2015, the Company

conducted the Second Closing pursuant to which it sold and one of the 2015 Investors purchased 454,387 shares of Common Stock and recorded the par value of the shares issued of $454 (at par value of $0.001 per share) with the remaining proceeds of $99,511 allocated to additional paid-in capital. The Company completed an evaluation of the series D Warrants issued and determined the Series D Warrants should be classified as equity within the consolidated balance sheet.

7.8% CONVERTIBLE NOTES

Beginning March 11, 2015 and through March 13, 2015, the Company entered into a series of substantially similar subscription agreements (each a “Subscription Agreement”) with each of Anson Investments Master Fund, Ltd., Equitec Specialists, LLC and Capital Ventures International (collectively, the “Note Investors”) pursuant to which the Company issued unsecured 8% Convertible Notes (the “Notes”, and such transaction, the “Notes Offering”) to the Note Investors in the aggregate principal amount of $750,000. On the Closing of the Notes Offering on March 13, 2015 (the “Closing Date”), each Note Investor was issued a Note in the principal amount of $250,000. The Company did not engage any underwriter or placement agent in connection with the Notes Offering.

The Notes become due and payable on March 13, 2016 (the "Stated Maturity Date") and may not be prepaid. The Notes bear interest on the unpaid principal balance at a rate equal to eight percent (8.0%) (computed on the basis of the actual number of days elapsed in a 360-day year) per annum until either (a) converted into shares of the Company's common stock, $0.001 par value per share ("Common Stock") or (b) the outstanding principal and accrued interest on the Notes is paid in full by the Company. Interest on the Notes becomes due and payable upon their conversion or the Stated Maturity Date and may become due and payable upon the occurrence of an event of default under the Notes. The Notes contain customary events of default, which include, among other things, (i) the Company's failure to pay other indebtedness of $100,000 or more within the specified cure period for such breach; (iii) the acceleration of the stated maturity of such indebtedness; (iii) the insolvency of the Company; and (iv) the receipt of final, non-appealable judgments in the aggregate amount of $100,000 or more.

On September 8, 2015, we, along with the current holders of the Convertible Notes, entered into a series of substantially similar subordination agreements with the Massachusetts Life Sciences Center ("**MLSC**" and such agreements, the "**Subordination Agreements**"), pursuant to which the holders of the Convertible Notes agreed to subordinate their right to payment under the Convertible Notes to MLSC's right to receive payments under the MLSC Loan Agreement. Under the terms of the Subordination Agreements, the indebtedness accrued under the Convertible Notes may not be repaid unless and until all indebtedness and fees owed to MLSC under the MLSC Loan Agreement are repaid in full, but the right to convert the Convertible Notes into shares of Common Stock is expressly allowed.

At any time prior to the Stated Maturity Date, the holders of the Notes have the right to convert some or all of such Notes into the number of shares of Common Stock determined by dividing (a) the aggregate sum of the (i) principal amount of the Note to be converted, and (ii) amount of any accrued but unpaid interest with respect to such portion of the Note to be converted; and (b) the conversion price then in effect (the shares of Common Stock issuable upon such conversion, the "Conversion Shares"). The initial conversion price is $0.20 per share, and it may be (A) reduced to any amount and for any period of time deemed appropriate by the Board of Directors of the Company, or (B) reduced or increased proportionately as a result of stock splits, stock dividends, recapitalizations, reorganizations, and similar transactions. A holder shall not have the right to convert any portion of a Note, if after giving effect to such conversion, the holder, together with its affiliates collectively, would beneficially own more than 4.99% or 9.99% (at the holder's discretion) of the shares of Common Stock outstanding immediately after giving effect to such conversion. During the year ended September 30, 2015, $145,000 of notes and $6,173 of interest were converted into 755,865 shares of the Company's Common Stock.

The issuance and sale of the Notes and Conversion Shares (collectively, the "Securities") has not been, and will not upon issuance be, registered under the Securities Act of 1933, as amended (the "Securities Act"), and the Securities may not be offered or sold in the United States absent registration under or exemption from the Securities Act and any applicable state securities laws. The Securities were issued and sold in reliance upon an exemption from registration afforded by Section 4(a)(2) of the Securities Act and Rule 506 of Regulation D promulgated under the Securities Act.

Derivative Liabilities

The Company accounted for the conversion feature embedded within the Notes in accordance with ASC 815-10, *Derivatives and Hedging*. Because the options to convert into common stock are not indexed to the Company's stock and are not classified within stockholders' equity, the options to convert are recorded as liabilities at fair value. They are marked to market each reporting period through the consolidated statement of operations.

On the closing date, the derivative liability was recorded at fair value of $354,988 with the remaining proceeds of $395,012 allocated to the Notes. The allocation of funds to the derivative liability resulted in a discount on the loan, which is being accreted to interest expense over the life of the loan. For the year ended September 30, 2015, $223,735 of the loan discount has been accreted to interest expense and $145,000 of the principal was converted into 725,000 shares of common stock. As of September 30, 2015 the accreted balance of the Notes was $473,747.

The value of the derivative liability as of September 30, 2015 was $335,092. As a result of a change in the estimated fair value of the derivative liability we recorded other expense of $67,395 and a gain on the conversion of the notes of $87,291 for the year ended September 30, 2015.

Fair Value Measurements Using Significant Unobservable Inputs (Level 3)	Convertible Debt Derivative Liability
Beginning balance at September 30, 2014	$ -
Issuances	354,988
Conversion of Notes	(87,291)
Adjustments to estimated fair value	67,395
Ending balance at September 30, 2015	$ 335,092

The derivative liability was valued as of March 15, 2015, September 20, and September 30, 2015 using Monte Carlo Simulations with the following assumptions:

	March 15, 2015		September 20, 2015		September 30, 2015	
Stated interest rate	8.0	%	8.0	%	8.0	%
Exercise price per share	$ 0.20		$ 0.20		$ 0.20	
Expected volatility	90.0	%	80.0	%	80.0	%
Risk-free interest rate	0.24	%	0.09	%	0.07	%
Credit adjusted discount rate	20.0	%	22.0	%	22.0	%
Remaining expected term of underlying securities (years)	1.00		.48		.46	

8. STOCK-BASED COMPENSATION

2013 Stock Incentive Plan

On June 18, 2013, the Company established the 2013 Stock Incentive Plan (the “2013 Plan”). Under the 2013 Plan, during the fiscal year ended September 30, 2015, a maximum number of 13,114,256 shares of the Company’s authorized and available common stock could be issued in the form of options, stock appreciation rights, sales or bonuses of restricted stock, restricted stock units or dividend equivalent rights, and an award may consist of one such security or benefit, or two or more of them in any combination or alternative. The 2013 Plan provides that on the first business day of each fiscal year commencing with fiscal year 2014, the number of shares of our common stock reserved for issuance under the 2013 Plan for all awards except for incentive stock option awards will be subject to increase by an amount equal to the lesser of (A) 3,000,000 Shares, (B) four (4) percent of the number of shares

outstanding on the last day of the immediately preceding fiscal year of the Company, or (C) such lesser number of shares as determined by the Company's Board of Directors (the "Board"). The exercise price of each option shall be the fair value as determined in good faith by the Board at the time each option is granted. On October 1, 2015, the aggregate number of authorized shares under the Plan was further increased by 3,000,000 shares to a total of 16,114,256 shares.

As of September 30, 2015, a total of 8,479,212 options had been issued to employees and directors and 4,652,500 options had been issued to consultants. The exercise price of each option has either been equal to the closing price of a share of our common stock on the date of grant or has been determined to be in compliance with Internal Revenue Section 409A.

Share-based awards

During the year ended September 30, 2015, the Company granted options to employees and directors to purchase 3,175,000 and to consultants to purchase 1,087,500 shares of common stock under the 2013 Plan. The options have terms ranging from 1 to 10 years, are subject to vesting terms over periods ranging up to 3 years and have exercise prices ranging from $0.17 to $0.28.

The Company recognizes compensation expense for stock option awards on a straight-line basis over the applicable service period of the award. The service period is generally the vesting period, with the exception of options granted subject to a consulting agreement, whereby the option vesting period and the service period are defined pursuant to the terms of the consulting agreement. Share-based compensation expense for awards granted during the year ended September 30, 2015 was based on the fair market value at period end or grant date fair value estimated using the Black-Scholes Option Pricing Model. The following assumptions were used to calculate the fair value of share based compensation for the year ended September 30, 2015; expected volatility, 76.6% - 119.4%, risk-free interest rate, 0.64% - 2.03%, expected forfeiture rate, 0.00%, expected dividend yield, 0.00%, expected term, 1 to 10 years.

Expected price volatility is the measure by which the Company's stock price is expected to fluctuate during the expected term of an option. The Company exited shell company status on June 26, 2013. In situations where a newly public entity has limited historical data on the price of its publicly traded shares and no other traded financial instruments, authoritative guidance is provided on estimating this assumption by basing its expected volatility on the historical, expected, or implied volatility of similar entities whose share option prices are publicly available. In making the determination as to similarity, the guidance recommends the consideration of industry, stage of life cycle, size and financial leverage of such other entities. The Company's expected volatility is derived from the historical daily change in the market price of its common stock since it exited shell company status, as well as the historical daily change in the market price for the peer group as determined by the Company.

For so called "plain vanilla" options granted to employees, the expected term of the options is based upon the simplified method as defined in ASC 718-10-S99 which averages an award's weighted-average vesting period and the contractual term for share options. The Company will continue to use the simplified method until it has the historical data necessary to provide a reasonable estimate of expected life in accordance with ASC Topic 718. The Company's estimation of the expected term for stock options not subject to the simplified method is based upon the contractual term of the option award. For the purposes of estimating the fair value of stock option awards, the risk-free interest rate used in the Black-Scholes calculation is based on the prevailing U.S. Treasury yield. The Company has never paid any dividends on its common stock and does not anticipate paying dividends on its common stock in the foreseeable future.

Stock-based compensation expense recognized in the Company's consolidated statements of operations is based on awards ultimately expected to vest, reduced for estimated forfeitures. Authoritative guidance requires forfeitures to be estimated at the time of grant, and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. Prior to the year ended September 30, 2015, the Company did not experience any forfeitures of stock options. During the year ended September 30, 2015, the Company experienced an insignificant number of forfeitures of stock options granted. Since the Company has a limited history of stock option forfeitures it continues to estimate the forfeiture rate of its outstanding stock options as zero, but will continually evaluate its historical data as a basis for determining expected forfeitures.

Common Stock Options

Stock compensation activity under the 2013 Plan for the year ended September 30, 2015 follows:

	Option Shares Outstanding	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value ($0's)
Outstanding at September 30, 2014	8,637,962	$ 0.38	-	$ -
Awarded	4,262,500	$ 0.21	-	-
Exercised	1,025,000	$ 0.33	-	-
Forfeited	(1,098,962)	$ 0.36	-	-
Outstanding at September 30, 2015	10,776,500	$ 0.30	6.85	$ 335,435
Vested	8,796,959	$ 0.32	4.73	$ 200,668
Vested and expected to vest at September 30, 2015	10,776,500	$ 0.30	6.85	$ 335,435

As of September 30, 2015, 781,506 shares are available for future grants under the 2013 Plan. Share-based compensation expense recorded in the Company's Consolidated Statements of Operations for the years ended September 30, 2015 and 2014 resulting from stock options awarded to the Company's employees, directors and consultants was approximately $1,048,000 and $1,101,000, respectively. Of this amount during the years ended September 30, 2015 and 2014, $466,000 and $629,000, respectively, was recorded to research and development expenses, and $582,000 and $472,000, respectively was recorded in general and administrative expenses in the Company's Consolidated Statements of Operations.

As of September 30, 2015, there is approximately $607,000 of unrecognized compensation expense related to unvested stock-based compensation arrangements granted under the 2013 Plan. That cost is expected to be recognized over a weighted average period of 1.62 years.

Restricted Stock

Restricted stock activity under the 2013 Plan for the years ended September 30, 2015 and 2014 follows:

	2015	2014
Restricted Stock		
Non Vested at October 1	25,000	-
Awarded	-	300,000
Vested	(25,000)	(275,000)
Forfeited	-	-
Non Vested at September 30	-	25,000

The weighted average restricted stock award date fair value information for the years ended September 30, 2015 and 2014 follows:

	2015	2014
Non Vested at October 1	$0.345	$-
Awarded	-	0.345
Vested	0.345	0.345
Forfeited	-	-
Non Vested at September 30	$-	$0.345

Non-employee restricted shares subject to vesting are revalued at each vesting date and at the end of the reporting period, with all changes in fair value recorded as stock-based compensation expense. For the year ended September 30, 2015 and 2014, compensation expense recorded for the restricted stock awards was approximately $9,000 and $95,000, respectively.

9. 2015 Restricted Stock

On August 6, 2015, we entered into separate consulting agreements with two investor relations firms, Excelsior Global Advisors LLC ("**Excelsior**") and Acorn Management Partners, LLC ("**Acorn**"). In consideration of the services to be provided under and in accordance with the terms of each consulting agreement, we issued 300,000 shares of Common Stock subject to time-based vesting restrictions to each of Excelsior and John R. Exley, Acorn's Chief Executive Officer and the party designated by Acorn to receive its shares, at an agreed upon value of $0.35 per share, which was the closing price of our common stock on August 6, 2015. 150,000 of shares of common stock granted to each of Excelsior and Mr. Exley vested immediately upon issuance, and the remaining 150,000 shares are scheduled to vest in 75,000, 50,000 and 25,000 share increments on September 4, 2015, October 2, 2015, and November 4, 2015, respectively. The issuance and sale of the shares of common stock to Excelsior and Acorn has not been registered under the Securities Act, and such securities may not be offered or sold in the United States absent registration under or exemption from the Securities Act and any applicable state securities laws. The securities were issued and sold in reliance upon an exemption from registration afforded by Section 4(a)(2) of the Securities Act based on the following facts: each of Excelsior and Acorn has represented that it is an accredited investor as defined in Regulation D promulgated under the Securities Act, that it is acquiring the securities for investment only and not with a view towards, or for resale in connection with, a distribution thereof in violation of applicable securities laws; that it understood that the securities would be issued as restricted securities and as a result, it must bear the economic risk of its investment in the securities for an indefinite period of time.

Restricted Stock activity for the year ended September 30, 2015 follows:

	2015
Restricted Stock	
Non Vested at October 1	-
Awarded	600,000
Vested	(450,000)
Forfeited	-
Non Vested at September 30	150,000

The weighted average restricted stock award date fair value information for the years ended September 30, 2015 follows:

	2015
Non Vested at October 1	$-
Awarded	0.35
Vested	0.35
Forfeited	-
Non Vested at September 30	$0.35

For the year ended September 30, 2015, compensation expense recorded for the restricted stock awards was approximately $157,000.

10. COLDSTREAM FINANCING

In contemplation of the Merger, (the "Merger"), on April 19, 2013, the Company entered into a financing agreement (the "Financing Agreement") with Coldstream Summit Ltd. ("Coldstream") pursuant to which we agreed to issue and sell, and Coldstream agreed to purchase or assist in securing the purchase of $2,000,000 worth of units in a private offering within the 12-month period following the closing of the Merger (the "Coldstream Financing"). Each unit issued in the Coldstream Financing was to be sold at a price of $0.50 per share and was to consist of (i) one share of common stock and (ii) one warrant to purchase one share of common stock at an exercise price of $0.75 per share and with a term of 12 months. Pursuant to the Coldstream Financing, we issued and sold units consisting of 4,000,000 shares of common stock and warrants to purchase 4,000,000 shares of common stock for aggregate gross proceeds of $2,000,000. As of September 30, 2014, all warrants issued in connection with the Coldstream Financing had expired.

11. NOTE PAYABLE

On September 30, 2013, the Company entered into the Life Sciences Accelerator Funding Agreement (the "MLSC Loan Agreement") with the Massachusetts Life Sciences Center ("MLSC"), pursuant to which MLSC provided an unsecured subordinated loan in the amount of $1,000,000. The loan bears interest at a rate of 10% per annum, and will become fully due and payable on the earlier of (i) September 30, 2018, (ii) the occurrence of an event of default under the MLSC Loan Agreement, or (iii) the completion of a sale of substantially all of our assets, a change-of-control transaction or one or more financing transactions in which we receive from third parties other than our then existing shareholders net proceeds of $5,000,000 or more in a 12-month period. The MLSC Loan Agreement includes warrants to purchase 145,985 shares of the Company's Common Stock at an exercise price of $0.27 per share. None of the warrants, which expire on September 30, 2023, have been exercised as of September 30, 2015.

Of the $1,000,000, the Company allocated $944,707 to the loan and $55,293 to the warrants. The allocation of funds to the warrants resulted in a discount on the loan, which is accreted to interest expense over the life of the loan. For the years ended September 30, 2015 and 2014, was approximately $11,000 of the loan discount was accreted to interest expense. As of September 30, 2015 and 2014 the accreted balance of the MLSC Loan was $966,824 and $955,766, respectively.

12. COMMITMENTS AND CONTINGENCIES

In the ordinary course of business, the Company enters into various agreements containing standard indemnification provisions. The Company's indemnification obligations under such provisions are typically in effect from the date of execution of the applicable agreement through the end of the applicable statute of limitations. The aggregate maximum potential future liability of the Company under such indemnification provisions is uncertain. As of September 30, 2015 and 2014, no amounts have been accrued related to such indemnification provisions.

From time to time, the Company may be exposed to litigation in connection with its operations. The Company's policy is to assess the likelihood of any adverse judgments or outcomes related to legal matters, as well as ranges of probable losses.

MIT Licensing Agreement

In December, 2007, the Company entered into a license agreement with MIT pursuant to which the Company acquired an exclusive world-wide license to develop and commercialize technology related to self-assembling peptide compositions, and methods of making and using such compositions in medical and non-medical applications, including claims that cover the Company's proposed products and methods of use thereof. The license also provides non-exclusive rights to additional intellectual property in the fields that cover the Company's proposed products and methods of use thereof, in order to provide freedom to operate. The license provides the Company a right to sublicense the exclusively licensed intellectual property. The Company has not sublicensed the exclusively licensed intellectual property to any party for any field.

In exchange for the licenses granted in the agreement, the Company has paid MIT license maintenance fees and patent prosecution costs. The Company paid license maintenance fees of $45,000 to MIT in the fiscal year ended September 30, 2015 and $35,000 in the fiscal year ended September 30, 2014. For the years ended September 30, 2015 and 2014, the annual MIT license maintenance fees of $50,000 and $45,000, respectively, are included in accrued expenses and other liabilities on the Consolidated Balance Sheets. The license maintenance fees and patent prosecution costs cover the contract year beginning January 1 thru December 31.

Annual license maintenance obligations extend through the life of the patents. The following table reflects the Company's annual license maintenance fee commitments:

Year Ending September 30,	
2016	$50,000
2017	50,000
2018	50,000
2019	50,000
	$200,000

In addition, MIT is entitled to royalties on applicable future product sales, if any. The annual payments may be applied towards royalties payable to MIT for that year for product sales.

The Company is obligated to indemnify MIT and related parties from losses arising from claims relating to the exercise of any rights granted to the Company under the license, with certain exceptions. The maximum potential amount of future payments the Company could be required to make under this provision is unlimited. The Company considers there to be a low performance risk as of September 30, 2015.

The agreement expires upon the expiration or abandonment of all patents that are issued and licensed to the Company by MIT under such agreement. The Company expects that patents will be issued from presently pending U.S. and foreign patent applications. Any such patent will have a term of 20 years from the filing date of the underlying application. MIT may terminate the agreement immediately, if the Company ceases to carry on its business, if any nonpayment by the Company is not cured or the Company commits a material breach that is not cured. The Company may terminate the agreement for any reason upon six months' notice to MIT.

Leases

We do not own any real property. In October 2013, we entered into a one and one-half year operating sublease agreement pursuant to which we leased the office space of our relocated headquarters in Wellesley, Massachusetts for a base annual rent equal to $5,031 per month. In April 2015, we moved our corporate offices to a property in Framingham, Massachusetts. We entered into a month-to-month operating lease agreement, pursuant to which we are obligated to pay monthly rent of $2,000, with a minimum six month commitment. We believe our present offices are suitable for our current and planned near-term operations.

13. Immaterial Corrections to Prior Period Financial Statements

The Company has determined that there had been an immaterial error in its accounting for the Series A Warrants, Series C Warrants, and Series D Warrants contained in its consolidated financial statements for the three and nine months ended June 30, 2015 filed with the Securities Exchange Commission on August 7, 2015. The Company determined that the Series A Warrants, Series C Warrants and Series D Warrants should have been presented in stockholders' equity instead of as a liability. The Company assessed the materiality of this error in accordance with Staff Accounting Bulletin No. 99, *Materiality*, and the Company determined that, qualitatively,, the amounts would have no bearing on the decision making process of a reasonable investor. The Company intends to revise its consolidated financial statements for the periods ended June 30, 2015 through subsequent periodic filings. An adjustment was made to correct the error by increasing additional paid-in capital by $5,721,957, decreasing the long-term derivative liabilities, net of current portion by $6,344,817 and decreasing the fair value mark to market of derivative by $622,860

The following table sets forth the effects of the adjustments discussed above on the consolidated balance sheet as at June 30, 2015.

Liabilities			
Derivative liabilities, net of current portion	6,344,817	(6,344,817)	-
Total long-term liabilities	7,491,377	(6,344,817)	1,146,560
Total liabilities	9,383,266	(6,344,817)	3,038,449
Stockholders' deficit			
Additional paid-in capital	8,566,193	5,721,957	14,288,150
Accumulated deficit	(14,624,760)	(622,860)	(14,001,900)
Total stockholders' deficit	(6,065,411)	6,344,817	279,406

The following table sets forth the effects of the adjustments discussed above on the consolidated statement of operations for the three and nine months ended June 30, 2015

	Three months ended			Nine Months Ended		
	Previously Reported $	Increase (Decrease) $	Restated $	Previously Reported $	Increase (Decrease) $	Restated $
(Increase)/decrease to fair value of derivative	(925,384)	(622,860)	(302,524)	2,924,064	(622,860)	3,546,924
Total other income (expense)	(57,016)	(622,860)	565,844	2,013,925	(622,860)	2,636,785
Net (loss)/income	(1,395,245)	(622,860)	(772,385)	(1,850,066)	(622,860)	(1,227,206)

The following table sets forth the effects of the adjustments discussed above on the consolidated statement of cash flow as at June 30, 2015

	Previously Reported	Increase (Decrease)	Restated
	$	$	$
Net (loss)	(1,850,066)	(622,860)	(1,277,206)
Decrease to fair value of derivative	(2,924,064)	622,860	(3,546,924)

14. Reclassification of Prior Year Presentation

Certain prior year amounts have been reclassified for consistency with the current year presentation. These reclassifications had no effect on the reported results of operations. An adjustment has been made to the Consolidated Statements of Cash Flows for fiscal year ended September 30, 2014, to identify the non cash expense for the issuance of warrants of $7,541,693. This change in classification does not affect previously reported cash flows from operating activities in the Consolidated Statements of Cash Flows

15. SUBSEQUENT EVENTS

During the period commencing October 1, 2015 and ending on December 10, 2015, an additional 255,000 of Convertible Notes and $12,470 of accrued interest have been converted for an aggregate issuance of 1,337,347 shares of the Company’s Common Stock.

Arch Therapeutics, Inc.

Consolidated Balance Sheets

As of March 31, 2016 (Unaudited) and September 30, 2015

	March 31, 2016 (Unaudited)	September 30, 2015
ASSETS		
Current assets:		
Cash	$ 1,669,249	$ 3,960,100
Prepaid expenses and other current assets	90,119	42,919
Total current assets	1,759,368	4,003,019
Total assets	$ 1,759,368	$ 4,003,019
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 135,615	$ 231,761
Accrued expenses and other liabilities	163,386	245,478
Convertible notes, net of unamortized discount	100,000	473,747
Current derivative liabilities	-	335,092
Total current liabilities	399,001	1,286,078
Long-term liabilities:		
Note payable, net of unamortized discount	972,353	966,824
Accrued interest, net of current portion	270,500	210,000
Total long-term liabilities	1,242,853	1,176,824
Total liabilities	1,641,854	2,462,902
Commitments and contingencies		
Stockholders' equity:		
Common stock, $0.001 par value, 300,000,000 shares authorized, 110,423,588 and 107,592,205 shares issued and outstanding as of March 31, 2016 and September 30, 2015, respectively	110,424	107,392
Additional paid-in capital	18,139,021	17,154,945
Accumulated deficit	(18,131,931)	(15,722,220)
Total stockholders' equity	117,514	1,540,117

Total liabilities and stockholders' equity	$ 1,759,368	$ 4,003,019

The accompanying notes are an integral part of these consolidated financial statements

Arch Therapeutics, Inc.

Consolidated Statements of Operations (Unaudited)

For the Three and Six Months Ended March 31, 2016 and 2015

	Three Months Ended March 31, 2016	Three Months Ended March 31, 2015	Six Months Ended March 31, 2016	Six Months Ended March 31, 2015
Revenues	$ -	$ -	$ -	$ -
Operating expenses:				
General and administrative expenses	868,433	853,177	1,733,946	1,723,533
Research and development expenses	386,285	402,495	800,288	802,230
Total operating expenses	1,254,718	1,255,672	2,534,234	2,525,763
Operating loss	(1,254,718)	(1,255,672)	(2,534,234)	(2,525,763)
Other income (expense):				
Interest expense	(66,823)	(50,556)	(210,569)	(78,320)
Gain on exercise of warrants and conversion of debt	13,503	-	142,964	224,000
Loss on warrant derivative modification	-	(624,016)	-	(1,924,186)
Decrease to fair value of derivative	54,982	1,096,278	192,128	3,849,448
Total other income	1,662	421,706	124,523	2,070,942
Net loss	$ (1,253,056)	$ (833,966)	$ (2,409,711)	$ (454,821)
Earnings per share - basic and diluted				
Net loss per common share - basic and diluted	$ (0.01)	$ (0.01)	$ (0.02)	$ (0.01)
Weighted common shares - basic and diluted	109,524,010	76,076,487	109,069,824	74,716,734

The accompanying notes are an integral part of these consolidated financial statements

Arch Therapeutics, Inc.

Consolidated Statements of Cash Flows (Unaudited)

For the Six Months Ended March 31, 2016 and 2015

	Six Months Ended March 31, 2016	Six Months Ended March 31, 2015
Cash flows from operating activities:		
Net loss	$ (2,409,711)	$ (454,821)
Adjustments to reconcile net loss to cash used in operating activities:		
Stock-based compensation	358,330	609,272
Noncash interest expense on notes payable	210,569	78,320
Issuance of restricted stock for services	52,500	8,625
Gain on exercise of warrants and conversion of debt	(142,964)	(224,000)
Loss on warrant derivative modification	-	1,924,186
Decrease to fair value of derivative	(192,128)	(3,849,448)
Changes in operating assets and liabilities:		
(Increase) decrease in:		
Prepaid expenses and other current assets	(47,200)	11,029
Increase (decrease) in:		
Accounts payable	(96,146)	28,267
Accrued expenses and other liabilities	(64,101)	58,650
Net cash used in operating activities	(2,330,851)	(1,809,920)
Cash flows from financing activities:		
Proceeds from exercise of warrants	40,000	800,000
Proceeds from issuance of convertible notes	-	750,000
Net cash provided by financing activities	40,000	1,550,000
Net increase in cash	(2,290,851)	(259,920)
Cash, beginning of period	3,960,100	833,520
Cash and cash equivalents, end of period	$ 1,669,249	$ 573,600
Non-cash financing activities		
Conversion of 8% convertible notes and accrued interest to common stock	$ 536,278	$ -

The accompanying notes are an integral part of these consolidated financial statements

ARCH THERAPEUTICS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

1. BASIS OF PRESENTATION AND DESCRIPTION OF BUSINESS

Organization and Description of Business

Arch Therapeutics, Inc., (together with its subsidiary, the "Company" or "Arch") was incorporated under the laws of the State of Nevada on September 16, 2009, under the name "Almah, Inc." to pursue the business of distributing automobile spare parts online. Effective June 26, 2013, the Company completed a merger (the "Merger") with Arch Biosurgery, Inc. (formerly known as Arch Therapeutics, Inc.), a Massachusetts corporation ("ABS"), and Arch Acquisition Corporation ("Merger Sub"), the Company's wholly owned subsidiary formed for the purpose of the transaction, pursuant to which Merger Sub merged with and into ABS and ABS thereby became the wholly owned subsidiary of the Company. As a result of the acquisition of ABS, the Company abandoned its prior business plan and changed its operations to the business of a biotechnology company. Our current principal offices are located in Framingham, Massachusetts.

For financial reporting purposes, the Merger represented a "reverse merger". ABS was deemed to be the accounting acquirer in the transaction and the predecessor of Arch. Consequently, the accumulated deficit and the historical operations that are reflected in the Company's unaudited interim consolidated financial statements prior to the Merger are those of ABS. All share information has been restated to reflect the effects of the Merger. The Company's financial information has been consolidated with that of ABS after consummation of the Merger on June 26, 2013, and the historical financial statements of the Company before the Merger have been replaced with the historical financial statements of ABS before the Merger in this report.

ABS was incorporated under the laws of the Commonwealth of Massachusetts on March 6, 2006 as Clear Nano Solutions, Inc. On April 7, 2008, ABS changed its name from Clear Nano Solutions, Inc. to Arch Therapeutics, Inc. Effective upon the closing of the Merger, ABS changed its name from Arch Therapeutics, Inc. to Arch Biosurgery, Inc.

The Company has generated no operating revenues to date, and is devoting substantially all of its efforts toward product research and development. To date, the Company has principally raised capital through debt borrowings, the issuance of convertible debt, and the issuance of units consisting of common stock and warrants.

The Company expects to incur substantial expenses for the foreseeable future relating to research, development and commercialization of its potential products. The Company will be required to raise additional capital, obtain alternative means of financial support, or both, prior to or during October 2016 in order to continue to fund operations. However, there can be no assurance that the Company will be successful in securing additional resources when needed, on terms acceptable to the Company, if at all. Therefore, there exists substantial doubt about the Company's ability to continue as a going concern. The unaudited interim consolidated financial statements do not include any adjustments related to the recoverability of assets that might be necessary despite this uncertainty.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accompanying unaudited interim consolidated financial statements of the Company have been prepared in accordance with accounting principles generally accepted in the United States of America ("US GAAP"). The interim consolidated financial statements included herein are unaudited; however, they contain all normal recurring accruals and adjustments that, in the opinion of management, are necessary to present fairly our results of operations and financial position for the interim periods.

Although we believe that the disclosures in these unaudited interim consolidated financial statements are adequate to make the information presented not misleading, certain information normally included in the footnotes prepared in accordance with US GAAP has been omitted as permitted by the rules and regulations of the Securities and Exchange Commission ("SEC"). These unaudited interim consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto included in the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2015, filed with the SEC on December 11, 2015.

For a complete summary of our significant accounting policies, please refer to Note 2 included in Item 15 of our Form 10-K for the fiscal year ended September 30, 2015. There have been no material changes to our significant accounting policies during the six months ended March 31, 2016.

Basis of Accounting

The unaudited interim consolidated financial statements include the accounts of Arch Therapeutics, Inc. and its wholly owned subsidiary, Arch Biosurgery, Inc., a biotechnology company. All intercompany accounts and transactions have been eliminated in consolidation.

The Company is in the development stage and is devoting substantially all of its efforts to developing technologies, raising capital, establishing customer and vendor relationships, and recruiting new employees.

Use of Estimates

Management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the dates of the financial statements and the reported amounts of revenue and expenses during the reporting periods. Actual results could differ from those estimates.

Recently Issued Accounting Guidance

Accounting Standards Update (ASU) 2016-09, “Compensation—Stock Compensation (Topic 718) Improvements to Employee Share-Based Payment Accounting” was issued by the Financial Accounting Standards Board (FASB) in March 2016. The purpose of this amendment is to simplify 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 amendments in this Update are effective for public business entities for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2016. Early adoption is permitted. The Company does not believe that this guidance will have a material impact on its consolidated results of operations, financial position or disclosures.

ASU 2016-02, “Leases (Topic 842)” was issued by the FASB in February 2016. The purpose of this amendment requires the recognition of lease assets and lease liabilities by lessees for those leases previously classified as operating leases. The amendments in this Update are effective for public business entities for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2018. Early adoption is permitted. The Company does not believe that this guidance will have a material impact on its consolidated results of operations, financial position or disclosures.

ASU 2015-17, “Income Taxes (Topic 740) – Balance Sheet Classification of Deferred Taxes” was issued by the FASB in November 2015. The purpose of this amendment requires deferred tax assets and liabilities to be classified as noncurrent in a classified statement of financial position. The amendments in this Update are effective for public business entities for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2017. Early adoption is permitted. The Company does not believe that this guidance will have a material impact on its consolidated results of operations, financial position or disclosures.

ASU 2015-03, “Interest – Imputation of Interest (Subtopic 835-30) Simplifying the Presentation of Debt Issuance Costs” was issued by the FASB in April 2015. The purpose of this amendment requires that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with debt discounts. The amendments in this Update are effective for public business entities for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2015. Early adoption is permitted. The Company does not believe that this guidance will have a material impact on its consolidated results of operations, financial position or disclosures.

ASU 2015-02, “Consolidation (Topic 810) – Amendments to the Consolidation Analysis”, was issued by the FASB in February 2015. The purpose of this amendment is to change the analysis that a reporting entity must perform to determine whether it should consolidate certain types of legal entities. The amendments in this Update are effective for public business entities for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2015. Early adoption is permitted. The Company does not believe that this guidance will have a material impact on its consolidated results of operations or financial position or disclosures.

ASU 2014-16, “Derivatives and Hedging (Topic 815)” was issued by the FASB in November 2014. The primary purpose of the ASU is to determine whether the host contract in a Hybrid Financial Instrument issued in the form of a share is more akin to debt or equity. ASU 2014-16 is effective for public entities for the fiscal years and interim periods within those fiscal years, beginning after December 15, 2015. Early adoption is permitted. The Company does not believe that this guidance will have a material impact on its consolidated results of operations or financial position or disclosures.

ASU 2014-15, “Presentation of Financial Statements-Going Concern (Subtopic 205-40) – Disclosure of Uncertainties about an Entity’s Ability to ‘Continue as a Going Concern” was issued by the FASB in August 2014. The primary purpose of the ASU is to provide guidance in GAAP about management’s responsibility to evaluate whether there is substantial doubt about an entity’s ability to continue as a going concern and to provide related footnote disclosures. The amendments should reduce diversity in the timing and content of footnote disclosure. ASU 2014-15 is effective for the annual period ending after December 15, 2016, and for the annual periods and interim periods thereafter. Early adoption is permitted. The Company is currently assessing the impact of this guidance, but does not believe that it will have a material impact on its consolidated results of operations, financial position or disclosures.

ASU 2014-12, “Compensation-Stock Compensation (Topic 718) – Accounting for Share-Based Payments When the Terms of an Award Provide That a Performance Target Could Be Achieved after the Requisite Service Period” was issued by the FASB in June 2014. ASU 2014-12 requires that compensation cost should be recognized in the period in which it becomes probable that the performance target will be achieved and should represent the compensation cost attributable to the period(s) for which the requisite service has already been rendered. ASU 2014-12 is effective for public business entities for annual periods and interim periods within the annual periods beginning after December 15, 2015. Early adoption is permitted. The Company is currently assessing the impact of this guidance, but does not believe that it will have a material impact on its consolidated results of operations, financial position or disclosures.

ASU 2014-09, “Revenue from Contracts with Customers (Topic 606) was issued by the FASB in May 2014. The primary purpose of the ASU is to develop a common revenue standard for revenue recognition between the FASB and the International Accounting Standards Board (IASB). The ASU removes inconsistencies and weaknesses in revenue requirements, provides a more robust framework for addressing revenue issues, and improves comparability of revenue recognition practices across entities, industries, jurisdictions and capital markets, among other items. We are a development stage company and do not currently generate revenue. ASU 2014-09 is effective for public business entities for annual periods beginning after December 15, 2017. While we are a development stage company and do not currently generate revenue, we currently anticipate generating revenue by the effective date of this ASU and therefore will be subject to this guidance. The Company is currently assessing the impact of this guidance, but does not believe that it will have a material impact on its consolidated results of operations, financial position or disclosures.

Cash and Cash Equivalents

The Company considers all highly liquid investments with an original maturity of three months or less to be cash equivalents. The Company had no cash equivalents as of March 31, 2016 and September 30, 2015.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentration of credit risk consist primarily of cash. The Company maintains its cash in bank deposit accounts, which, at times, may exceed federally insured limits. The Company has not experienced any losses in such accounts. The Company believes it is not exposed to any significant credit risk on cash.

Property and Equipment

Property and equipment are recorded at cost and depreciated using the straight-line method over the estimated useful life of the related asset. Upon sale or retirement, the cost and accumulated depreciation are eliminated from their respective accounts, and the resulting gain or loss is included in income or loss for the period. Repair and maintenance expenditures are charged to expense as incurred.

Impairment of Long-Lived Assets

Long-lived assets are reviewed for impairment when circumstances indicate the carrying value of an asset may not be recoverable in accordance with ASC 360, *Property, Plant and Equipment*. For assets that are to be held and used, impairment is recognized when the estimated undiscounted future cash flows associated with the asset or group of assets is less than their carrying value. If impairment exists, an adjustment is made to write the asset down to its fair value, and a loss is recorded as the difference between the carrying value and fair value. Fair values are determined based on quoted market values, discounted cash flows or internal and external appraisals, as applicable. Assets to be disposed of are carried at the lower of carrying value or estimated net realizable value. For the three and six month periods ended March 31, 2016 and 2015 there were no impairments of long-lived assets.

Convertible Debt

The Company records a discount to convertible notes for the intrinsic value of conversion options embedded in debt instruments based upon the differences between the fair value of the underlying common stock at the commitment date of the note transaction and the effective conversion price embedded in the note. Debt discounts under these arrangements are amortized to noncash interest expense using the effective interest rate method over the term of the related debt through their date of maturity. If a security or instrument becomes convertible only upon the occurrence of a future event outside the control of the Company, or, is convertible from inception, but contains conversion terms that change upon the occurrence of a future event, then any contingent beneficial conversion feature is measured and recognized when the triggering event occurs and the contingency has been resolved.

Income Taxes

In accordance with ASC 740, *Income Taxes*, the Company recognizes deferred tax assets and liabilities for the expected future tax consequences or events that have been included in the Company's consolidated financial statements and/or tax returns. Deferred tax assets and liabilities are based upon the differences between the financial statement carrying amounts and the tax bases of existing assets and liabilities and for loss and credit carryforwards using enacted tax rates expected to be in effect in the years in which the differences are expected to reverse. Deferred tax assets are reduced by a valuation allowance if it is more likely than not that some portion or all of the deferred tax asset will not be realized.

The Company provides reserves for potential payments of tax to various tax authorities related to uncertain tax positions when management determines that it is probable that a loss will be incurred related to these matters and the amount of the loss is reasonably determinable. The Company has no reserves related to uncertain tax positions as of March 31, 2016 and September 30, 2015.

Research and Development

The Company expenses internal and external research and development costs, including costs of funded research and development arrangements, in the period incurred.

Accounting for Stock-Based Compensation

The Company accounts for employee stock-based compensation in accordance with the guidance of ASC 718, *Compensation-Stock Compensation*, which requires all share-based payments to employees, including grants of employee stock options, to be recognized in the consolidated financial statements based on their fair values. The Company accounts for non-employee stock-based compensation in accordance with the guidance of ASC 505, *Equity,* which requires that companies recognize compensation expense based on the estimated fair value of options granted to non-employees over their vesting period, which is generally the period during which services are rendered by such non-employees. ASC 505 requires the Company to re-measure the fair value of stock options issued to non-employees at each reporting period during the vesting period or until services are complete.

In accordance with ASC 718, the Company has elected to use the Black-Scholes option pricing model to determine the fair value of options granted and recognizes the compensation cost of share-based awards on a straight-line basis over the vesting period of the award.

The determination of the fair value of share-based payment awards utilizing the Black-Scholes model is affected by the fair value of the common stock and a number of other assumptions, including expected volatility, expected life, risk-free interest rate, and expected dividends. The Company has a limited history of market prices of its common stock, and as such volatility is estimated in accordance with ASC 718-10-S99 Staff Accounting Bulletin ("SAB") No. 107, *Share-Based Payment* ("SAB No. 107"), using historical volatilities of similar public entities. The Company uses a simplified method for all "plain vanilla" options, as defined in SAB No. 107 and the contractual term for all other employee and non-employee awards to estimate the expected life. The risk-free interest rate assumption is based on observed interest rates appropriate for the terms of our awards. The dividend yield assumption is based on history and the expectation of paying no dividends. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. Stock-based compensation expense, when recognized in the consolidated financial statements, is based on awards that are ultimately expected to vest.

Fair Value Measurements

The Company measures both financial and nonfinancial assets and liabilities in accordance with ASC 820, *Fair Value Measurements and Disclosures*. The standard created a fair value hierarchy which prioritizes the inputs to valuation techniques used to measure fair value into three broad levels as follows: Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities; Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly; and Level 3 inputs are unobservable inputs that reflect the Company's expectations about the assumptions market participants would use in pricing the asset or liability.

At March 31, 2016 and September 30, 2015, the carrying amounts of cash, accounts payable, accrued liabilities, and convertible notes approximate fair value because of their short-term nature. The fair value of note payable, which is influenced by interest rates and the company's liquidity, approximates carrying value.

Subsequent Events

The Company evaluated all events or transactions that occurred through April 27, 2016 the date which these unaudited interim consolidated financial statements were available to be issued. The Company disclosed material subsequent events in Note 9 of these unaudited interim consolidated financial statements.

Going Concern Basis of Accounting

The Company does not currently believe its existing cash resources are sufficient to meet its anticipated needs during the next twelve months. As reflected in the unaudited interim consolidated financial statements, the Company has an accumulated deficit, has suffered significant net losses and negative cash flows from operations, and has limited working capital. The continuation of our business as a going concern is dependent upon raising additional capital and eventually attaining and maintaining profitable operations. As of March 31, 2016, there is substantial doubt about our ability to continue as a going concern. The unaudited interim consolidated financial statements included in this report do not include any adjustments that might be necessary should operations discontinue. The Company expects to incur substantial expenses for the foreseeable future for the research, development and commercialization of its potential products. In addition, the Company will require additional financing in order to seek to license or acquire new assets, research and develop any potential patents and the related compounds, and obtain any further intellectual property that the Company may seek to acquire. The Company does not have sufficient cash to support its current operating plan. The Company will be required to raise additional capital, obtain alternative means of financial support, or both, in order to continue to fund operations. Therefore, there exists substantial doubt about the Company's ability to continue

as a going concern. Historically, the Company has funded its operations primarily through equity and debt financings.

3.STOCK-BASED COMPENSATION

2013 Stock Incentive Plan

On June 18, 2013, the Company established the 2013 Stock Incentive Plan (the “2013 Plan”). Under the 2013 Plan, during the fiscal year ended September 30, 2015, a maximum number of 13,114,256 shares of the Company’s authorized and available common stock could be issued in the form of: options, stock appreciation rights, sales or bonuses of restricted stock, restricted stock units or dividend equivalent rights, and an award may consist of one such security or benefit, or two or more of them in any combination or alternative. The 2013 Plan provides that on the first business day of each fiscal year commencing with fiscal year 2014, the number of shares of our common stock reserved for issuance under the 2013 Plan for all awards except for incentive stock option awards will be subject to increase by an amount equal to the lesser of (A) 3,000,000 Shares, (B) four (4) percent of the number of shares outstanding on the last day of the immediately preceding fiscal year of the Company, or (C) such lesser number of shares as determined by the Company’s Board of Directors (the “Board”). The exercise price of each option shall be the fair market value as determined in good faith by the Board at the time each option is granted. On October 1, 2015, the aggregate number of authorized shares under the Plan was further increased by 3,000,000 shares to a total of 16,114,256 shares.

As of March 31, 2016, a total of 8,479,212 options had been issued to employees and directors and 4,652,500 options had been issued to consultants. The exercise price of each option has either been equal to the closing price of a share of our common stock on the date of grant or has been determined to be in compliance with Internal Revenue Section 409A.

Share-based awards

During the three and six months ended March 31, 2016, the Company did not grant options to employees and directors or to consultants to purchase shares of common stock under the 2013 Plan.

The Company recognizes compensation expense for stock option awards on a straight-line basis over the applicable service period of the award. The service period is generally the vesting period, with the exception of options granted subject to a consulting agreement, whereby the option vesting period and the service period are defined pursuant to the terms of the consulting agreement. Share-based compensation expense for awards outstanding during the three and six months ended March 31, 2016 was based on the fair market value at period end or grant date fair value estimated using the Black-Scholes option pricing model. The following assumptions were used to calculate the fair value of share based compensation for the three and six months ended March 31, 2016; expected volatility, 76.57% - 119.44%, risk-free interest rate, 0.58% - 2.40%, expected dividend yield, 0.00%, expected term, 1 to 10 years.

Expected price volatility is the measure by which the Company’s stock price is expected to fluctuate during the expected term of an option. The Company exited shell company status on June 26, 2013. In situations where a newly public entity has limited historical data on the price of its publicly traded shares and no other traded financial instruments, authoritative guidance is provided on estimating this assumption by basing its expected volatility on the historical, expected, or implied volatility of similar entities whose share option prices are publicly available. In making the determination as to similarity, the guidance recommends the consideration of industry, stage of life cycle, size and financial leverage of such other entities. The Company’s expected volatility is derived from the historical daily change in the market price of its common stock since it exited shell company status, as well as the historical daily change in the market price for the peer group as determined by the Company.

For so called “plain vanilla” options granted to employees, the expected term of the options is based upon the simplified method as defined in ASC 718-10-S99 which averages an award’s weighted-average vesting period and the contractual term for share options. The Company will continue to use the simplified method until it has the historical data necessary to provide a reasonable estimate of expected life in accordance with ASC Topic 718. The Company’s estimation of the expected term for stock options not subject to the simplified method is based upon the contractual term of the option award. For the purposes of estimating the fair value of stock option awards, the risk-free interest rate used in the Black-Scholes calculation is based on the prevailing U.S. Treasury yield. The Company has never paid any dividends on its common stock and does not anticipate paying dividends on its common stock in the foreseeable future.

Stock-based compensation expense recognized in the Company’s unaudited interim consolidated statements of operations is based on awards ultimately expected to vest, reduced for estimated forfeitures. Authoritative guidance requires forfeitures to be estimated at the time of grant, and revised, if necessary, in subsequent periods if actual

forfeitures differ from those estimates. Historically, the Company has not had significant forfeitures of stock options granted to employees, directors and non-employees. Therefore, the Company has estimated the forfeiture rate of its outstanding stock options as zero, but will continually evaluate its historical data as a basis for determining expected forfeitures.

Stock compensation plan activity is as follows:

Common Stock Options

Stock compensation activity under the 2013 Plan for the six months ended March 31, 2016 follows:

	Option Shares Outstanding	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value
Outstanding at September 30, 2015	10,776,500	$ 0.30	-	$ -
Awarded	-	-	-	-
Exercised	-	-	-	-
Forfeited	(37,500)	$ 0.22	-	-
Outstanding at March 31, 2016	10,739,000	$ 0.31	5.67	593,828
Vested	9,816,751	$ 0.31	4.87	434,330
Vested and expected to vest at March 31, 2016	10,739,000	$ 0.31	5.67	593,828

As of March 31, 2016, 4,381,704 shares are available for future grants under the 2013 Plan. Share-based compensation expense recorded in the Company's unaudited interim consolidated statements of operations for the three months ended March 31, 2016 and 2015 resulting from outstanding stock option awards to the Company's employees, directors and consultants was approximately $210,000 and $331,000, respectively. Of this amount during the three months ended March 31, 2016 and 2015, approximately $114,000 and $153,000 respectively was recorded to research and development expenses, and approximately $96,000 and $178,000, respectively was recorded in general and administrative expenses in the Company's unaudited interim consolidated statements of operations. Share-based compensation expense recorded in the Company's unaudited interim consolidated statements of operations for the six months ended March 31, 2016 and 2015 resulting from outstanding stock option awards to the Company's employees, directors and consultants was approximately $358,000 and $609,000, respectively. Of this amount during the six months ended March 31, 2016 and 2015, approximately $168,000 and $274,000 respectively was recorded to research and development expenses, and approximately $190,000 and $335,000, respectively was recorded in general and administrative expenses in the Company's unaudited interim consolidated statements of operations.

As of March 31, 2016, there is approximately $219,000 of unrecognized compensation expense related to unvested stock-based compensation arrangements granted under the 2013 Plan. That cost is expected to be recognized over a weighted average period of 1.18 years.

4. 2015 RESTRICTED STOCK

On August 6, 2015, we entered into separate consulting agreements with two investor relations firms, Excelsior Global Advisors LLC ("**Excelsior**") and Acorn Management Partners, LLC ("**Acorn**"). In consideration of the services to be provided under and in accordance with the terms of each consulting agreement, we issued 300,000 shares of Common Stock subject to time-based vesting restrictions to each of Excelsior and John R. Exley, Acorn's Chief Executive Officer and the party designated by Acorn to receive its shares, at an agreed upon value of $0.35 per share, which was the closing price of our common stock on August 6, 2015. 150,000 of the shares of common stock granted to each of Excelsior and Mr. Exley vested immediately upon issuance, and the remaining 150,000 shares were scheduled to vest in 75,000, 50,000 and 25,000 share increments on September 4, 2015, October 2, 2015, and November 4, 2015, respectively. The issuance and sale of the shares of Common Stock to Excelsior and Acorn has not been registered under the Securities Act, and such securities may not be offered or sold in the United States absent registration under or exemption from the Securities Act and any applicable state securities laws. The securities were issued and sold in reliance upon an exemption from registration afforded by Section 4(a)(2) of the Securities Act based on the following facts: each of Excelsior and Acorn has represented that it is an accredited investor as defined in Regulation D promulgated under the Securities Act; that it is acquiring the securities for investment only and not with a view towards, or for resale in connection with, a distribution thereof in violation of applicable securities laws; that it understood that the securities would be issued as restricted securities and as a result, it must bear the economic risk of its investment in the securities for an indefinite period of time.

Restricted stock activity for the six months ended March 31, 2016 is as follows:

Restricted Stock	
Non Vested at September 30, 2015	150,000
Awarded	-
Vested	(150,000)
Forfeited	-
Non Vested at March 31, 2016	-

The weighted average restricted stock award date fair value information for the six months ended March 31, 2016 is as follows:

Non Vested at September 30, 2015	$0.35
Awarded	-
Vested	0.35
Forfeited	-
Non Vested at March 31, 2016	$-

For the three and six months ended March 31, 2016, compensation expense recorded for the restricted stock awards was $0 and $52,500, respectively.

5.8% CONVERTIBLE NOTES

Beginning March 11, 2015 and through March 13, 2015, the Company entered into a series of substantially similar subscription agreements (each a "Subscription Agreement") with each of Anson Investments Master Fund, Ltd., Equitec Specialists, LLC and Capital Ventures International (collectively, the "Note Investors") pursuant to which the Company issued unsecured 8% Convertible Notes (the "Notes", and such transaction, the "Notes Offering") to the Note Investors in the aggregate principal amount of $750,000. On the closing of the Notes Offering on March 13, 2015 (the "Closing Date"), each Note Investor was issued a Note in the principal amount of $250,000. The Company did not engage any underwriter or placement agent in connection with the Notes Offering.

During the three months ended March 31, 2016, $195,000 of Notes and $15,381 of accrued interest were converted into 1,051,904 shares of the Company's Common Stock. During the six months ended March 31, 2016, $505,000 of Notes and $31,278 of accrued interest were converted into 2,681,383 shares of the Company's Common Stock. As of March 31, 2016 and September 30, 2015 principal amounts outstanding under the Notes amounted to $100,000 and $605,000, respectively. On April 4, 2016, the remaining $100,000 of Notes and $8,622 of accrued interest were converted into 543,111 shares of the Company's Common Stock.

The issuance and sale of the Notes and Conversion Shares (collectively, the "Securities") has not been, and will not upon issuance be, registered under the Securities Act of 1933, as amended (the "Securities Act"), and the Securities may not be offered or sold in the United States absent registration under or exemption from the Securities Act and any applicable state securities laws. The Securities were issued and sold in reliance upon an exemption from registration afforded by Section 4(a)(2) of the Securities Act and Rule 506 of Regulation D promulgated under the Securities Act, based on the following facts: each of the Note Investors has represented that it is (and on the date of any conversion or sale of the Notes and/or Conversion Shares will be) an accredited investor as defined in Rule 501(a) promulgated under the Securities Act, that it is acquiring the Securities for investment only and not with a view towards, or for resale in connection with, the public sale or distribution thereof in violation of applicable securities laws and that it has sufficient investment experience to evaluate the risks of the investment. The Company used no advertising or general solicitation in connection with the issuance and sale of the Securities to the Note Investors; the Securities were issued as restricted securities.

Derivative Liabilities

The Company accounted for the conversion feature embedded within the Notes in accordance with ASC 815-10, *Derivatives and Hedging*. Because the options to convert into Common Stock are not indexed to the Company's stock and are not classified within stockholders' equity, the options to convert are recorded as liabilities at fair value. They are marked to fair value each reporting period through the consolidated statement of operations.

On the Closing Date, the derivative liability was recorded at fair value of $354,988 with the remaining proceeds of $395,012 allocated to the Notes. The allocation of funds to the derivative liability resulted in a discount on the Notes, which is being accreted to interest expense over the life of the loan. For the three and six months ended March 31, 2016, $29,101 and $131,252, respectively of the loan discount has been accreted to interest expense. As of March 31, 2016 the accreted balance of the outstanding Notes was $100,000. On April 4, 2016, the remaining $100,000 of Notes and $8,622 of interest were converted into 543,111 shares of the Company’s Common Stock.

As a result of the conversion of notes we recorded other income of $13,503 and $142,964 for the three and six months ended March 31, 2016, respectively and due to the change in the estimated fair value of the derivative liability we recorded other income of $54,982 and $192,128 for the three and six months ended March 31, 2016, respectively. As of March 31, 2016, the remaining derivative liability balance was deemed to be immaterial to the accompanying unaudited interim consolidated financial statements.

Fair Value Measurements Using Significant Unobservable Inputs
(Level 3)

	Convertible Debt Derivative Liability
Beginning balance at September 30, 2015	$ 335,092
Conversion of notes	(142,964)
Adjustments to estimated fair value	(192,128)
Ending balance at March 31, 2016	$ -

The derivative liability was valued as of September 30, 2015, October 29, 2015 (weighted average conversion date) and December 31, 2015 using Monte Carlo Simulations with the following assumptions:

	September 30, 2015	October 29, 2015	December 31, 2015
Stated interest rate	8.0 %	8.0 %	8.0 %
Exercise price per share	$ 0.20	$ 0.20	$ 0.20
Expected volatility	80.0 %	85.0 %	110.0 %
Risk-free interest rate	0.07 %	0.14 %	0.16 %
Credit adjusted discount rate	22.0 %	22.0 %	25.0 %
Remaining expected term of underlying securities (years)	0.46	0.38	0.21

6. NOTE PAYABLE

On September 30, 2013, the Company entered into the Life Sciences Accelerator Funding Agreement (the “MLSC Loan Agreement”) with the Massachusetts Life Sciences Center (“MLSC”), pursuant to which MLSC provided an unsecured subordinated loan in the principal amount of $1,000,000. The loan bears interest at a rate of 10% per annum, and will become fully due and payable on the earlier of (i) September 30, 2018, (ii) the occurrence of an event of default under the MLSC Loan Agreement, or (iii) the completion of a sale of substantially all of our assets, a change-of-control transaction or one or more financing transactions in which we receive from third parties other than our then-existing shareholders net proceeds of $5,000,000 or more in a 12-month period. The MLSC Loan Agreement includes warrants to purchase 145,985 shares of the Company’s Common Stock at an exercise price of $0.27 per share. None of the warrants, which expire on September 30, 2023, have been exercised as of March 31, 2016.

Of the $1,000,000, the Company allocated $944,707 to the loan and $55,293 to the warrants. The warrant valuation was derived at the date of grant with the Black-Scholes option pricing model with the following assumptions: risk free rate 2.64%, dividend yield 0.0%, expected life of 10 years, and volatility 114%. The fair value of the warrants was recorded as an increase to additional paid-in capital. The allocation of funds to the warrants resulted in a discount on the loan, which is being accreted to interest expense over the life of the loan. For both the three months ended March 31, 2016 and 2015, $2,764 of the loan discount has been accreted to interest expense. For both the six months ended March 31, 2016 and 2015, $5,529 of the loan discount has been accreted to interest expense. As of March 31, 2016 and September 30, 2015 the accreted balance of the MLSC Loan was $972,353 and $966,824, respectively.

7. 2014 PRIVATE PLACEMENT FINANCING

On January 30, 2014, the Company entered into a Securities Purchase Agreement (the “Securities Purchase Agreement”) with nine separate accredited investors (“2014 Investors”) providing for the issuance and sale by the Company to the 2014 Investors, in a private placement, of an aggregate of 11,400,000 shares of Common Stock (collectively, the “2014 Shares”) at a purchase price of $0.25 per share and three series of warrants, the Series A warrants, the Series B warrants and the Series C warrants, to purchase up to an aggregate of 34,200,000 shares of the Company’s Common Stock (collectively, the “2014 Warrants,” and the shares issuable upon exercise of the 2014 Warrants, collectively, the “2014 Warrant Shares”), for aggregate gross proceeds to the Company of approximately $2,850,000 (the “2014 Private Placement Financing”).

Upon the closing of the 2014 Private Placement Financing on February 4, 2014 (the "Closing Date"), the Company entered into a registration rights agreement (the "2014 Registration Rights Agreement") with the 2014 Investors, pursuant to which the Company became obligated, subject to certain conditions, to file with the SEC on or before March 21, 2014 one or more registration statements to register for resale under the Securities Act of 1933, as amended, (i) the 2014 Shares and the 2014 Warrant Shares, plus (ii) an additional number of shares of Common Stock equal to 33% of the total number of 2014 Shares and 2014 Warrant Shares, to account for adjustments, if any, to the number of 2014 Warrant Shares issuable pursuant to the terms of the 2014 Warrants (the securities set forth in this clause (ii), the "Additional Shares"). Under the terms of the 2014 Registration Rights Agreement, the Company is permitted to reduce the number of shares covered by a registration statement if such reduction is required by the SEC as a condition for permitting such registration statement to become effective and treated as a resale registration statement (the "Cutback Provisions"). In response to comments received from the SEC and in accordance with the terms of the 2014 Registration Rights Agreement, the Company reduced the number of shares included in its draft resale registration statement by the number of Additional Shares. The Company's failure to satisfy certain other obligations and deadlines set forth in the 2014 Registration Rights Agreement may subject the Company to payment of monetary penalties as discussed below. The resale registration statement was declared effective on July 2, 2014. As described below, in the event that we fail to comply with certain requirements in the 2014 Registration Rights Agreement, we may be required to pay liquidated damages to the investors.

The 2014 Warrants were exercisable immediately upon issuance. The Series A warrants had an initial exercise price of $0.30 per share and expire five years from the date of their issuance. The Series B warrants had an initial exercise price of $0.35 per share and expired on the earlier of 12 months after their issuance date or six months after the first date on which the resale of all Registrable Securities (as defined in the 2014 Registration Rights Agreement) is covered by one or more effective registration statements. The Series B warrants expired on January 2, 2015. The Series C warrants had an initial exercise price of $0.40 per share and an initial expiration on the earlier of 18 months after their issuance date or nine months after the first date on which the resale of all Registrable Securities (as defined in the 2014 Registration Rights Agreement) is covered by one or more effective registration statements. The Series C warrants were set to expire on April 2, 2015 and, as described below, were amended to expire on July 2, 2016. The number of shares of the Company's Common Stock into which each of the 2014 Warrants is exercisable and the exercise price therefore were subject to adjustment as set forth in the 2014 Warrants, including, without limitation, adjustment to both the exercise price of the 2014 Warrants in the event of certain subsequent issuances and sales of shares of the Company's Common Stock (or securities convertible or exercisable into shares of Common Stock) at a price per share lower than the then-effective exercise price of the 2014 Warrants, in which case the per share exercise price of the 2014 Warrants would be adjusted to equal such lower price per share and the number of shares issuable upon exercise of the 2014 Warrants would be adjusted accordingly so that the aggregate exercise price upon full exercise of the 2014 Warrants immediately before and immediately after such per share exercise price adjustment were equal. The 2014 Warrants are also subject to customary adjustments in the event of stock dividends and splits, subsequent rights offerings and pro rata distributions to the Company's common stockholders, and provide that they shall not be exercisable in the event and to the extent that the exercise thereof would result in the holder of the Warrant or any of its affiliates beneficially would then own more than 4.9% of the Company's Common Stock. The 2014 Warrants also provide that they shall not be exercisable in the event and to the extent that the exercise thereof would result in the holder of the Warrant or any of its affiliates beneficially owning more than 4.9% of our Common Stock.

The Company may be required to make certain payments to the 2014 Investors under certain circumstances in the future pursuant to the terms of the Securities Purchase Agreement and the 2014 Registration Rights Agreement. These potential future payments include: (a) potential partial damages for failure to register the Common Stock issued or issuable upon exercise of 2014 Warrants (in a cash amount equal to 1% of the price paid to the Company by each investor in the 2014 Private Placement Financing on the date of and on each 30-day anniversary of such failure until the cure thereof; (b) amounts payable if the Company and its transfer agent fail to timely remove certain restrictive legends from certificates representing shares of Common Stock issued in the 2014 Private Placement Financing or issuable upon exercise of the 2014 Warrants; (c) expense reimbursement for the lead investor in the 2014 Private Placement Financing; and (d) payments in respect of claims for which the Company provides indemnification. There is no cap to the potential consideration. On July 2, 2014, we received from the SEC a Notice of Effectiveness of our Registration Statement related to the 2014 Private Placement Financing which satisfied some of our obligation to register these securities with the SEC.

On December 1, 2014, the Company agreed to amend certain provisions of the 2014 Warrants (the “December 2014 Amendment”). Under the terms of the December 2014 Amendment, the affected 2014 Warrants were amended to (i) reduce the exercise price of the Series B Warrants from $0.35 to $0.20, (ii) reduce the exercise price of the Series C Warrants from $0.40 to $0.20, and (iii) clarify that each series of 2014 Warrants may be amended individually, without having to amend all three series of 2014 Warrants. The number of shares of the Company’s Common Stock, which may be purchased from the Company upon exercise of each 2014 Warrant, remained unchanged. In conjunction with the December 2014 Amendment, the Company recognized a loss on the modification of 2014 Warrants in the amount of $1,300,170, which was determined using Monte Carlo Simulation valuation model.

As of December 2, 2014, Series B Warrants had been exercised for an aggregate issuance of 4,000,000 shares of the Company's Common Stock resulting in gross proceeds to the Company of $800,000. In conjunction with the exercise of the Series B Warrants, their corresponding fair value at the exercise dates of $224,000 were extinguished from the derivative liabilities balance.

On March 13, 2015, the Company issued unsecured 8% Convertible Notes in the aggregate principal amount of $750,000. The Company's issuance of the Notes triggered the anti-dilution provisions of the Series A Warrants and, as a result, the exercise price of the Series A Warrants was reduced to $0.20 per share and the aggregate number of shares issuable under the Series A Warrants increased by 5,700,000 shares from 11,400,000 shares to 17,100,000 shares. In addition, on March 13, 2015 and May 30, 2015, respectively the expiration date of the Series C Warrants was extended to June 2, 2015 and July 2, 2015, respectively. In conjunction with the March 13, 2015 amendment, the Company recognized a loss on the modification of warrants in the amount of $624,016, which was determined using Monte Carlo Simulation.

On June 22, 2015 the Company entered into an amendment to the Series A Warrants and Series C Warrants to purchase Common Stock (the "June 2015 Amendment"), with Cranshire Capital Master Fund, Ltd. ("Cranshire"), to (i) delete the full ratchet anti-dilution provisions set forth in the Series A Warrants and Series C Warrants; and (ii) extend the expiration date of the Series C Warrants from to 5:00 p.m., New York time, on July 2, 2015 to 5:00 p.m., New York time, on July 2, 2016. In consideration of Cranshire's entrance into the June 2015 Amendment (and for no additional consideration), the Company agreed to issue to the holders of the 2014 Warrants up to 570,000 shares of Company's Common Stock subject to the delivery by each such holder of an investor certificate to the Company (such shares of Common Stock, the "Inducement Shares"). All 570,000 Inducement Shares have been issued. As of June 22, 2015, the Company determined that its Series A and C Warrants were eligible for equity classification due to the elimination of the full ratchet anti-dilution provision. As a result, as of June 22, 2015, the derivative liabilities were reclassified as equity within the Company's consolidated financial statements.

During the three and six months ended March 31, 2016, Series C Warrants had been exercised on a cash basis for an aggregate issuance of 200,000 shares of the Company's Common stock resulting in gross proceeds to the Company of $40,000. During the three and six months ended March 31, 2015, Series B Warrants had been exercised on a cash basis for an aggregate issuance of 4,000,000 shares of the Company's Common Stock resulting in gross proceeds to the Company of $800,000.

8. 2015 PRIVATE PLACEMENT FINANCING

Beginning June 22, 2015 and through June 30, 2015, the Company entered into a series of substantially similar subscription agreements (each a "Subscription Agreement") with 20 accredited investors (collectively, the "2015 Investors") providing for the issuance and sale by the Company to the 2015 Investors, in a private placement, of an aggregate of 14,390,754 Units ("Unit") at a purchase price of $0.22 per Unit (the "2015 Private Placement Financing").

Each Unit consisted of a share of Common Stock (the "2015 Shares") and a Series D Warrant to purchase a share of Common Stock at an exercise price of $0.25 per share at any time prior to the fifth anniversary of the issuance date of the Series D Warrant (the "Series D Warrants," and the shares issuable upon exercise of the Series D Warrants, collectively, the "2015 Warrant Shares"). The Company did not engage any underwriter or placement agent in connection with the 2015 Private Placement Financing, and the aggregate gross proceeds raised by the Company in the 2015 Private Placement Financing totaled approximately $3,100,000.

The Company's obligation to issue and sell the 2015 Shares and the Series D Warrants and the corresponding obligation of the 2015 Investors to purchase such 2015 Shares and Series D Warrants were subject to a number of conditions precedent including, but not limited to, the amendment of the Company's Series A Warrants and Series C Warrants to delete certain of the anti-dilution provisions contained therein, as described in Note 7, 2014 Private Placement Financing, and other customary closing conditions. The conditions precedent were satisfied June 30, 2015 (the "Initial Closing Date"), and the Company conducted an initial closing (the "Initial Closing") pursuant to which it sold and 19 of the 2015 Investors (the "Initial Investors") purchased 13,936,367 Units at an aggregate purchase price of $3,066,000. On July 2, 2015, the Company conducted a second closing (the "Second Closing" and together with the Initial Closing, the "Closings") pursuant to which it sold and one of the 2015 Investors purchased 454,387 Units at an aggregate purchase price of $100,000.

On the Initial Closing Date, the Company entered into a registration rights agreement with the Initial Investors (the " 2015 Registration Rights Agreement"), pursuant to which the Company was obligated, subject to certain conditions, to file with the Securities and Exchange Commission within 90 days after the closing of the 2015 Private Placement Financing one or more registration statements (any such registration statement, a "Resale Registration Statement") to register the 2015 Shares and the 2015 Warrant Shares for resale under the Securities Act of 1933, as amended (the "Securities Act"). The remaining 2015 Investor became a party to the 2015 Registration Rights Agreement upon the consummation of the Second Closing. The Company's failure to satisfy certain filing and effectiveness deadlines with respect to a Resale Registration Statement and certain other requirements set forth in the 2015 Registration Rights Agreement may subject the Company to payment of monetary penalties. On October 27, 2015, we received from the SEC a Notice of Effectiveness of our Registration Statement related to the 2015 Private Placement Financing which satisfied some of our obligation to register these securities with the SEC.

Following each Closing, each 2015 Investor was also issued Series D Warrants to purchase shares of the Company's Common Stock up to 100% of the 2015 Shares purchased by such 2015 Investor under such 2015 Investor's Subscription Agreement. The Series D Warrants have an exercise price of $0.25 per share, are exercisable immediately after their issuance and have a term of exercise equal to five years after their issuance date. The number of shares of the Company's Common Stock into which each of the Series D Warrants is exercisable and the exercise price therefore are subject to adjustment, as set forth in the Series D Warrants, including adjustments for stock subdivisions or combinations (by any stock split, stock dividend, recapitalization, reorganization, scheme, arrangement or otherwise). In addition, at any time during the term of the Series D Warrants, the Company may reduce the then-current exercise price to any amount and for any period of time deemed appropriate by the Board of the Company.

Common Stock

At the June 30, 2015 Initial Closing Date of the 2015 Private Placement Financing, the Company issued 13,936,367 shares of Common Stock. On July 2, 2015, the Company conducted the Second Closing pursuant to which it sold and one of the 2015 Investors purchased 454,387 shares of Common Stock.

Equity Value of Warrants

The Company accounted for the Series D Warrants relating to the aforementioned 2015 Private Placement Financing in accordance with ASC 815-40, *Derivatives and Hedging*. Because the Series D Warrants are indexed to the Company's stock, they are classified within stockholders' equity in the accompanying unaudited interim consolidated financial statements.

9.SUBSEQUENT EVENTS

During the period commencing April 1, 2016 and ending on April 27, 2016, additional Series A and Series C Warrants have been exercised for an aggregate issuance of 2,699,725 shares of the Company's Common Stock at an exercise price of $0.20 per share, resulting in gross proceeds to the Company of $539,945. In addition, 1,400,000 Series A Warrants were exercised on a cashless basis, resulting in the issuance of 727,084 shares of the Company's Common Stock. Also during this period additional Series D Warrants have been exercised for an aggregate issuance of 2,404,227 shares at an exercise price of $0.25 per shares, resulting in gross proceeds to the Company of $601,057. During April 2016, the remaining $100,000 of Notes and $8,622 of accrued interest were converted into 543,111 shares of the Company's Common Stock.

ARCH THERAPEUTICS, INC.

PROSPECTUS

Up to 16,482,082 Shares of Common Stock

Prospectus dated July 14, 2016