As filed with the Securities and Exchange Commission on November 6, 2014

Registration Number 333-197220

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

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

PLASMATECH BIOPHARMACEUTICALS, INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware	**3841**	**83-0221517**
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

4848 Lemmon Avenue, Suite 517
Dallas, Texas 75219
(214) 905-5100

(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

Scott Schorer
Chief Executive Officer
PlasmaTech Biopharmaceuticals, Inc.
4848 Lemmon Avenue, Suite 517
Dallas, Texas 75219
(214) 905-5100

(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

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with a copy to:

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Approximate date of commencement of proposed sale to public: As soon as practicable after the effective date hereof.

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

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

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

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

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

Larger accelerated filer ☐	Accelerated filer ☐
Non-accelerated filer ☐	Smaller reporting company ☒

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(A) OF THE SECURITIES ACT OF 1933 OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE COMMISSION, ACTING PURSUANT TO SECTION 8(A), MAY DETERMINE.

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities or the solicitation of an offer to buy these securities in any state in which such offer, solicitation, or sale is not permitted.

PRELIMINARY PROSPECTUS SUBJECT TO COMPLETION DATED NOVEMBER 6, 2014

Up to $20 Million in Shares of Common Stock and Warrants to Purchase Shares of Common Stock

PlasmaTech Biopharmaceuticals, Inc.

We are offering up to shares of common stock and warrants to purchase up to an aggregate shares of common stock. Each warrant will have an exercise price of per share, will be exercisable upon issuance and will expire five years from the date of issuance.

Our common stock is presently quoted on the OTCQB under the symbol "ACCPD". Prior to October 24, 2014, our common stock was quoted under the symbol "ACCP". On October 24, 2014, we effected a 1 for 50 reverse stock split of our common stock. On November 5, 2014, the last reported sale price of our common stock on the OTCQB was $11.45 per share. We have applied for listing our shares of our common stock and warrants on The NASDAQ Capital Market under the symbols "PTBI and "PTBIW", respectively. No assurance can be given that our application will be approved.

BEFORE INVESTING IN OUR SECURITIES, YOU SHOULD CAREFULLY READ THE DISCUSSION OF "RISK FACTORS" BEGINNING ON PAGE 8.

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.

	Per Share	Per Warrant	Total
Public offering price	$	$	$
Underwriting discounts and commissions[1]	$	$	$
Proceeds to us, before expenses	$	$	$

(1) The underwriters will receive compensation in addition to the underwriting discount. See "Underwriting" beginning on page 63.

We have granted a 45-day option to the representative of the underwriters to purchase up to additional shares and/or warrants from us solely to cover over-allotments, if any. The shares and/or warrants issuable upon exercise of the underwriter option are identified to those offered by this prospectus and have been registered under the registration statement of which this prospectus forms a part. If the underwriters exercise the option in full, the total discount and commission will be $ and the total net proceeds, before expenses, to us will be $.

The underwriter expects to deliver the shares and warrants against payment thereof on or about, 2014.

Aegis Capital Corp

The date of this prospectus is , 2014

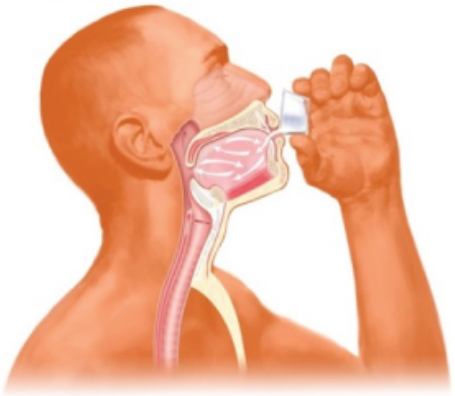
TABLE OF CONTENTS

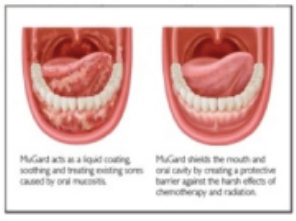
PLASMATECH BIOPHARMACEUTICALS

SDF Process: Salt Diafiltration Process	Complete	2014	2015	2016	2017	2017 Market Opportunity
SDF Alpha™ (Alpha-1)	Process validation, Patent	PTBI License, Manufacturer Qualification	Process Scale Up	Regulatory	Commercial	> $ 2.5B
SDF Gamma™ (IVIG)			Process Scale Up	Regulatory	Commercial	> $11.5B
PlasmaTech™ Ultra-Orphan			Discovery	TBD	TBD	> $ 1B
				Plasma Protein Addressable Markets		~ $15B

PHT: Polymer Hydrogel Technology Platform					2015 Market Opportunity
MuGard®	510(k) US: AMAG, China: RHEI		Europe: Norgine, Korea: Hanmi	ongoing global commercial optimization	> $1B
ProctiGard™		510(k)	Commercial		> $500M
BenzaGard™		FDA Discussions towards 510(k)		Commercial	> $500M
				Oncology Supportive Care Markets	> $2B

MuGard™ Oral Mucoadhesive Hydrogel





Commercial Products Launching 2014/15

MuGard™ Oral Mucoadhesive Hydrogel

ProctiGard™

FORWARD-LOOKING STATEMENTS

This prospectus contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, and that involve risks and uncertainties. These statements include, without limitation, statements relating to uncertainties associated with research and development activities, clinical trials, our ability to raise capital, the timing of and our ability to achieve regulatory approvals, dependence on others to market our licensed products, collaborations, future cash flow, the timing and receipt of licensing and milestone revenues, the future success of our marketed products and products in development, our sales projections, and the sales projections of our licensing partners, our ability to achieve licensing milestones, the size of the prospective markets in which we may offer products, our ability to continue as a going concern, anticipated product approvals and timing thereof, product opportunities, clinical trials and U.S. Food and Drug Administration ("FDA") applications, as well as our drug development strategy, our clinical development organization expectations regarding our rate of technological developments and competition, our plan not to establish an internal marketing organization, our expectations regarding minimizing development risk and developing and introducing technology, the terms of future licensing arrangements, our ability to secure additional financing for our operations, our ability to establish new relationships and maintain current relationships, our ability to attract and retain key personnel, our belief that we will not pay any cash dividends in the foreseeable future, our belief that a failure to obtain necessary additional capital in the future will result in our operations being jeopardized, our belief that we will expend substantial funds to conduct research and development programs, preclinical studies and clinical trials of potential products, our belief that the market for a mucositis product is in excess of $1 billion, our belief that we have a rich pipeline of products and product candidates, our belief that we will continue to evaluate the most cost-effective methods to advance our programs, and our expected cash burn rate. These statements relate to future events or our future financial performance. In some cases, you can identify forward-looking statements by terminology such as "may," "will," "should," "expects," "plans," "could," "anticipates," "believes," "estimates," "predicts," "potential" or "continue" or the negative of such terms or other comparable terminology. We intend the forward-looking statements to be covered by the safe harbor for forward-looking statements in these sections. The forward-looking information is based on various factors and was derived using numerous assumptions.

Forward-looking statements necessarily involve risks and uncertainties, and our actual results could differ materially from those anticipated in the forward-looking statements due to a number of factors, including those set forth under "Risk Factors" and elsewhere in this prospectus. The factors set forth under "Risk Factors" and other cautionary statements made in this prospectus should be read and understood as being applicable to all related forward-looking statements wherever they appear in this prospectus. The forward-looking statements contained in this prospectus represent our judgment as of the date of this prospectus. We caution readers not to place undue reliance on such statements. Except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason, even if new information becomes available or other events occur in the future.

TABLE OF CONTENTS

You should rely only on the information provided in this prospectus or amendment thereto. We have not authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give to you. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or any sale of our common stock and warrants.

PROSPECTUS SUMMARY

This summary highlights certain information appearing elsewhere in this prospectus. For a more complete understanding of this offering, you should read the entire prospectus carefully, including the risk factors and the financial statements. You should read both this prospectus and any prospectus supplement together with additional information described below under the heading "Where You Can Find More Information" beginning on page 71. Unless the context requires otherwise, references to "PlasmaTech," our "company," "we," "us" or "our" refer to PlasmaTech Biopharmaceuticals, Inc., a Delaware corporation.

Overview

We are an emerging biopharmaceutical company focused on developing a range of pharmaceutical products primarily based upon our nanopolymer chemistry technologies, and salt diafiltration process ("SDF") technology recently licensed from Plasma Technologies LLC, ("Licensor"). We currently have one marketed product licensed in the U.S., Europe, China and Korea. We also have additional products and platform technologies in various stages of development and are seeking partners to continue development and/or to license the technology.

Marketed Product

- MuGard® is our marketed product for the management of oral mucositis, a frequent side-effect of cancer therapy for which there is no established treatment. The market for mucositis treatment is estimated to be in excess of $1.0 billion world-wide. MuGard, a proprietary nanopolymer formulation, has received marketing allowance in the U.S. from FDA. We launched MuGard in the U.S. in 2010.

  On June 6, 2013 we entered into an exclusive license agreement with AMAG Pharmaceuticals, Inc., ("AMAG"), related to the commercialization of MuGard in the U.S. and its territories. Under the terms of the licensing agreement we received an upfront licensing fee of $3.3 million and a tiered, double-digit royalty on net sales of MuGard in the licensed territory. We receive quarterly royalty payments from AMAG.

  On August 5, 2010, we entered into an exclusive license with RHEI Pharmaceuticals, ("RHEI") related to the commercialization of MuGard in China and other Southeast Asian countries. Our China partners have received an acceptance letter from the State Food and Drug Administration of the People's Republic of China, which provides marketing approval in China. MuGard has been manufactured in the U.S. and shipped to China for sale. RHEI has rights to sub-license MuGard sales in some Southeast Asia countries.

  On March 11, 2014, we announced we had entered into an exclusive license agreement with Hanmi Pharmaceutical Co. Ltd., ("Hanmi") related to MuGard commercialization in South Korea.

  On August 7, 2014, we entered into an exclusive license agreement with Norgine B.V. ("Norgine"), a leading independent European specialty pharmaceutical company, for the commercialization of MuGard in Europe. Under the terms of the license agreement, we could receive up to $10 million in milestone payments and an escalating double digit royalty on the net sales of the oral mucositis product, MuGard, in the licensed territories. Norgine will develop, manufacture, and commercialize MuGard in the European Union, Switzerland, Norway, Iceland and Lichtenstein. Norgine anticipates launching MuGard in 2015.

  We are actively seeking partners to license MuGard in other territories.

Product Candidates

- ProctiGard™ received FDA marketing clearance on July 22, 2014. ProctiGard is our product for the treatment of radiation proctitis, a frequent side effect of radiation treatment to the pelvic region. Radiation proctitis, or RP, is the inflammation and damage to the lower portion of the colon after exposure to x-rays or ionizing radiation as part of radiation therapy. RP is most common after treatments for cancer, such as cervical, colon and prostate cancer. RP can be acute, occurring within

weeks of initiation of therapy, or can occur months or years after treatment. We intend to commercialize ProctiGard in a manner similar to the commercialization of MuGard, which may include confirmatory clinical trials, with the objective of commercialization in collaboration with marketing partners globally.

- LexaGard™ is our proprietary formulation of the generic pharmaceutical agent, amlexanox, a drug with known anti-inflammatory and anti-allergic properties that has been approved and used in the US, Japan, and other countries. We are positioning LexaGard for treatment of conditions of the upper gastrointestinal tract including Barrett's esophagus and esophagitis.
- We are also developing additional products using our proprietary mucoadhesive hydrogel technology as a mucoprotectant and/or delivery vehicle, as well as our vitamin B-12 mediated delivery technology.

Compound	Originator	Technology	Indication	Clinical Stage
MuGard®	PlasmaTech	Mucoadhesive liquid	Mucositis	— Launched in U.S. — Licensed to AMAG: U.S. rights — Licensed to Norgine: European Union rights — Licensed to RHEI: China rights and other SE Asia countries — Licensed to Hanmi: South Korea rights
ProctiGard™	PlasmaTech	Mucoadhesive hydrogel technology	Radiation proctitis	FDA clearance 7/22/14
LexaGard™	PlasmaTech	Mucoadhesive hydrogel technology	Inflammatory and ulcerative conditions of the esophagus	Filings being reviewed at FDA
Alpha-1 Antitrypsin (AAT)	Licensor	Proprietary biological processing	Various	Process validation
Intravenous immune globulin (IVIG)	Licensor	Proprietary biological processing	Various	Process validation

Recent Developments

On August 7, 2014, we entered into an exclusive license agreement with Norgine, an independent European specialty pharmaceutical company, for the commercialization of MuGard in Europe. Under the terms of the license agreement, we will receive up to $10 million in milestone payments and an escalating double digit royalty on the net sales of the oral mucositis product, MuGard, in the licensed territories. Norgine will develop, manufacture, and commercialize MuGard in the European Union, Switzerland, Norway, Iceland and Lichtenstein. Norgine anticipates launching MuGard in 2015.

On July 22, 2014 we received 510(K) marketing clearance from the FDA for ProctiGard ™ for the treatment of symptomatic management of rectal mucositis.

On March 11, 2014, we announced we had entered into an exclusive license agreement with Hanmi related to MuGard commercialization in South Korea. Under the terms of the agreement, we received an upfront licensing fee and double digit royalties on sales of MuGard in the licensed territory.

On September 12, 2014, we announced we had received notification from the European Patent Office that an additional European patent for MuGard had been granted. The patent (EP1997478) protects a wide range of liquid formulations for the prevention and treatment of mucosal diseases and disorders.

Reverse Stock Split

Our Board of Directors and majority shareholders approved an amendment to our certificate of incorporation to effect a reverse stock split of our common stock at a ratio between 1 for 5 and 1 for 50 in order to satisfy requirements for the listing of our common stock on the NASDAQ Capital Market. Our stockholders further authorized the board of directors to determine the ratio at which the reverse stock split would be effected. Our board of directors authorized the ratio of the Reverse Split on October 16, 2014 and to be effective at the opening of business on October 24, 2014. We amended our certificate of incorporation to effect the reverse split at a ratio of 1 for 50 (the "Reverse Split"). All share and per share numbers included in this prospectus give effect to the Reverse Split.

Plasma Technologies LLC License

On September 22, 2014, we entered into an exclusive, world-wide licensing agreement with Licensor to obtain rights to utilize and to sub-license to other pharmaceutical firms its recently patented methods for the extraction of therapeutic biologics from human plasma. Plasma biologics are bio-pharmaceutical proteins extracted, purified, and formulated from human blood plasma by the use of biotechnological processing techniques including precipitation, diafiltration, affinity chromatography, and ion-exchange chromatography. Because plasma biologics are biosimilar, they are less likely than recombinant or transgenic proteins to cause toxic or other adverse reactions, or cause adverse immunological responses such as the stimulation of inhibitors in recipients.

Under the terms of the licensing agreement, we will pay a license fee of $5 million in a combination of cash and common stock subject to the achievement of certain events, a regulatory approval milestone payment in common shares upon the first FDA regulatory approval of a drug derived from the Licensor's proprietary SDF process, and a tiered royalty on annual net sales of plasma fractions produced with Licensor's proprietary SDF process.

Licensor was founded to develop superior high-yield technology to extract a wide range of therapeutically useful proteins from human blood plasma. We believe that Licensor's proprietary SDF process is expected to significantly enhance yields of key value blood proteins, including alpha-1 antitrypsin ("AAT"), expanding market opportunities, while greatly enhancing margins. We obtained rights to utilize and sub-license to other pharmaceutical firms the recently patented improved methods for the extraction of therapeutic biologics from human plasma. We believe that Licensor's lead product, AAT, offers a low-risk, high revenue, short time-to-market respiratory product for treatment of inherited COPD (pulmonary emphysema), among other genetic AAT deficiencies. Additionally, the ability to extract several additional therapeutically useful and important proteins, due to the process being less destructive than historical fractionation processes, may enable us to seek new therapeutic applications and address high-value-added orphan indications.

Corporate Information

Our principal executive office is located at 4848 Lemmon Avenue, Suite 517, Dallas, Texas 75219; our telephone number is (214) 905-5100.

On October 24, 2014 we changed our name from Access Pharmaceuticals, Inc. to PlasmaTech Biopharmaceuticals, Inc.

SUMMARY OF THE OFFERING

Securities offered by us	Up to shares of our common stock and warrants to purchase up to an aggregate shares of common stock.
Description of warrants	Each warrant will have an exercise price of per share, will be exercisable upon issuance and will expire five years from date of issuance.
Common stock to be outstanding immediately after this offering	shares
Over-allotment option	The underwriters have an option for a period of 45 days to purchase up to additional shares of our common stock and/or warrants to cover over-allotments, if any.
Use of proceeds	We estimate that the net proceeds from this offering will be approximately $ million, or approximately $ million if the underwriters exercise their over-allotment option in full, at an assumed public offering price of $ per share after deducting the underwriting discount and estimated offering expenses payable by us. We intend to use the net proceeds from this offering for the clinical development and validation of the Licensor technologies, for the continued commercialization of MuGard, Proctigard, and for the development of follow-on portfolio products, for general corporate purposes including working capital, and for the upfront $ payment for Licensor exclusive license.
Risk Factors	You should read the "Risk Factors" section starting on page 8 for a discussion of factors to consider carefully before deciding to invest in our securities.
OTCQB Trading Symbol	ACCPD
Proposed NASDAQ Capital Market Trading Symbol	We have applied to have our shares of common stock and warrants listed for trading on The NASDAQ Capital Market under the symbol "PTBI" and "PTBIW," respectively. No assurances can be given that such listing will be approved.

The total number of shares of our common stock outstanding is 536,089 as of October 24, 2014 and excludes the following:

- shares issuable upon the exercise of warrants in this offering;
- 207,833 shares of common stock reserved for future issuance under our equity incentive plans. As of October 24, 2014, there were options to purchase 233,834 shares of our common stock outstanding under our equity incentive plans with a weighted average exercise price of $23.60 per share;
- 577,756 shares of common stock issuable upon exercise of outstanding warrants as of October 24, 2014 with exercise prices ranging from $25.00 per share to $182.50 per share;
- shares of our common stock initially issuable upon conversion of Series A Cumulative Convertible Preferred Stock, subject to adjustment;
- shares of our common stock initially issuable upon conversion of Series B Cumulative Convertible Preferred Stock at the liquidating preference, subject to adjustment;
- shares of our common stock underlying the warrants to be issued to the representative of the underwriters in connection with this offering; and

- shares of common stock issued to Plasma Technologies LLC for licensed technology.

Unless otherwise indicated, all information in this prospectus assumes:

- a 1 for 50 reverse stock split of our issued and outstanding shares of common stock effected on October 24, 2014 and the corresponding adjustment of all common stock price per share data and stock option and warrant exercise price per share data.
- no exercise of the underwriter's option to purchase up to additional shares of our common stock and/or warrants to cover over-allotments, if any.

SUMMARY CONDENSED CONSOLIDATED FINANCIAL INFORMATION

The following summary condensed consolidated financial information as of and for the years ended December 31, 2013 and 2012, have been derived from our audited financial statements. The financial information as of and for the six months ended June 30, 2014 and 2013 is derived from our unaudited condensed consolidated financial statements. The condensed consolidated financial information set forth below should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the financial statements and notes thereto included elsewhere in this prospectus.

	For the Six Months Ended June 30,		For the Year Ended December 31,	
(in thousands, except per share amounts)	**2014**	**2013**	**2013**	**2012**
	(unaudited)	(unaudited)		
Consolidated Statement of Operations:				
Total revenues	$ 455	$ 1,691	$ 2,042	$ 4,404
Loss from operations	(2,031)	(2,424)	(3,804)	(4,316)
Interest and miscellaneous income	34	169	251	242
Interest and other expense	(259)	(86)	(279)	(608)
Warrant extension expense	—	—	—	(2,316)
Gain (loss) on change in fair value of derivative – warrants	—	(28)	271	1,236
Gain (loss) on change in fair value of derivative – preferred stock	(11,110)	8,050	8,010	(4,770)
Net income (loss)	(13,366)	5,681	4,449	(10,532)
Preferred stock dividends	(1,451)	(1,460)	(2,898)	(1,999)
Net income (loss) allocable to common stockholders	$ (14,817)	$ 4,221	$ 1,551	$ (12,531)
Common Stock Data:				
Net income (loss) per common share				
Basic	$ (28.44)	$ 8.46	$ 3.07	$ (25.89)
Diluted	$ (28.44))	$ 8.34	$ 3.04	$ (25.89)
Weighted average number of common shares outstanding				
Basic	521	499	505	484
Diluted	521	506	509	484

	June 30, 2014	
	Actual	**Pro forma, as adjusted[(1)]**
	(unaudited)	
Consolidated Balance Sheet Data:		
Cash and cash equivalents	$ 55	
Total assets	240	
Dividends payable	8,373	
Deferred revenue	5,772	
Total liabilities	28,642	
Total stockholders' equity (deficit)	(28,402)	

(1) Our pro forma adjusted balance sheet as of June 30, 2014 gives effect to:

(i) the sale of the shares of common stock and warrants in this offering at the assumed public offering price of $ per share and $ per warrant less underwriting discounts, commissions and estimated offering expenses payable by us;

(ii) the conversion of outstanding shares of Series A Preferred Stock, dividends payable on Series A Preferred Stock and interest on dividends payable into shares of common stock upon consummation of this offering;

(iii) the exchange of outstanding shares of Series B Preferred Stock, including shares of Series B Preferred Stock issued upon conversion of dividends payable on Series B Preferred Stock, interest on dividends payable and liquidated damages for shares of common stock upon consummation of this offering; and

(iv) shares of common stock issued to Plasma Technologies, LLC for purchased licensed technology.

RISK FACTORS

Any investment in our securities involves a high degree of risk. You should carefully consider the risks described below, which we believe represent the material risks to our business, together with the information contained elsewhere in this prospectus, before you make a decision to invest in our securities. If any of the following events occur, our business, financial condition and operating results may be materially adversely affected. In that event, the trading price of our securities could decline and you could lose all or part of your investment.

Risks relating to our business and industry

We have experienced a history of losses, we expect to incur future losses and we may be unable to obtain necessary additional capital to fund operations in the future.

We have recorded minimal revenue to date and have incurred an accumulated deficit of approximately $281.2 million through June 30, 2014 and $266.4 million through December 31, 2013. Net loss allocable to common stockholders for the six months ended June 30, 2014 was $14.8 million and net income allocable to common stockholders for the year ended December 31, 2013 was $1.6 million and the net loss for the year ended December 31, 2012 was $12.5 million. Our losses have resulted principally from costs incurred in research and development activities related to our efforts to develop clinical drug candidates and from the associated administrative costs. We expect to incur additional operating losses over the next several years. We also expect cumulative losses to increase if we expand research and development efforts and preclinical and clinical trials. Our net cash burn rate for the six months ended June 30, 2014 was approximately $65,000 per month and for the year ended December 31, 2013 was approximately $289,000 per month.

We require substantial capital for our development programs and operating expenses, to pursue regulatory clearances and to prosecute and defend our intellectual property rights. We believe that our existing capital resources, interest income, royalties and revenue from our licensing agreements and collaborative agreements will be sufficient to fund our currently expected operating expenses and capital requirements for the next twelve months. We will need to raise substantial additional capital to support our ongoing and planned operations.

If we raise additional funds by issuing equity securities, further dilution to existing stockholders will result and future investors may be granted rights superior to those of existing stockholders. If adequate funds are not available to us through additional equity offerings, we may be required to delay, reduce the scope of or eliminate one or more of our research and development programs or to obtain funds by entering into arrangements with collaborative partners or others that require us to issue additional equity securities or to relinquish rights to certain technologies or drug candidates that we would not otherwise issue or relinquish in order to continue independent operations.

Without obtaining adequate capital funding, we may not be able to continue as a going concern.

The report of our independent registered public accounting firm for the fiscal year ended December 31, 2013, contained an explanatory paragraph to reflect its significant doubt about our ability to continue as a going concern as a result of our history of losses and our liquidity position. If we are unable to obtain adequate capital funding in the future, we may not be able to continue as a going concern, which would have an adverse effect on our business and operations, and investors' investment in us may decline.

We do not have significant operating revenue and may never attain profitability.

To date, we have funded our operations primarily through private sales of common stock, preferred stock and convertible notes. Contract research payments and licensing fees from corporate alliances and mergers have also provided funding for our operations. Our ability to achieve significant revenue or profitability depends upon our ability to successfully market MuGard in North America, Europe, Korea and China or to complete the development of our drug candidates, to develop and obtain patent protection and regulatory approvals for our drug candidates and to manufacture and commercialize the resulting drugs. We are not expecting any significant revenues in the short-term from our products or product candidates. Furthermore, we may not be able to ever successfully identify, develop, commercialize, patent, manufacture, obtain required regulatory approvals and market any additional products. Moreover, even if we do identify, develop, commercialize,

patent, manufacture, and obtain required regulatory approvals to market additional products, we may not generate revenues or royalties from commercial sales of these products for a significant number of years, if at all. Therefore, our proposed operations are subject to all the risks inherent in the establishment of a new business enterprise. In the next few years, our revenues may be limited to minimal product sales and royalties, and any amounts that we receive under strategic partnerships and research or drug development collaborations that we may establish and, as a result, we may be unable to achieve or maintain profitability in the future or to achieve significant revenues in order to fund our operations.

We may not successfully commercialize our drug candidates.

Our drug candidates are subject to the risks of failure inherent in the development of pharmaceutical products based on new technologies, and our failure to develop safe commercially viable drugs would severely limit our ability to become profitable or to achieve significant revenues. We may be unable to successfully commercialize our drug candidates because:

- some or all of our drug candidates may be found to be unsafe or ineffective or otherwise fail to meet applicable regulatory standards or receive necessary regulatory clearances;
- our drug candidates, if safe and effective, may be too difficult to develop into commercially viable drugs;
- it may be difficult to manufacture or market our drug candidates on a large scale;
- proprietary rights of third parties may preclude us from marketing our drug candidates; and
- third parties may market superior or equivalent drugs.

The success of our research and development activities, upon which we primarily focus, is uncertain.

Our primary focus is on our research and development activities and the commercialization of compounds covered by proprietary biopharmaceutical patents and patent applications. Research and development activities, by their nature, preclude definitive statements as to the time required and costs involved in reaching certain objectives. Actual research and development costs, therefore, could significantly exceed budgeted amounts and estimated time frames may require significant extension. Cost overruns, unanticipated regulatory delays or demands, unexpected adverse side effects or insufficient therapeutic efficacy will prevent or substantially slow our research and development effort and our business could ultimately suffer. We anticipate that we will remain principally engaged in research and development activities for an indeterminate, but substantial, period of time.

We may be unable to successfully develop, market, or commercialize our products or our product candidates without establishing new relationships and maintaining current relationships and our ability to successfully commercialize, and market our product candidates could be limited if a number of these existing relationships are terminated.

Our strategy for the research, development and commercialization of our potential pharmaceutical products may require us to enter into various arrangements with corporate and academic collaborators, licensors, licensees and others, in addition to our existing relationships with other parties. Specifically, we may seek to joint venture, sublicense or enter other marketing arrangements with parties that have an established marketing capability or we may choose to pursue the commercialization of such products on our own. We may, however, be unable to establish such additional collaborative arrangements, license agreements, or marketing agreements as we may deem necessary to develop, commercialize and market our potential pharmaceutical products on acceptable terms. Furthermore, if we maintain and establish arrangements or relationships with third parties, our business may depend upon the successful performance by these third parties of their responsibilities under those arrangements and relationships.

We may be unable to successfully manufacture our products and our product candidates in clinical quantities or for commercial purposes without the assistance of contract manufacturers, which may be difficult for us to obtain and maintain.

We have limited experience in the manufacture of pharmaceutical products in clinical quantities or for commercial purposes and we may not be able to manufacture any new pharmaceutical products that we may

develop. As a result, we have established, and in the future intend to establish arrangements with contract manufacturers to supply sufficient quantities of products to conduct clinical trials and for the manufacture, packaging, labeling and distribution of finished pharmaceutical products if any of our potential products are approved for commercialization. If we are unable to contract for a sufficient supply of our potential pharmaceutical or biopharmaceutical products on acceptable terms, our preclinical and human clinical testing schedule may be delayed, resulting in the delay of our clinical programs and submission of product candidates for regulatory approval, which could cause our business to suffer. Our business could suffer if there are delays or difficulties in establishing relationships with manufacturers to produce, package, label and distribute our finished pharmaceutical or biopharmaceutical or other medical products, if any. Moreover, US contract manufacturers that we may use must adhere to current Good Manufacturing Practices, as required by the FDA. In this regard, the FDA will not issue a pre-market approval or product and establishment licenses, where applicable, to a manufacturing facility for the products until the manufacturing facility passes a pre-approval plant inspection. If we are unable to obtain or retain third party manufacturing on commercially acceptable terms, we may not be able to commercialize our products as planned. Our potential dependence upon third parties for the manufacture of our products may adversely affect our ability to generate profits or acceptable profit margins and our ability to develop and deliver such products on a timely and competitive basis.

We are subject to extensive governmental regulation which increases our cost of doing business and may affect our ability to commercialize any new products that we may develop.

The FDA and comparable agencies in foreign countries impose substantial requirements upon the introduction of pharmaceutical products through lengthy and detailed laboratory, preclinical and clinical testing procedures and other costly and time-consuming procedures to establish safety and efficacy. All of our drugs and drug candidates require receipt and maintenance of governmental approvals for commercialization. Preclinical and clinical trials and manufacturing of our drug candidates will be subject to the rigorous testing and approval processes of the FDA and corresponding foreign regulatory authorities. Satisfaction of these requirements typically takes a significant number of years and can vary substantially based upon the type, complexity and novelty of the product.

Due to the time-consuming and uncertain nature of the drug candidate development process and the governmental approval process described above, we cannot assure you when we, independently or with our collaborative partners, might submit a New Drug Application, or NDA, for FDA or other regulatory review. Further, our ability to commence and/or complete development projects will be subject to our ability to raise enough funds to pay for the development costs of these projects.

Government regulation also affects the manufacturing and marketing of pharmaceutical products. Government regulations may delay marketing of our potential drugs for a considerable or indefinite period of time, impose costly procedural requirements upon our activities and furnish a competitive advantage to larger companies or companies more experienced in regulatory affairs. Delays in obtaining governmental regulatory approval could adversely affect our marketing as well as our ability to generate significant revenues from commercial sales. Our drug candidates may not receive FDA or other regulatory approvals on a timely basis or at all. Moreover, if regulatory approval of a drug candidate is granted, such approval may impose limitations on the indicated use for which such drug may be marketed. Even if we obtain initial regulatory approvals for our drug candidates, our drugs and our manufacturing facilities would be subject to continual review and periodic inspection, and later discovery of previously unknown problems with a drug, manufacturer or facility may result in restrictions on the marketing or manufacture of such drug, including withdrawal of the drug from the market. The FDA and other regulatory authorities stringently apply regulatory standards and failure to comply with regulatory standards can, among other things, result in fines, denial or withdrawal of regulatory approvals, product recalls or seizures, operating restrictions and criminal prosecution.

The uncertainty associated with preclinical and clinical testing may affect our ability to successfully commercialize new products.

Before we can obtain regulatory approvals for the commercial sale of any of our potential drugs, the drug candidates will be subject to extensive preclinical and clinical trials to demonstrate their safety and efficacy in humans. Preclinical or clinical trials of future drug candidates may not demonstrate the safety and efficacy to

the extent necessary to obtain regulatory approvals. In this regard, for example, adverse side effects can occur during the clinical testing of a new drug on humans which may delay ultimate FDA approval or even lead it to terminate our efforts to develop the drug for commercial use. Companies in the biotechnology industry have suffered significant setbacks in advanced clinical trials, even after demonstrating promising results in earlier trials. The failure to adequately demonstrate the safety and efficacy of a drug candidate under development could delay or prevent regulatory approval of the drug candidate. A delay or failure to receive regulatory approval for any of our drug candidates could prevent us from successfully commercializing such candidates and we could incur substantial additional expenses in our attempt to further develop such candidates and obtain future regulatory approval.

We may incur substantial product liability expenses due to the use or misuse of our products for which we may be unable to obtain insurance coverage.

Our business exposes us to potential liability risks that are inherent in the testing, manufacturing and marketing of pharmaceutical products. These risks will expand with respect to our drug candidates, if any, that receive regulatory approval for commercial sale and we may face substantial liability for damages in the event of adverse side effects or product defects identified with any of our products that are used in clinical tests or marketed to the public. Product liability insurance for the biotechnology industry is generally expensive, if available at all, and as a result, we may be unable to obtain insurance coverage at acceptable costs or in a sufficient amount in the future, if at all. We may be unable to satisfy any claims for which we may be held liable as a result of the use or misuse of products which we developed, manufactured or sold and any such product liability claim could adversely affect our business, operating results or financial condition.

Intense competition may limit our ability to successfully develop and market commercial products.

The biotechnology and pharmaceutical industries are intensely competitive and subject to rapid and significant technological change. Our competitors in the U.S. and elsewhere are numerous and include, among others, major multinational pharmaceutical and chemical companies, specialized biotechnology firms and universities and other research institutions.

Many of our competitors have and employ greater financial and other resources, including larger research and development, marketing and manufacturing organizations. As a result, our competitors may successfully develop technologies and drugs that are more effective or less costly than any that we are developing or which would render our technology and future products obsolete and noncompetitive.

In addition, some of our competitors have greater experience than we do in conducting preclinical and clinical trials and obtaining FDA and other regulatory approvals. Accordingly, our competitors may succeed in obtaining FDA or other regulatory approvals for drug candidates more rapidly than we can. Companies that complete clinical trials, obtain required regulatory agency approvals and commence commercial sale of their drugs before their competitors may achieve a significant competitive advantage. Drugs resulting from our research and development efforts or from our joint efforts with collaborative partners therefore may not be commercially competitive with our competitors' existing products or products under development.

Our ability to successfully develop and commercialize our drug candidates will substantially depend upon the availability of reimbursement funds for the costs of the resulting drugs and related treatments.

Market acceptance and sales of our product candidates may depend on coverage and reimbursement policies and health care reform measures. Decisions about formulary coverage as well as levels at which government authorities and third-party payers, such as private health insurers and health maintenance organizations, reimburse patients for the price they pay for our products as well as levels at which these payors pay directly for our products, where applicable, could affect whether we are able to commercialize these products. We cannot be sure that reimbursement will be available for any of these products. Also, we cannot be sure that coverage or reimbursement amounts will not reduce the demand for, or the price of, our products. We have not commenced efforts to have our product candidates reimbursed by government or third party payors. If coverage and reimbursement are not available or are available only at limited levels, we may not be able to commercialize our products.

In recent years, officials have made numerous proposals to change the health care system in the U.S. These proposals include measures that would limit or prohibit payments for certain medical treatments or subject the

pricing of drugs to government control. In addition, in many foreign countries, particularly the countries of the European Union, the pricing of prescription drugs is subject to government control. If our products are or become subject to government regulation that limits or prohibits payment for our products, or that subjects the price of our products to governmental control, we may not be able to generate revenue, attain profitability or commercialize our products.

As a result of legislative proposals and the trend towards managed health care in the U.S., third-party payors are increasingly attempting to contain health care costs by limiting both coverage and the level of reimbursement of new drugs. They may also impose strict prior authorization requirements and/or refuse to provide any coverage of uses of approved products for medical indications other than those for which the FDA has granted market approvals. As a result, significant uncertainty exists as to whether and how much third-party payors will reimburse patients for their use of newly-approved drugs, which in turn will put pressure on the pricing of drugs.

The market may not accept any pharmaceutical products that we develop.

The drugs that we are attempting to develop may compete with a number of well-established drugs manufactured and marketed by major pharmaceutical companies. The degree of market acceptance of any drugs developed by us will depend on a number of factors, including the establishment and demonstration of the clinical efficacy and safety of our drug candidates, the potential advantage of our drug candidates over existing therapies and the reimbursement policies of government and third-party payers. Physicians, patients or the medical community in general may not accept or use any drugs that we may develop independently or with our collaborative partners and if they do not, our business could suffer.

Healthcare reform measures could hinder or prevent our product candidates' commercial success.

The U.S. government and other governments have shown significant interest in pursuing healthcare reform. Any government-adopted reform measures could adversely impact the pricing of healthcare products and services in the U.S. or internationally and the amount of reimbursement available from governmental agencies or other third party payors. The continuing efforts of the U.S. and foreign governments, insurance companies, managed care organizations and other payors of health care services to contain or reduce health care costs may adversely affect our ability to set prices for our products which we believe are fair, and our ability to generate revenues and achieve and maintain profitability.

New laws, regulations and judicial decisions, or new interpretations of existing laws, regulations and decisions, that relate to healthcare availability, methods of delivery or payment for products and services, or sales, marketing or pricing, may limit our potential revenue, and we may need to revise our research and development programs. The pricing and reimbursement environment may change in the future and become more challenging due to several reasons, including policies advanced by the current executive administration in the U.S., new healthcare legislation or fiscal challenges faced by government health administration authorities. Specifically, in both the U.S. and some foreign jurisdictions, there have been a number of legislative and regulatory proposals to change the health care system in ways that could affect our ability to sell our products profitably.

For example, in March 2010, President Obama signed the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, or the PPACA. This law will substantially change the way healthcare is financed by both government health plans and private insurers, and significantly impact the pharmaceutical industry. The PPACA contains a number of provisions that are expected to impact our business and operations in ways that may negatively affect our potential revenues in the future. For example, the PPACA imposes a non-deductible excise tax on pharmaceutical manufacturers or importers that sell branded prescription drugs to U.S. government programs which we believe will increase the cost of our products. In addition, as part of the PPACA's provisions closing a funding gap that currently exists in the Medicare Part D prescription drug program (commonly known as the "donut hole"), we will be required to provide a discount on branded prescription drugs equal to 50% of the government-negotiated price, for drugs provided to certain beneficiaries who fall within the donut hole. Similarly, PPACA increases the level of Medicaid rebates payable by manufacturers of brand-name drugs from 15.1% to 23.1% and requires collection of rebates for drugs paid by Medicaid managed care organizations. The PPACA also includes significant changes to the 340B drug discount program including expansion of the list of eligible covered entities that

may purchase drugs under the program. At the same time, the expansion in eligibility for health insurance benefits created under PPACA is expected to increase the number of patients with insurance coverage who may receive our products. While it is too early to predict all the specific effects the PPACA or any future healthcare reform legislation will have on our business, they could have a material adverse effect on our business and financial condition.

Congress periodically adopts legislation like the PPACA and the Medicare Prescription Drug, Improvement and Modernization Act of 2003, that modifies Medicare reimbursement and coverage policies pertaining to prescription drugs. Implementation of these laws is subject to ongoing revision through regulatory and sub regulatory policies. Congress also may consider additional changes to Medicare policies, potentially including Medicare prescription drug policies, as part of ongoing budget negotiations. While the scope of any such legislation is uncertain at this time, there can be no assurances that future legislation or regulations will not decrease the coverage and price that we may receive for our proposed products. Other third-party payors are increasingly challenging the prices charged for medical products and services. It will be time consuming and expensive for us to go through the process of seeking coverage and reimbursement from Medicare and private payors. Our proposed products may not be considered cost-effective, and coverage and reimbursement may not be available or sufficient to allow us to sell our proposed products on a profitable basis. Further federal and state proposals and health care reforms are likely which could limit the prices that can be charged for the product candidates that we develop and may further limit our commercial opportunities. Our results of operations could be materially adversely affected by proposed healthcare reforms, by the Medicare prescription drug coverage legislation, by the possible effect of such current or future legislation on amounts that private insurers will pay and by other health care reforms that may be enacted or adopted in the future.

In September 2007, the Food and Drug Administration Amendments Act of 2007 was enacted, giving the FDA enhanced post-marketing authority, including the authority to require post-marketing studies and clinical trials, labeling changes based on new safety information, and compliance with risk evaluations and mitigation strategies approved by the FDA. The FDA's exercise of this authority could result in delays or increased costs during product development, clinical trials and regulatory review, increased costs to assure compliance with post-approval regulatory requirements, and potential restrictions on the sale and/or distribution of approved products.

Our business could suffer if we lose the services of, or fail to attract, key personnel.

We are highly dependent upon the efforts of our senior management, including our Chief Executive Officer, Scott Schorer; our President and Chief Financial Officer, Harrison Wehner; and our consultant and board member Jeffrey B. Davis. The loss of the services of these individuals could delay or prevent the achievement of our research, development, marketing, or product commercialization objectives. We do not have employment contracts with our other key personnel. We do not maintain any 'key-man' insurance policies on any of our key employees and we do not intend to obtain such insurance. In addition, due to the specialized scientific nature of our business, we are highly dependent upon our ability to attract and retain qualified scientific and technical personnel and consultants. In view of the stage of our development and our research and development programs, we have restricted our hiring to research scientists, consultants and a small administrative staff and we have made only limited investments in manufacturing, production, sales or regulatory compliance resources. There is intense competition among major pharmaceutical and chemical companies, specialized biotechnology firms and universities and other research institutions for qualified personnel in the areas of our activities, however, and we may be unsuccessful in attracting and retaining these personnel.

Trends toward managed health care and downward price pressures on medical products and services may limit our ability to profitably sell any drugs that we may develop.

Lower prices for pharmaceutical products may result from:

- third-party-payers' increasing challenges to the prices charged for medical products and services;
- the trend toward managed health care in the U.S. and the concurrent growth of HMOs and similar organizations that can control or significantly influence the purchase of healthcare services and products; and

- legislative proposals to reform healthcare or reduce government insurance programs.

The cost containment measures that healthcare providers are instituting, including practice protocols and guidelines and clinical pathways, and the effect of any healthcare reform, could limit our ability to profitably sell any drugs that we may successfully develop. Moreover, any future legislation or regulation, if any, relating to the healthcare industry or third-party coverage and reimbursement, may cause our business to suffer.

Security breaches and other disruptions could compromise our information and expose us to liability, which would cause our business and reputation to suffer.

In the ordinary course of our business, we collect and store sensitive data, including intellectual property, our proprietary business information and that of our suppliers and business partners, as well as personally identifiable information of clinical trial participants and employees. Similarly, our business partners and third party providers possess certain of our sensitive data. The secure maintenance of this information is critical to our operations and business strategy. Despite our security measures, our information technology and infrastructure may be vulnerable to attacks by hackers or breached due to employee error, malfeasance or other disruptions. Any such breach could compromise our networks and the information stored there could be accessed, publicly disclosed, lost or stolen. Any such access, disclosure or other loss of information, including our data being breached at our business partners or third-party providers, could result in legal claims or proceedings, liability under laws that protect the privacy of personal information, disrupt our operations, and damage our reputation which could adversely affect our business.

Risks Related to our Intellectual Property

It is difficult and costly to protect our proprietary rights, and we may not be able to ensure protection of such rights.

Our commercial success will depend in part on obtaining and maintaining patent protection and trade secret protection of our product candidates, and the methods used to manufacture them, as well as successfully defending these patents against third-party challenges. We will only be able to protect our product candidates from unauthorized making, using, selling and offering to sell or importation by third parties to the extent that we have rights under valid and enforceable patents or trade secrets that cover these activities.

The patent positions of pharmaceutical and biotechnology companies can be highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. No consistent policy regarding the breadth of claims allowed in biotechnology patents has emerged to date in the U.S. The biotechnology patent situation outside the U.S. is even more uncertain. Changes in either the patent laws or in interpretations of patent laws in the U.S. and other countries may diminish the value of our intellectual property. Accordingly, we cannot predict the breadth of claims that may be allowed or enforced in our issued patents or in third-party patents.

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

- others may be able to produce compounds or molecules that are competitive with our product candidates but that are not covered by the claims of our patents;
- we may not have been the first to make the inventions covered by our pending patent applications;
- we may not have been the first to file patent applications for these inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies;
- it is possible that our pending patent applications will not result in issued patents and it is possible that our issued patents could be narrowed in scope, invalidated, held to be unenforceable, or circumvented;
- we may not develop additional proprietary technologies that are patentable; or
- the patents of others may have an adverse effect on our business; or

- others may be able to misappropriate our trade secrets.

We also may rely on trade secrets to protect our technology, especially where we do not believe patent protection is appropriate or obtainable. However, trade secrets are difficult to protect. While we use reasonable efforts to protect our trade secrets, our employees, consultants, contractors, outside scientific collaborators and other advisors may unintentionally or willfully disclose our information to competitors. Enforcing a claim that a third party illegally obtained and is using our trade secrets is expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the United States are sometimes less willing to protect trade secrets. Moreover, our competitors may independently develop equivalent knowledge, methods and know-how.

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

If we choose to go to court to stop someone else from using the inventions claimed in our patents, that individual or company has the right to ask the court to rule that these patents are invalid and/or should not be enforced against that third party. These lawsuits are expensive and would consume time and other resources even if we were successful in stopping the infringement of these patents. In addition, there is a risk that the court will decide that these patents are not valid and that we do not have the right to stop the other party from using the inventions. There is also the risk that, even if the validity of these patents is upheld, the court will refuse to stop the other party on the ground that such other party's activities do not infringe our rights to these patents.

Furthermore, a third party may claim that we are using inventions covered by the third party's patent rights and may go to court to stop us from engaging in our normal operations and activities, including making or selling our product candidates. These lawsuits are costly and could affect our results of operations and divert the attention of managerial and technical personnel. There is a risk that a court would decide that we are infringing the third party's patents and would order us to stop the activities covered by the patents. In addition, there is a risk that a court will order us to pay the other party damages for having violated the other party's patents. The biotechnology industry has produced a proliferation of patents, and it is not always clear to industry participants, including us, which patents cover various types of products or methods of use. The coverage of patents is subject to interpretation by the courts, and the interpretation is not always uniform. If we are sued for patent infringement, we would need to demonstrate that our products or methods of use either do not infringe the patent claims of the relevant patent and/or that the patent claims are invalid, and we may not be able to do this. Proving invalidity, in particular, is difficult since it requires a showing of clear and convincing evidence to overcome the presumption of validity enjoyed by issued patents.

Because some patent applications in the U.S. may be maintained in secrecy until the patents are issued, patent applications in the U.S. and many foreign jurisdictions are typically not published until eighteen months after filing, and publications in the scientific literature often lag behind actual discoveries, we cannot be certain that others have not filed patent applications for technology covered by our issued patents or our pending applications or that we were the first to invent the technology. Our competitors have filed, and may in the future file, patent applications covering technology similar to ours. Any such patent application may have priority over our patent applications and could further require us to obtain rights to issued patents covering such technologies. If another party has filed a U.S. patent application on inventions similar to ours, we may have to participate in an interference proceeding declared by the PTO, to determine priority of invention in the U.S.. The costs of these proceedings could be substantial, and it is possible that such efforts would be unsuccessful, resulting in a loss of our United States patent position with respect to such inventions.

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

Pending and future litigation, including product liability claims, private securities litigation, shareholder derivative suits and contract litigation, may adversely affect our financial condition and results of operations or liquidity.

The development, manufacture and marketing of pharmaceutical products of the types that we produce entail an inherent risk of product liability claims. A number of factors could result in an unsafe condition or injury to a patient with respect to these or other products that we manufacture or sell, including inadequate disclosure of product-related risks or product-related information. In addition, we may be the subject of litigation involving contract disputes, shareholder derivative suites or private securities litigation. The outcome of litigation, particularly class action lawsuits, is difficult to assess or quantify. Plaintiffs in these types of lawsuits often seek recovery of very large or indeterminate amounts, including not only actual damages, but also punitive damages. The magnitude of the potential losses relating to these lawsuits may remain unknown for substantial periods of time. In addition, the cost to defend against any future litigation may be significant. Product liability claims, securities and commercial litigation and other litigation in the future, regardless of the outcome, could have a material adverse effect on our financial condition, results of operations or liquidity. We are currently involved in a class action litigation, the outcome of which is uncertain and we may be required to pay damages. This litigation is described on page 46 under the heading “Legal Proceedings.”

We may not be successful in protecting our intellectual property and proprietary rights.

Our success depends, in part, on our ability to obtain U.S. and foreign patent protection for our drug candidates and processes, preserve our trade secrets and operate our business without infringing the proprietary rights of third parties. Legal standards relating to the validity of patents covering pharmaceutical and biotechnological inventions and the scope of claims made under such patents are still developing and there is no consistent policy regarding the breadth of claims allowed in biotechnology patents. The patent position of a biotechnology firm is highly uncertain and involves complex legal and factual questions. We cannot assure you that any existing or future patents issued to, or licensed by, us will not subsequently be challenged, infringed upon, invalidated or circumvented by others. We cannot assure you that any patents will be issued from any of the patent applications owned by, or licensed to, us. Furthermore, any rights that we may have under issued patents may not provide us with significant protection against competitive products or otherwise be commercially viable.

Patents may have been granted to third parties or may be granted covering products or processes that are necessary or useful to the development of our drug candidates. If our drug candidates or processes are found to infringe upon the patents or otherwise impermissibly utilize the intellectual property of others, our development, manufacture and sale of such drug candidates could be severely restricted or prohibited. In such event, we may be required to obtain licenses from third parties to utilize the patents or proprietary rights of others. We cannot assure you that we will be able to obtain such licenses on acceptable terms, if at all. If we become involved in litigation regarding our intellectual property rights or the intellectual property rights of others, the potential cost of such litigation, regardless of the strength of our legal position, and the potential damages that we could be required to pay could be substantial.

Risks related to our common stock

The market price of our common stock may be volatile and adversely affected by several factors.

The market price of our common stock could fluctuate significantly in response to various factors and events, including:

- our ability to integrate operations, technology, products and services;
- our ability to execute our business plan;
- operating results below expectations;
- announcements concerning product development results, including clinical trial results, or intellectual property rights of others;
- litigation or public concern about the safety of our potential products;

- our issuance of additional securities, including debt or equity or a combination thereof, which will be necessary to fund our operating expenses;
- announcements of technological innovations or new products by us or our competitors;
- loss of any strategic relationship;
- industry developments, including, without limitation, changes in healthcare policies or practices or third-party reimbursement policies;
- economic and other external factors;
- period-to-period fluctuations in our financial results; and
- whether an active trading market in our common stock develops and is maintained.

In addition, the securities markets have from time to time experienced significant price and volume fluctuations that are unrelated to the operating performance of particular companies. These market fluctuations may also materially and adversely affect the market price of our common stock.

We have not paid cash dividends in the past and do not expect to pay cash dividends in the foreseeable future. Any return on investment may be limited to the value of our common stock.

We have never paid cash dividends on our common stock and do not anticipate paying cash dividends on our common stock in the foreseeable future. The payment of dividends on our capital stock will depend on our earnings, financial condition and other business and economic factors affecting us at such time as the board of directors may consider relevant. If we do not pay dividends, our common stock may be less valuable because a return on your investment will only occur if the common stock price appreciates.

Our quarterly operating results may fluctuate significantly.

We expect our operating results to be subject to quarterly fluctuations. Our net loss and other operating results will be affected by numerous factors, including:

- variations in the level of expenses related to our development programs;
- addition or termination of clinical trials;
- any intellectual property infringement lawsuit in which we may become involved;
- regulatory developments affecting our product candidates; and
- our execution of any collaborative, licensing or similar arrangements, and the timing of payments we may make or receive under these arrangements.

If our quarterly operating results fall below the expectations of investors or securities analysts, the price of our common stock could decline substantially. Furthermore, any quarterly fluctuations in our operating results may, in turn, cause the price of our common stock to fluctuate substantially.

Provisions of our charter documents could discourage an acquisition of our company that would benefit our stockholders and may have the effect of entrenching, and making it difficult to remove, management.

Provisions of our Certificate of Incorporation and By-laws may make it more difficult for a third party to acquire control of us, even if a change in control would benefit our stockholders. In particular, shares of our preferred stock may be issued in the future without further stockholder approval and upon such terms and conditions, and having such rights, privileges and preferences, as our Board of Directors may determine, including, for example, rights to convert into our common stock. The rights of the holders of our common stock will be subject to, and may be adversely affected by, the rights of the holders of any of our preferred stock that may be issued in the future. The issuance of our preferred stock, while providing desirable flexibility in connection with possible acquisitions and other corporate purposes, could have the effect of making it more difficult for a third party to acquire control of us. This could limit the price that certain investors might be willing to pay in the future for shares of our common stock and discourage these investors

from acquiring a majority of our common stock. Further, the existence of these corporate governance provisions could have the effect of entrenching management and making it more difficult to change our management.

We have adopted a shareholder rights plan, the purpose of which is, among other things, to enhance our board's ability to protect shareholder interests and to ensure that shareholders receive fair treatment in the event any coercive takeover attempt of our company is made in the future. The shareholder rights plan could make it more difficult for a third party to acquire, or could discourage a third party from acquiring, our company or a large block of our common stock.

Failure to achieve and maintain effective internal controls could have a material adverse effect on our business.

Effective internal controls are necessary for us to provide reliable financial reports. If we cannot provide reliable financial reports, our operating results could be harmed. All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. Based on our evaluation, our management concluded that there is a material weakness in our internal control over financial reporting for the year ended December 31, 2013. The material weakness identified did not result in the restatement of any previously reported financial statements or any related financial disclosure, nor does management believe that it had any effect on the accuracy of our financial statements for the year ended December 31, 2013. A material weakness is a deficiency, or a combination of control deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis. The material weakness relates to the monitoring and review of work performed by an accounting consultant who was formerly our Chief Financial Officer in the preparation of audit and financial statements, footnotes and financial data provided to our registered public accounting firm in connection with the annual audit. All of our financial reporting is currently carried out by our accounting consultant. This lack of accounting staff results in a lack of segregation of duties and accounting technical expertise necessary for an effective system of internal control. As soon as our finances allow, we will hire sufficient accounting staff and implement appropriate procedures for monitoring and review of work performed by our accounting consultant. Because of the material weakness described above, management concluded that, as of December 31, 2013, our internal control over financial reporting was not effective based on the criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO").

While we continue to evaluate and improve our internal controls, we cannot be certain that these measures will ensure adequate controls over our financial processes and reporting in the future. Any failure to implement required new or improved controls, or difficulties encountered in their implementation, could harm our operating results or cause us to fail to meet our reporting obligations.

Failure to achieve and maintain an effective internal control environment could cause investors to lose confidence in our reported financial information, which could have a material adverse effect on our stock price. Failure to comply with Section 404 could also potentially subject us to sanctions or investigations by the Securities and Exchange Commission ("SEC") or other regulatory authorities.

Our ability to use our net operating loss carry forwards may be subject to limitation.

Generally, a change of more than 50% in the ownership of a company's stock, by value, over a three-year period constitutes an ownership change for U.S. federal income tax purposes. An ownership change may limit our ability to use our net operating loss carryforwards attributable to the period prior to the change. As a result, if we earn net taxable income, our ability to use our pre-change net operating loss carryforwards to offset U.S. federal taxable income may become subject to limitations, which could potentially result in increased future tax liability for us. At December 31, 2013, we had net operating loss carryforwards aggregating approximately $189 million.

An investment in our common stock may be less attractive because it is not traded on a recognized public market.

Our common stock has traded on the OTC Bulletin Board, or OTCBB since June 5, 2006 and the OTCQB since July 18, 2012. The OTCQB is viewed by most investors as a less desirable, and less liquid, marketplace. As a result, an investor may find it more difficult to purchase, dispose of or obtain accurate quotations as to the value of our common stock.

Our common stock is subject to Rules 15g-1 through 15g-9 under the Exchange Act, which imposes certain sales practice requirements on broker-dealers who sell our common stock to persons other than established customers and "accredited investors" (as defined in Rule 501(c) of the Securities Act). For transactions covered by this rule, a broker-dealer must make a special suitability determination for the purchaser and have received the purchaser's written consent to the transaction prior to the sale. This rule adversely affects the ability of broker-dealers to sell our common stock and purchasers of our common stock to sell their shares of our common stock.

Additionally, our common stock is subject to SEC regulations applicable to "penny stock." Penny stock includes any non-NASDAQ equity security that has a market price of less than $5.00 per share and does not trade on a national exchange, subject to certain exceptions. The regulations require that prior to any non-exempt buy/sell transaction in a penny stock, a disclosure schedule proscribed by the SEC relating to the penny stock market must be delivered by a broker-dealer to the purchaser of such penny stock. This disclosure must include the amount of commissions payable to both the broker-dealer and the registered representative and current price quotations for our common stock. The regulations also require that monthly statements be sent to holders of penny stock that disclose recent price information for the penny stock and information of the limited market for penny stocks. These requirements adversely affect the market liquidity of our common stock.

Ownership of our shares is concentrated in the hands of a few investors which could limit the ability of our other stockholders to influence the direction of the company.

As calculated by SEC rules of beneficial ownership, SCO Capital Partners LLC and affiliates; Larry N. Feinberg (Oracle Partners LP, Oracle Institutional Partners LP and Oracle Investment Management Inc.); and Lake End Capital LLC each beneficially owned approximately 71.5%, 12.1%, and 6.8%, respectively, of our common stock on an as converted basis as of October 24, 2014. Accordingly, they collectively have the ability to significantly influence or determine the election of all of our directors or the outcome of most corporate actions requiring stockholder approval. They may exercise this ability in a manner that advances their best interests and not necessarily those of our other stockholders.

Risks relating to this offering

We will have broad discretion over the use of the net proceeds from this offering.

We intend to use the net proceeds for the clinical development and validation of the Licensed technologies, for the continued commercialization of MuGard, ProctiGard, and for the development of follow-on portfolio products, for general corporate purposes, including working capital, and for the up-front payment of $ for Licensor exclusive license. Our judgment may not result in positive returns on your investment and you will not have an opportunity to evaluate the economic, financial, or other information upon which we base our decisions.

Future sales by our stockholders may adversely affect our stock price and our ability to raise funds in new stock offerings.

Sales of our common stock in the public market following this offering could lower the market price of our common stock. Sales may also make it more difficult for us to sell equity securities or equity-related securities in the future at a time and price that our management deems acceptable or at all. Of the 536,089 shares of common stock outstanding as of October 24, 2014, all shares are, or will be, freely tradable without restriction, unless held by our "affiliates." Some of these shares may be resold under Rule 144. The sale of the shares issuable upon conversion of our outstanding Series A Preferred Stock, the sale of the shares issuable upon exchange of our outstanding Series B Preferred Stock and 577,756 shares issuable upon exercise of outstanding warrants could also lower the market price of our common stock.

You will experience immediate and substantial dilution as a result of this offering and may experience additional dilution in the future.

You will incur immediate and substantial dilution as a result of this offering. After giving effect to the sale by us of shares and warrants offered in this offering at an assumed public offering price of $ per share and $ per warrant, and after deducting underwriting discount and estimated offering expenses payable by us, investors in this offering can expect an immediate dilution of $ per share. In addition, in the past, we issued options and warrants to acquire shares of common stock. To the extent these options are ultimately exercised, you will sustain future dilution. We may also acquire or license other technologies or finance strategic alliances by issuing equity, which may result in additional dilution to our stockholders. In addition, pursuant to the license agreement with Licensor, upon FDA approval of a drug derived from the Licensor's proprietary SDF process, we will issue additional shares of common stock to Licensor.

Risks Related to the Reverse Split

On October 24, 2014, we effected a l-for-50 reverse stock split of our outstanding common stock in order to meet the minimum bid price requirement of the NASDAQ Capital Market. There can be no assurance that we will be able to continue to comply with the minimum bid price requirement of the NASDAQ Capital Market, in which case this offering may not be completed.

The reverse stock split of our outstanding common stock has increased the market price of our common stock to exceed the minimum bid price requirement of the NASDAQ Capital Market. However, the effect of a reverse stock split upon the market price of our common stock cannot be predicted with certainty, and the results of reverse stock splits by companies in similar circumstances have been varied. There can be no assurance that the market price of our common stock following the reverse stock split will remain at the level required for continuing compliance with that requirement. It is not uncommon for the market price of a company's common stock to decline in the period following a reverse stock split. If the market price of our common stock declines following the reverse stock split, the percentage decline may be greater than would occur in the absence of a reverse stock split. In any event, other factors unrelated to the number of shares of our common stock outstanding, such as negative financial or operational results, could adversely affect the market price of our common stock and jeopardize our ability to meet or maintain the NASDAQ Capital Market's minimum bid price requirement. In addition to specific listing and maintenance standards, the NASDAQ Capital Market has broad discretionary authority over the initial and continued listing of securities, which it could exercise with respect to the listing of our common stock.

Even if we do obtain a listing on the NASDAQ Capital Market, there can be no assurance that we will be able to comply with continued listing standards of the NASDAQ Capital Market.

Even if we sustain a market price of our common stock sufficient to obtain an initial listing on the Nasdaq Capital Market, we cannot assure you that we will be able to continue to comply with the minimum bid price and the other standards that we are required to meet in order to maintain a listing of our common stock on the NASDAQ Capital Market. Our failure to continue to meet these requirements may result in our common stock being delisted from the NASDAQ Capital Market.

The reverse stock split may decrease the liquidity of the shares of our common stock.

The liquidity of the shares of our common stock may be affected adversely by the reverse stock split given the reduced number of shares that are outstanding following the reverse stock split, especially if the market price of our common stock does not increase as a result of the reverse stock split. In addition, the reverse stock split increased the number of stockholders who own odd lots (less than 100 shares) of our common stock, creating the potential for such stockholders to experience an increase in the cost of selling their shares and greater difficulty effecting such sales.

Following the reverse stock split, the resulting market price of our common stock may not attract new investors, including institutional investors, and may not satisfy the investing requirements of those investors. Consequently, the trading liquidity of our common stock may not improve.

Although we believe that a higher market price of our common stock may help generate greater or broader investor interest, there can be no assurance that the reverse stock split will result in a share price that will attract new investors, including institutional investors, In addition, there can be no assurance that the market price of our common stock will satisfy the investing requirements of those investors, As a result, the trading liquidity of our common stock may not necessarily improve.

USE OF PROCEEDS

We estimate that the net proceeds from our issuance and sale of shares of our common stock and warrants in this offering will be approximately $ million, assuming a public offering price of $ per share and $ per warrant, after deducting underwriting discount and estimated offering expenses payable by us. If the underwriters exercise their over-allotment option in full, we estimate that the net proceeds from this offering will be approximately $ million. In addition, if all of the warrants offered pursuant to this prospectus are exercised in full for cash, we will receive approximately an additional $ million in cash. However, the warrants contain a cashless exercise provision that permit exercise of warrants on a cashless basis at any time where there is no effective registration statement under the Securities Act of 1933, as amended covering the issuance of the underlying shares.

A $1.00 increase or decrease in the assumed public offering price of $ per share would increase or decrease the net proceeds from this offering by approximately $ million, assuming that the number of shares and warrants offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions.

We intend to use the net proceeds from this offering for the clinical development and validation of the Licensor technologies, for the continued commercialization of MuGard, ProctiGard, and for the development of follow-on portfolio products, for general corporate purposes including working capital, and for the up-front $ payment for Licensor exclusive license.

This expected use of net proceeds from this offering represents our intentions based upon our current plans and business conditions. The amounts and timing of our actual expenditures may vary significantly depending on numerous factors. As a result, our management will retain broad discretion over the allocation of the net proceeds from this offering. We may find it necessary or advisable to use the net proceeds from this offering for other purposes, and we will have broad discretion in the application of net proceeds from this offering.

Pending our use of the net proceeds from this offering, we intend to invest the net proceeds in a variety of capital preservation investments, including short-term, investment-grade, interest-bearing instruments and U.S. government securities.

DILUTION

If you purchase shares and warrants in this offering your interest will be diluted immediately to the extent of the difference between the assumed public offering price of $ per share and the pro forma as adjusted net tangible book value per share of our common stock immediately following this offering.

Our net tangible book value as of June 30, 2014 was approximately $(16.1) million, or approximately $(30.44) per share. Net tangible book value per share represents our total tangible assets less total tangible liabilities, divided by the number of shares of common stock outstanding as of June 30, 2014.

Net tangible book value dilution per share to new investors represents the difference between the amount per share and warrant paid by purchasers in this offering and the pro forma as adjusted net tangible book value per share of common stock immediately after completion of this offering. After giving effect to (i) our sale of shares and warrants in this offering at an assumed public offering price of $ per share, (ii) the conversion of outstanding shares of Series A Preferred Stock, dividends payable on Series A Preferred Stock and interest on dividends payable into shares of common stock upon consummation of this offering, (iii) the exchange of outstanding shares of Series B Preferred Stock, including shares of Series B Preferred Stock issued upon conversion of dividends payable on Series B Preferred Stock, interest on dividends payable and liquidated damages for shares of common stock upon consummation of this offering and (iv) shares of common stock issued to Plasma Technologies, LLC for license technology, our pro forma as adjusted net tangible book value as of June 30, 2014 would have been $(___) million, or $(0.__) per share. This represents an immediate increase in net tangible book value of $ per share to existing stockholders and an immediate dilution in net tangible book value of $ per share to purchasers of shares in this offering, as illustrated in the following table:

Assumed public offering price per share		$
Net tangible book value per share as of June 30, 2014	$ (30.44)	
Increase in net tangible book value per share attributable to new investors	$	
Pro forma, as adjusted net tangible book value per share as of June 30, 2014, after this offering		$ ( )
Dilution per share to new investors in the offering		$

PRICE RANGE OF OUR COMMON STOCK

Market Information

Our common stock was traded on the OTC Bulletin Board, or OTCBB, under the trading symbol ACCP between June 5, 2006 and July 17, 2012 and the OTCQB from July 18, 2012 until October 23, 2014. Beginning on October 24, 2014 our ticker symbol was changed to PTBI in connection with the change in our corporate name and we effected a 1 for 50 reverse stock split on October 24, 2014.

The following table sets forth, for the periods indicated, the high and low closing prices as reported by OTCQB for our common stock for 2014 year-to-date and fiscal years 2013 and 2012. The OTCQB quotations reflect inter-dealer prices, without retail mark-up, mark-down or commission and may not represent actual transactions.

	Common Stock	
	High	Low
Fiscal Year 2014 Year-to-date		
First quarter	$ 29.50	$ 12.50
Second quarter	27.00	14.00
Third quarter	17.50	11.50
Fourth quarter (through October 23, 2014	13.50	10.00
Fiscal Year Ended December 31, 2013		
First quarter	$ 30.00	$ 12.50
Second quarter	27.00	19.00
Third quarter	25.00	16.00
Fourth quarter	21.00	11.50
Fiscal Year Ended December 31, 2012		
First quarter	$ 22.00	$ 49.00
Second quarter	61.50	22.50
Third quarter	36.50	16.00
Fourth quarter	22.50	11.00

Holders

The number of record holders of our common stock at October 24, 2014 was approximately 6,700.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our common stock and we do not anticipate paying any cash dividends in the foreseeable future on our common stock. The payment of dividends on common stock, if any, in the future is within the discretion of our Board of Directors and will depend on its earnings, capital requirements and financial condition and other relevant facts. We currently intend to retain all future earnings, if any, to finance the development and growth of its business.

The holders of Series A Preferred Stock are entitled to receive dividends of 6% per annum on their shares of Series A Preferred Stock. The dividends are payable by us semi-annually and may be paid by us either in cash, or if certain conditions are met, at our option, in shares of our common stock. To be eligible to pay dividends in shares of common stock, among other things, there must be in place a registration statement pursuant to which the holders of the Series A Preferred Stock are permitted to utilize the prospectus thereunder to resell all of the shares of common stock issuable in relation to the Series A Preferred Stock.

The holders of Series B Preferred Stock are entitled to receive dividends of 12% per annum on their shares of Series B Preferred Stock. The dividends are payable by us quarterly and may be paid by us either in cash, or if certain conditions are met, as determined by election of the majority holders, in cash or increase in stated value (or a combination).

CAPITALIZATION

The following table presents a summary of our cash and cash equivalents and capitalization as of June 30, 2014:

- on an actual basis: and
- on a pro forma as adjusted basis to:
  - (i) give effect to the sale of shares of common stock and warrants in this offering at the assumed public offering price of $ per share and $ warrant less underwriting discounts, commissions and estimated offering expenses payable by us;
  - (ii) the conversion of outstanding shares of Series A Preferred Stock, including shares of Series B Preferred Stock issued upon conversion of dividends payable on Series A Preferred Stock and interest on dividends payable into shares of common stock upon consummation of this offering;
  - (iii) the exchange of outstanding shares of Series B Preferred Stock, dividends payable on Series B Preferred Stock, interest on dividends payable and liquidated damages for shares of common stock at the liquidating preference upon consummation of this offering;
  - (iv) shares of common stock issued to Plasma Technologies, LLC for purchased licensed technology.

You should read the following table in conjunction with "Use of Proceeds," "Selected Financial Information," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and historical financial statements and the related notes thereto included in this prospectus.

	As of June 30, 2014 (in thousands except share data)	
	Actual	Pro forma as adjusted
Dividends payable – Series A Preferred Stock	$ 6,097	
Dividends payable – Series B Preferred Stock	2,276	
Derivative liability – preferred stock	12,300	
Long-term deferred revenue (including current portion)	5,772	
Stockholders equity (deficit):		
Convertible preferred stock Series A – $.01 par value; authorized 2,000,000 shares; 2,893.3617 shares issued and outstanding, actual; no shares issued and outstanding, pro forma as adjusted	—	
Convertible preferred stock Series B – $.01 par value; authorized 2,000,000 shares; 1,000 shares issued and outstanding, actual; no shares issued and outstanding; pro forma as adjusted	—	
Common stock – $.01 par value; authorized 200,000,000 shares; 528,989 shares issued and outstanding, actual; shares issued and outstanding, pro forma as adjusted	7	
Additional paid-in capital	252,833	
Treasury stock, at cost 4 shares	(4)	
Accumulated deficit	(281,238)	
Total stockholders' equity (deficit)	(28,402)	
Total capitalization	$ (1,957)	

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

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

OVERVIEW

We are an emerging biopharmaceutical company focused on developing a range of pharmaceutical products primarily based upon our nanopolymer chemistry technologies and technology recently licensed from Licensor. We currently have one marketed product licensed in the U.S., Europe, China and South Korea. We also have additional products and platform technologies in various stages of development where we are seeking partners to continue development and/or to license the technology.

Products and Product Candidates

Compound	Originator	Technology	Indication	Clinical Stage
MuGard®	PlasmaTech	Mucoadhesive liquid	Mucositis	— Launched in U.S. — Licensed to AMAG: U.S. rights — Licensed to Norgine – European Union rights — Licensed to RHEI: China rights and other SE Asia countries — Licensed to Hanmi: South Korea rights
ProctiGard ™	PlasmaTech	Mucoadhesive hydrogel technology	Radiation proctitis	FDA clearance 7/22/14
LexaGard™	PlasmaTech	Mucoadhesive hydrogel technology	Inflammatory and ulcerative conditions of the esophagus	Filings being reviewed at FDA
Alpha-1 Antitrypsin (AAT)	Licensor	Proprietary biological processing	Various	Process validation
Intravenous immune globulin (IVIG)	Licensor	Proprietary biological processing	Various	Process validation

Critical Accounting Policies and Estimates

The preparation of our consolidated financial statements in conformity with accounting principles generally accepted in the U.S. requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amount of revenues and expenses during the reported period. In applying our accounting principles, we must often make individual estimates and assumptions regarding expected outcomes or uncertainties. As you might expect, the actual results or outcomes are often different than the estimated or assumed amounts. These differences are usually minor and are included in our consolidated financial statements as soon as they are known. Our estimates, judgments and assumptions are continually evaluated based on available information and experience. Because of the use of estimates inherent in the financial reporting process, actual results could differ from those estimates.

Receivables

Receivables are reported in the balance sheets at the outstanding amount net of an allowance for doubtful accounts. We continually evaluate the creditworthiness of our customers and their financial condition and generally do not require collateral. The allowance for doubtful accounts is based upon reviews of specific

customer balances, historic losses, and general economic conditions. As of December 31, 2013 and 2012, no allowance was recorded as all accounts were considered collectible.

Derivative liability

In order to calculate the Derivative liability — preferred stock and warrants, we used the Monte Carlo simulation to estimate future stock prices. The use of valuation techniques requires us to make various key assumptions for inputs into the model, including assumptions about the expected future volatility of the price of our stock. In estimating the fair value at the end of each balance sheet date, we based our selected volatility on the one-year historic volatility of our stock as we believe this is most representative of the expected volatility in the near future for us.

Product sales and allowances

We initially sold MuGard to wholesaler, specialty, and retail pharmacies. We began shipping to customers in September 2010 through June 6, 2013 when we licensed MuGard to AMAG. Since June 6, 2013 we received royalties from AMAG from their sales of MuGard, and no longer record direct sales. We recognized revenue for MuGard product sales at the time title transferred to our customers, which occurred at the time product was shipped to our customers.

We previously recognized product sales allowances as a reduction of product sales in the same period the related revenue was recognized. Product sales allowances were based on amounts owed or to be claimed on the related sales. These estimates take into consideration the terms of our agreements with customers, rebates or discounts taken. If actual future results varied from our estimates, we may have needed to adjust these estimates, which could have had an effect on product sales and earnings in the period of adjustment. Our product sales allowances included:

- Wholesaler, Specialty, and Retail Pharmacy Discounts — we offered contractually determined discounts to certain wholesale distributors and specialty and retail pharmacies that purchase directly from us. These discounts are either taken off the invoice at the time of shipment or paid to the customer on a monthly or quarterly basis.
- Prompt Pay Discounts — we offered cash discounts to our customers, generally 2% of the sales price, as an incentive for prompt payment. Based on our experience many of the customers comply with the payment terms to earn the cash discount.
- Patient Discount Programs — we offered discount card programs in which patients receive certain discounts off their prescription.
- Managed Care Rebates — we offered discounts under contracts with certain managed care providers who do not purchase directly from us.

We believe our estimates related to gross-to-net sales adjustments for MuGard do not have a high degree of estimation complexity or uncertainty, as the related amounts were settled within a short period of time.

License Revenues and Royalties

Our revenues are generated from licensing, research and development agreements, royalties and product sales. We recognize revenue in accordance with SEC Staff Accounting Bulletin No. 104 (SAB 104), *Revenue Recognition*. License revenue is recognized over the remaining life of the underlying patent or period of performance obligation. Research and development revenues are recognized as services are performed. Royalties are recognized in the period of sales.

Stock Based Compensation Expense

We account for stock based compensation expense in accordance with FASB ASC 718, *Stock Based Compensation*. We have several stock-based compensation plans under which incentive and non-incentive qualified stock options and restricted shares may be granted to employees, directors and consultants. We measure the cost of the employee/director/consultant services received in exchange for an award of equity instruments based on the grant date fair value of the award. We use the Black-Scholes option pricing model to value our options which includes expected volatility, risk-free interest rate, dividend yield and estimated expected term.

Stock-based compensation expense recognized for the years ended December 31, 2013 and 2012 was approximately $439,000 and $390,000, respectively.

Results of Operations

Comparison of Three Months Ended June 30, 2014 with Three Months Ended June 30, 2013

Product sales of MuGard in the United States totaled $380,000 for the second quarter of 2013. We did not record direct sales of MuGard in 2014, since MuGard was licensed to AMAG on June 6, 2013. We are currently receiving royalties from AMAG for the sale of MuGard.

Our licensing revenue for the second quarter of 2014 was $150,000 as compared to $84,000 for the same period of 2013, an increase of $66,000. We recognize licensing revenue over the period of the performance obligation under our licensing agreements.

We recorded royalty revenue for MuGard of $97,000 for second quarter of 2014 and $3,000 royalties in the same period of 2013. We licensed MuGard to AMAG on June 6, 2013 and currently receive quarterly royalties from AMAG under our agreement.

Total research and development spending for the second quarter of 2014 was $81,000, as compared to $197,000 for the same period of 2013, a decrease of $116,000. The decrease in expenses was primarily due to:

- decreased clinical development with trials for MuGard ($55,000);
- decreased salary and related costs ($78,000) from reduced scientific staff;
- offset by increased scientific consulting expense ($76,000); and
- other net decreases in research spending ($59,000).

Product costs for MuGard in the United States were $53,000 for the second quarter of 2013. There were no product costs in 2014 due to no sales of MuGard by us.

Total selling, general and administrative expenses were $868,000 for the second quarter of 2014, as compared to $2,137,000 for the same period of 2013, a decrease of $1,269,000. The decrease in expenses was due primarily to the following:

- decreased net MuGard product selling expenses ($485,000) which includes an increase of $125,000 of MuGard product returns;
- decreased legal fees ($354,000);
- decreased salary and related costs ($263,000) from reduced general and administrative staff; and
- net decrease other general and administrative expenses ($167,000).

Depreciation and amortization was $1,000 for the second quarter of 2014 as compared to $1,000 for the same period in 2013.

Total operating expenses for the second quarter of 2014 were $950,000 as compared to total operating expenses of $2,388,000 for the same period of 2013, a decrease of $1,438,000 for the reasons listed above.

Interest and miscellaneous income was $26,000 for the second quarter of 2014 as compared to $75,000 for the same period of 2013, a decrease of $49,000. Miscellaneous income was higher in 2013 due to sale of certain platinum inventory for a discontinued product development effort.

Interest and other expense was $137,000 for the second quarter of 2014 as compared to $43,000 in the same period of 2013, an increase of $94,000. The interest represents interest accrued on unpaid dividends. No dividends have been paid in 2013 or 2014.

We recorded a gain related to warrants classified as derivative liabilities of $219,000 for the second quarter of 2013. The warrants expired in November 2013 and February 2014 so there was no derivative liability or loss during the second quarter of 2014.

We recorded a loss for the derivative liability related to preferred stock of $11,693,000 for the second quarter of 2014 and a gain of $3,270,000 for the same period of 2013. We recorded a derivative liability in 2010 per the requirements of accounting guidance due to the possibility of repricing our Series A Preferred Stock if we sold our common stock at a price below the original conversion price.

Preferred stock dividends of $726,000 were accrued for the second quarter of 2014 and $733,000 for the same period of 2013, a decrease of $7,000. Dividends are due semi-annually in either cash or common stock for the Series A Preferred Stock and due quarterly in either cash or common stock for the Series B Preferred Stock.

Net loss allocable to common stockholders for the second quarter of 2014 was $13,233,000, or a $20.21 basic and diluted loss per common share as compared to a net income of $867,000, or a $1.38 basic and a $1.36 diluted income per common share, for the same period in 2013, an increased loss of $14,100,000.

Comparison of Six Months Ended June 30, 2014 with Six Months Ended June 30, 2013

Product sales of MuGard in the United States totaled $1,542,000 for the first six months of 2013. We did not have any sales of MuGard in 2014 since MuGard was licensed to AMAG on June 6, 2013. We are currently receiving royalties from AMAG for sale of MuGard.

Our licensing revenue for the first six months of 2014 was $296,000 as compared to $146,000 for the same period of 2013, an increase of $150,000. We recognize licensing revenue over the period of the performance obligation under our licensing agreements.

We recorded royalty revenue for MuGard of $159,000 for first six months of 2014 and $3,000 royalties in the same period of 2013. We licensed MuGard to AMAG on June 6, 2013 and currently receive quarterly royalties from AMAG under our agreement.

Total research and development spending for the first six months of 2014 was $225,000, as compared to $520,000 for the same period of 2013, a decrease of $295,000. The decrease in research and development expenses was primarily due to:

- decreased clinical development with trials for MuGard ($226,000);
- decreased salary and related costs ($149,000) from reduced scientific staff;
- offset by increased scientific consulting expense ($194,000); and
- other net decreases in research spending ($114,000).

Product costs for MuGard in the United States were $119,000 for the first six months of 2013. There were no product costs in 2014 due to no sales of MuGard by us.

Total selling, general and administrative expenses were $2,260,000 for the first six months of 2014, as compared to $3,475,000 for the same period of 2013, a decrease of $1,215,000. The decrease in expenses was due primarily to the following:

- decreased net MuGard product selling expenses ($954,000) which includes an increase of $212,000 of MuGard product returns;
- decreased salary and related costs ($458,000) from reduced general and administrative staff;
- decreased legal fees ($405,000); offset by
- net increase other general and administrative expenses ($19,000); and
- increased stock compensation expense for options granted to employees, officers, directors and consultants ($583,000), options were granted in 2014 and no options were granted in 2013.

Depreciation and amortization was $1,000 for the first six months of 2014 as compared to $1,000 for the same period in 2013.

Total operating expenses for the first six months of 2014 were $2,486,000 as compared to total operating expenses of $4,115,000 for the same period of 2013, a decrease of $1,629,000 for the reasons listed above.

Interest and miscellaneous income was $34,000 for the first six months of 2014 as compared to $169,000 for the same period of 2013, a decrease of $135,000. Miscellaneous income was higher in 2013 due to sale of certain platinum inventory for a discontinued product development effort and to write-offs of certain accounts payables.

Interest and other expense was $259,000 for the first six months of 2014 as compared to $86,000 in the same period of 2013, an increase of $173,000. The interest represents interest accrued on unpaid dividends. No dividends have been paid in 2013 or 2014.

We recorded a loss related to warrants classified as derivative liabilities of $28,000 for the first six months of 2013. The warrants expired in November 2013 and February 2014 so there was no derivative liability or loss during the first six months of 2014.

We recorded a loss for the derivative liability related to preferred stock of $11,110,000 for the first six months of 2014 and a gain of $8,050,000 for the same period of 2013. We recorded a derivative liability per the requirements of accounting guidance due to the possibility of resetting the conversion price of our Series A Preferred Stock if we sold our common stock at a price below the original price.

Preferred stock dividends of $1,451,000 were accrued for the first six months of 2014 and $1,460,000 for the same period of 2013, a decrease of $9,000. Dividends are due semi-annually in either cash or common stock for the Series A Preferred Stock and due quarterly in either cash or preferred stock for the Series B Preferred Stock.

Net loss allocable to common stockholders for the first six months of 2014 was $14,817,000, or a $22.76 basic and diluted loss per common share as compared to a net income of $4,221,000, or a $6.77 basic and a $6.67 diluted income per common share, for the same period in 2013, an increased loss of $19,038,000.

Comparison of Years Ended December 31, 2013 and 2012

Product sales of MuGard in the U.S. totaled $1,529,000 for the year ended December 31, 2013 as compared with $2,865,000 for the same period of 2012, a decrease of $1,336,000. On June 6, 2013, MuGard was licensed to AMAG and revenue is now recorded as royalty income.

Our licensing revenue for the year ended December 31, 2013 was $435,000 as compared to $1,446,000 for the same period of 2012, a decrease of $1,011,000. We recognize licensing revenue over the period of the performance obligation under our licensing agreements. In the first quarter of 2012, we finalized the negotiations for the termination of the license from our European partner for MuGard and recognized all of the previously received license fees ($706,000) that were recorded in deferred revenue and a $500,000 termination fee.

We recorded royalty revenue for MuGard for the year ended December 31, 2013 of $78,000 as compared to $93,000 for the same period of 2012, a decrease of $15,000. Prior to the license of MuGard in the U.S. to AMAG on June 6, 2013 we recorded product sales for MuGard and no royalty revenue. We recorded royalty revenue for MuGard in Europe of $93,000 for the year ended December 31, 2012 and none in the same period of 2013. In the first quarter of 2012, we finalized the negotiations for the termination of the license to our European partner for MuGard.

Total research and development spending for the year ended December 31, 2013 was $884,000, as compared to $2,010,000 for the same period of 2012, a decrease of $1,126,000. The net decrease in research and development expenses was primarily due to:

- decreased salary and related costs ($433,000) from reduced scientific staff;
- decreased clinical development due to completed trials for MuGard, ProLindac and Thiarabine ($433,000);
- decreased laboratory costs due to the closing of our laboratory ($90,000);
- decreased stock compensation expense from lower expense of option grants for research and development employees ($62,000); and
- other net decreases in research spending ($108,000).

Product costs for MuGard in the U.S. were $125,000 for the year ended December 31, 2013 as compared to $267,000 for the same period in 2012, a decrease of $142,000. On June 6, 2013, MuGard was licensed to AMAG and product costs after that date are incurred by AMAG.

Total selling, general and administrative expenses were $4,834,000 for the year ended December 31, 2013, as compared to $6,024,000 for the same period of 2012, a decrease of $1,190,000. The net decrease in expenses was due primarily to the following:

- decreased MuGard product selling expenses ($1,238,000);
- decreased salary and related costs ($415,000) from reduced general and administrative salaries and staff;
- lower investor relations expenses ($102,000);
- increased legal fees ($315,000);
- increased general business consulting expenses for MuGard licensing and transition costs ($147,000); and
- increased net other general and administrative expenses ($103,000).

Depreciation and amortization was $3,000 for the year ended December 31, 2013 as compared to $419,000 for the same period in 2012, a decrease of $416,000. Amortization expense related to intangible assets was $362,000 in 2012 and was fully amortized. Depreciation was $54,000 lower in 2013 due to the closing of our lab in Dallas and the sale of our furniture and equipment.

Total operating expenses for the year ended December 31, 2013 were $5,846,000 as compared to total operating expenses of $8,720,000 for the same period of 2012, a decrease of $2,874,000 for the reasons listed above.

Interest and miscellaneous income was $251,000 for the year ended December 31, 2013 as compared to $242,000 for the same period of 2012, an increase of $9,000. Miscellaneous income was higher in 2013 due to sale of certain platinum and monomer inventory and write-offs and settlements of certain accounts payables.

Interest and other expense was $279,000 for the year ended December 31, 2013 as compared to $608,000 in the same period of 2012, a decrease of $329,000. The decrease in interest and other expense was due to the pay-off of the secured promissory note of $2.75 million in November 2012.

We recorded a one-time expense of $2,316,000 in the year ended December 31, 2012 for amendment agreements for 91,646 currently outstanding warrants which extended the expiration dates of such warrants to February 16, 2015 for 76,370 warrants; to October 24, 2015 for 7,728 warrants; and to December 6, 2015 for 7,547 warrants. The holders of such warrants include unaffiliated warrant holders as well as SCO Capital Partners LLC, Lake End Capital LLC and Beach Capital LLC. Such holders may be deemed to be affiliates of Jeffrey B. Davis our Director and Consultant and Steven H. Rouhandeh, our Chairman, respectively. The warrants that were amended were for the purchase of an aggregate of 91,646 shares of our common stock. In connection with the amendments, the holders of such warrants agreed to waive any damages that they may have incurred relating to our inability to register the shares of common stock issuable upon exercise of the warrants, other than liquidated damages that may have already accrued relating to such inability to register such shares.

We recorded a gain related to warrants classified as derivative liabilities of $271,000 for the year ended December 31, 2013 as compared to a gain of $1,236,000 for the same period of 2012. We recorded a derivative for warrants when the fair value of the warrants that were issued with our Series A Preferred Stock were reclassified from equity to liabilities per the requirements of accounting guidance as a result of the repricing feature. These warrants expired in February 2014.

We recorded a gain for the derivative liability related to preferred stock of $8,010,000 for the year ended December 31, 2013 and a loss of $4,770,000 for the same period of 2012. We recorded a derivative per the

requirements of accounting guidance due to the possibility of resetting the conversion price of our Series A Preferred Stock if we sold our common stock at a price below the original price.

Preferred stock dividends of $2,898,000 were accrued for the year ended December 31, 2013 and $1,999,000 for the same period of 2012, an increase of $899,000 due to the issuance of the Series B Preferred Stock. Dividends are due semi-annually in either cash or common stock for the Series A Preferred Stock and due quarterly in either cash or preferred stock for the Series B Preferred Stock.

Net income allocable to common stockholders for the year ended December 31, 2013 was $1,551,000, or a $3.07 basic income per common share and a $3.04 diluted income per common share as compared to a net loss of $12,531,000, or a $25.91 basic and diluted loss per common share, for the same period in 2012, an increased income of $14,082,000.

Liquidity and Capital Resources

We have funded our operations primarily through private sales of common stock, preferred stock, convertible notes and through licensing agreements. Our principal source of liquidity is cash and cash equivalents. Licensing payments and royalty revenues provided limited funding for operations during the six months ended June 30, 2014. As of June 30, 2014, our cash and cash equivalents were $55,000 and our net cash expenditures for the six months ended June 30, 2014, was approximately $65,000 per month. Net cash used in operating activities was approximately $369,000 for the six months ended June 30, 2014. As of June 30, 2014, our working capital deficit was $10,969,000. Our working capital deficit at June 30, 2014 represented an increase of $2,583,000 as compared to our working capital deficit as of December 31, 2013 of $8,386,000. The increase in the working capital deficit at June 30, 2014 reflects six months of net operating costs and changes in current assets and liabilities, partially offset by the license fee from Hanmi.

On September 10, 2014, we entered into an Unsecured Grid Note, for up to $250,000 with SCO. As of October 23, 2014 we have drawn a total of $250,000. The interest rate is 8% per annum and the maturity date is August 31, 2015 unless a financing of at least $5,000,000 occurs, then the note is required to be paid in full.

On September 22, 2014, we entered into an exclusive, world-wide licensing agreement with Licensor to obtain rights to utilize and to sub-license to other pharmaceuticals firms, its recently patented methods for the extraction of therapeutic biologics from human plasma.

Under the terms of the licensing agreement, we will pay a license fee of $5 million in a combination of cash and common stock subject to this offering, a regulatory approval milestone payment in common shares upon the first FDA regulatory approval of a drug derived from the Licensor’s proprietary SDF process, and a tiered royalty on annual net sales of plasma fractions produced with Licensor’s proprietary SDF process.

As of October 23, 2014, we did not have enough capital to achieve our long-term goals. If we raise additional funds by selling equity securities, the relative equity ownership of our existing investors will be diluted and the new investors could obtain terms more favorable than previous investors. A failure to obtain necessary additional capital in the future could jeopardize our operations and our ability to continue as a going concern.

We have incurred negative cash flows from operations since inception, and have expended, and expect to continue to expend in the future, substantial funds to complete our planned product development efforts. Since inception, our expenses have significantly exceeded revenues, resulting in an accumulated deficit as of June 30, 2014 of $281,238,000. We expect that our capital resources, royalties from MuGard and expected receipts due under our license agreements will be adequate to fund our current level of operations for the next twelve months. However, our ability to fund operations over this time could change significantly depending upon changes to future operational funding obligations or capital expenditures. As a result, we may be required to seek additional financing sources within the next twelve months. We cannot provide assurance that we will ever be able to generate sufficient product revenue or royalty revenue to achieve profitability on a sustained basis or at all.

Since our inception, we have devoted our resources primarily to fund our research and development programs. We have been unprofitable since inception and to date have received limited revenues from the sale of

products. We expect to incur losses for the next several years as we continue to invest in product research and development, preclinical studies, clinical trials and regulatory compliance.

We plan to expend substantial funds to conduct research and development programs, preclinical studies and clinical trials of potential products, including research and development with respect to our acquired and developed technology. Our future capital requirements and adequacy of available funds will depend on many factors, including:

- the successful development and commercialization of MuGard™ and our other product candidates;
- the successful development and commercialization of products derived from our recent license of Licensor technologies;
- the ability to establish and maintain collaborative arrangements with corporate partners for the research, development and commercialization of products;
- continued scientific progress in our research and development programs;
- the magnitude, scope and results of preclinical testing and clinical trials;
- the costs involved in filing, prosecuting and enforcing patent claims;
- the costs involved in conducting clinical trials;
- competing technological developments;
- the cost of manufacturing and scale-up;
- the ability to establish and maintain effective commercialization arrangements and activities; and
- successful regulatory filings.

We have devoted substantially all of our efforts and resources to research and development conducted on our own behalf. The following table summarizes research and development spending by project category, which spending includes, but is not limited to, payroll and personnel expense, lab supplies, preclinical expense, development cost, clinical trial expense, outside manufacturing expense and consulting expense:

(in thousands)	Twelve Months ended December 31,		February 24, 1988 (Inception) To
Project	2013	2012	Date[1]
MuGard	$ 725	$ 1,033	$ 5,015
Others[2]	159	977	39,988
Total	$ 884	$ 2,010	$ 45,003

(1) Cumulative spending from inception of the Company or project through December 31, 2013.

(2) Includes: CobOral, CobaCyte and other projects.

Due to uncertainties and certain of the risk factors described above, including those relating to our ability to successfully commercialize our drug candidates, our ability to obtain necessary additional capital to fund operations in the future, our ability to successfully manufacture our products and our product candidates in clinical quantities or for commercial purposes, government regulation to which we are subject, the uncertainty associated with preclinical and clinical testing, intense competition that we face, market acceptance of our products and protection of our intellectual property, it is not possible to reliably predict future spending or time to completion by project or product category or the period in which material net cash inflows from significant projects are expected to commence. If we are unable to timely complete a particular project, our research and development efforts could be delayed or reduced, our business could suffer depending on the significance of the project and we might need to raise additional capital to fund operations, as discussed in the risk factors above, including without limitation those relating to the uncertainty of the success of our research and development activities and our ability to obtain necessary additional capital to fund operations in the future. As discussed in such risk factors, delays in our research and development efforts and any inability to raise additional funds could cause us to eliminate one or more of our research and development programs.

We plan to continue our policy of investing any available funds in certificates of deposit, money market funds, government securities and investment-grade interest-bearing securities. We do not invest in derivative financial instruments.

We do not believe inflation or changing prices have had a material impact on our revenue or operating income in the past three years.

Series B Cumulative Convertible Preferred Stock

On October 25, 2012, we entered into a Preferred Stock and Warrant Purchase Agreement (the "Purchase Agreement") with existing investors whereby we agreed to sell 1,000 shares of a newly created series of our preferred stock, designated "Series B Cumulative Convertible Preferred Stock", par value $0.01 per share, for an issue price of $10,000 per share, (the "Series B Preferred Stock") and agreed to issue warrants to purchase 400,000 shares of our common stock at an exercise price of $25.00 per share, for an aggregate purchase price of $10,000,000. The financing consisted of $4,703,000 of new investment and the conversion of approximately $5,297,000 of outstanding dividends payable on our Series A Preferred Stock. Certain terms of the Series B Preferred Stock are senior in right to our outstanding Series A Preferred Stock. The Series B financing was approved by the requisite percentage of the holders of our Series A Preferred Stock and closed on October 25, 2012.

The shares of Series B Preferred Stock are convertible at the option of the holder into shares of our common stock at a conversion price of $25.00 per share of common stock (the "Conversion Price"). The Conversion Price is not subject to adjustment, except in cases of stock splits, stock dividends or similar transactions.

The Series B Preferred Stock is entitled to a liquidation preference, senior to the liquidation preference of the Series A Preferred Stock, equal to the greater of (i) (A) two times (2x) the Stated Value for the Series B Preferred Stock, plus any accumulated and unpaid dividends (whether or not declared) on the Series B Preferred Stock if such liquidation takes place prior to the fifth anniversary of the original issue date or (B) three times (3x) the Stated Value for the Series B Preferred Stock, plus any accumulated and unpaid dividends (whether or not declared) on the Series B Preferred Stock if such liquidation takes place on or after to the fifth anniversary of the original issue date, or (ii) the cash or other property distributable upon such liquidation with respect to the shares of Common Stock into which such shares of Series B Preferred Stock, including any accrued dividends thereon, could have been converted immediately prior to such payment. "Stated Value" shall mean $10,000 per share of Series B Preferred Stock, as it may be increased from time to time as set forth in the Certificate of Designations. The Series B Preferred Stock is also entitled to a dividend of 12% per annum, payable quarterly in cash or additional Stated Value, at the election of the majority holders at time of payment.

We have the right, but not the obligation, and with the written consent of the majority holders, to force conversion ("Mandatory Conversion") of all, but not less than all, of the outstanding Series B Preferred Stock into common stock as long as the closing price of our common stock exceeds $250.00 for at least 20 consecutive trading days immediately prior to the conversion and the average daily trading volume is not less than 4,000 shares per day for at least 20 consecutive trading days immediately prior to such date on which the Company gives notice of such conversion. Our ability to cause a Mandatory Conversion is subject to certain other conditions, including that a registration statement covering the common stock issuable upon such Mandatory Conversion is in effect and able to be used.

The Series B Preferred Stock will vote together with the common stock on an as-if-converted basis. The consent of the Series B Preferred Stock is required for us to take certain actions.

The common stock purchase warrants issued are for an aggregate of 400,000 shares of our common stock at an exercise price of $25.00. The warrants can also be exercised on a cashless basis. The warrants will expire six years from the date of issuance.

The warrant exercise price is subject to equitable adjustment for stock splits, dividends, combinations, and reorganizations only.

All Series B Preferred Stock dividends payable, interest on Series B Preferred Stock dividends payable and liquidated damages will be converted into Series B Preferred Stock just prior to an offering of at least

$10 million. The Series B Preferred Stock, including the shares of Series B Preferred Stock issued upon conversion of all accrued dividends payable, interest on dividends payable and liquidated damages thereon, subject to a liquidation preference, will be exchanged for shares of Common Stock upon consummation of an offering at the offering price pursuant to a Share Exchange Agreement dated September 10, 2014.

Climate Change

We do not believe there is anything unique to our business which would result in climate change regulations having a disproportional effect on us as compared to U.S. industry overall.

Off-Balance Sheet Arrangements

None.

BUSINESS

We are an emerging biopharmaceutical company focused on developing a range of pharmaceutical products primarily based upon our nanopolymer chemistry technologies and technology recently licensed from Licensor. We currently have one marketed product licensed in the U.S., Europe, China and South Korea. We also have additional products and platform technologies in various stages of development where we are seeking partners to continue development and/or to license the technology.

Marketed Product

- MuGard® is our marketed product for the management of oral mucositis, a frequent side-effect of cancer therapy for which there is no established treatment. The market for mucositis treatment is estimated to be in excess of $1.0 billion world-wide. MuGard, a proprietary nanopolymer formulation, has received marketing allowance in the U.S. from FDA. We launched MuGard in the U.S. in 2010.

  On June 6, 2013 we entered into an exclusive license agreement with AMAG related to the commercialization of MuGard in the U.S. and its territories. Under the terms of the licensing agreement, we received an upfront licensing fee of $3.3 million and a tiered, double-digit royalty on net sales of MuGard in the licensed territory. We receive quarterly royalty payments from AMAG.

  On August 5, 2010, we entered into an exclusive license with RHEI related to the commercialization of MuGard in China and other Southeast Asian countries. Our China partners have received an acceptance letter from the State Food and Drug Administration of the People's Republic of China, which provides marketing approval in China. MuGard has been manufactured in the U.S. and shipped to China for sale. RHEI has rights to sublicense MuGard sales in some Southeast Asia countries.

  On March 11, 2014, we announced we had entered into an exclusive license agreement with Hanmi related to MuGard commercialization in South Korea.

  On August 7, 2014, we entered into an exclusive license agreement with Norgine, an independent European specialty pharmaceutical company, for the commercialization of MuGard in Europe. Under the terms of the license agreement, we could receive up to $10 million in milestone payments and an escalating double digit royalty on the net sales of the oral mucositis product, MuGard, in the licensed territories. Norgine will develop, manufacture, and commercialize MuGard in the European Union, Switzerland, Norway, Iceland and Lichtenstein. Norgine anticipates launching MuGard in 2015.

  We are actively seeking partners to license MuGard in other territories.

Product Candidates

- ProctiGard™ received FDA marketing clearance on July 22, 2014. ProctiGard is our product for the treatment of radiation proctitis, a frequent side effect of radiation treatment to the pelvic region. Radiation proctitis ("RP") is the inflammation and damage to the lower portion of the colon after exposure to x-rays or ionizing radiation as part of radiation therapy. RP is most common after treatments for cancer, such as cervical, colon and prostate cancer. RP can be acute, occurring within weeks of initiation of therapy, or can occur months or years after treatment. We intend to develop ProctiGard in a manner similar to the commercialization of MuGard, which may include confirmatory clinical trials, with the objective of commercialization in collaboration with marketing partners globally.
- LexaGard™, is our proprietary formulation of the generic pharmaceutical agent, amlexanox, a drug with known anti-inflammatory and anti-allergic properties that has been approved and used in the US, Japan and other countries. We are positioning LexaGard for treatment of conditions of the upper gastrointestinal tract including Barrett's esophagus and esophagitis.
- We are also working on additional products using our proprietary mucoadhesive hydrogel technology as a mucoprotectant and/or delivery vehicle, and our vitamin B-12 mediated delivery technology.

Therapeutic Targets

Compound	Originator	Technology	Indication	Clinical Stage
MuGard®	PlasmaTech	Mucoadhesive liquid	Mucositis	— Launched in U.S. — Licensed to AMAG: U.S. rights — Licensed to Norgine: European Union rights — Licensed to RHEI: China rights and other SE Asian countries — Licensed to Hanmi: South Korea rights
ProctiGard ™	PlasmaTech	Mucoadhesive hydrogel technology	Radiation proctitis	FDA clearance 7/22/14
LexaGard™	PlasmaTech	Mucoadhesive hydrogel technology	Inflammatory and ulcerative conditions of the esophagus	Filings being reviewed at FDA
Alpha-1 Antitrypsin (AAT)	Licensor	Proprietary biological processing	Various	Process validation
Intravenous immune globulin (IVIG)	Licensor	Proprietary biological processing	Various	Process validation

Licensor Licensed Technology

Background

On September 22, 2014, we entered into an exclusive, world-wide, licensing agreement with Licensor to obtain rights to utilize and to sub-license to other pharmaceuticals firms, its recently patented methods for the extraction of therapeutic biologics from human plasma.

Plasma biologics are bio-pharmaceutical proteins extracted, purified, and formulated from human blood plasma by the use of biotechnological processing techniques including precipitation, diafiltration, affinity chromatography, and ion-exchange chromatography. These products are rendered virus-safe by means of chemical treatment, nanofiltration, and pasteurization. FDA exercises rigorous control of plasma collection to assure its safety. Because plasma biologics are biosimilar, they are less likely than recombinant or transgenic proteins to cause toxic or other adverse reactions, or cause adverse immunological responses such as the stimulation of inhibitors in recipients.

Plasma biologics primarily address indications arising from genetic deficiencies which are increasingly being identified by means of newly available rapid and low cost diagnostic genetic tests. Examples of plasma biologics include Alpha-1 Antitrypsin (“AAT”), Intravenous Immune Globulin (“IVIG”), Anti-Hemophilic Factor VIII (“AHF”) and Albumin, to name a few.

Plasma biologics are currently obtained from human plasma by a fractionation process known as the Cohn Cold Ethanol Fractionation Process (“Cohn Process”), which was developed prior to World War II to provide a stable solution of human albumin for the rapid treatment of hemorrhagic shock on the battlefield. This process employs various concentrations of ethanol combined with adjustments of pH, ionic strength, and temperature to bring about the necessary separations by precipitation. This process has been used for over 70 years and is still currently considered an industry standard.

Licensor

Licensor was founded to develop superior high-yield technology to extract a wide range of therapeutically useful proteins from human blood plasma. Its founder, Eugene J. Zurlo, saw the opportunity to utilize new

technology to replace the now 74-year-old Cohn Process in order to fundamentally change the economics of plasma fractionation, improve the quality of existing plasma biologics, and enable the extraction of additional useful plasma proteins.

Due to technology limitations in 1940, E.J. Cohn and his team at Harvard University were compelled to use ethanol combined with changes in pH, ionic strength, and temperature in a lengthy multi-step process to bring about the separation of albumin. In addition to the denaturing effects on plasma proteins by prolonged exposure to ethanol and pH changes from neutrality, commercial production facilities had to be explosion-proof and refrigerated, and were thus highly capital intensive.

Licensor's SDF Process uses salt as the precipitant at neutral pH, followed by salt removal by diafiltration, followed by the use of state-of-the-art chromatography for final separations and purification. The efficacy of the process has been confirmed in pilot scale batches in two independent laboratories. While several salts were found to work, Sodium Citrate was selected because of its "friendliness" to biologics, having been long used as an FDA approved protectant and preservative of whole blood and blood plasma.

The Licensor Process enables the production of unusually high yields of AAT and IVIG compared with the Cohn process and comparable yields of Anti-Hemophilic Factor VIII, which separation occurs before either the Cohn or Licensor Process. Because the Licensor Process optimizes the yields of the more valuable AAT and IVIG, its yields of less valuable albumin are somewhat lower than for Cohn fractionation.

Licensor's short, two-step salt precipitation process, in contrast to the highly denaturing Cohn process, may also enable the extraction of several additional plasma biologics by means of downstream affinity and/or ion-exchange chromatography, thus potentially further improving revenues and process economics deriveable from the same starting plasma. Examples of these additional therapeutic proteins are C-1-Esterase Inhibitor, Protein C, Antithrombin III, Transferrin, and Haptoglobin, all of which are used as treatments for low-incidence genetic deficiencies which could qualify them as Orphan Drugs.

Plasma Biologic Product Targets

AAT

AAT, also known as alpha-1 protease inhibitor (A1PI), is a protease inhibitor that protects tissues from enzymes produced by inflammatory cells, especially neutrophil elastase. Its normal concentration in human plasma is 1.8 to 3.5 grams per liter. The Licensor Process recovers at least 70% of the target AAT, about 10 times that currently yielded from the Cohn process.

AAT Deficiency is a genetic condition resulting in damage to lung, liver, and pancreatic tissues, with pulmonary emphysema being the most common indication. Approximately 1 in 3,000 Caucasians suffer from the genetic deficiency, with over 150,000 people in North America and Europe living with the deficiency. Treatment involves lifelong weekly injections of AAT of at least 60 mg/Kg of body weight, or about 200 grams per year. Less than 5% of the treatable worldwide population receive AAT therapy.

AAT also exerts immunomodulatory as well as anti-viral and anti-bacterial effects independent of protease inhibition. Administration of AAT in non-deficient individuals may interfere with disease progression in the following conditions: Diabetes (Type 1 and 2), acute myocardial infarction, inflammatory bowel disease, cystic fibrosis, graft vs. host disease, stroke, Alzheimer's disease, vasculitis, organ transplantation, and multiple sclerosis. The number of new potential therapeutic indications for AAT could create supply problems due to the challenge of producing sufficient quantities using current plasma extraction methods to meet the demand created by the growing number of clinical indications. It is the view within the industry that the supply of AAT (without new indications) is currently nearing capacity. The increase in demand, coupled with the limitations of plasma suppy and the shortcomings of the Cohn Fractionation Process, combine to underscore the need for a high-yield process such as the Licensor Process.

IVIG

IVIG is extracted from human plasma and contains a broad spectrum of Immunoglobulin G (IgG) antibodies.

On-label indications of IVIG include Primary immune deficiencies of genetic origin (estimated 10 million potential patients worldwide; 60,000 currently treated with IVIG), Chronic lymphocytic leukemia, Idiopathic thrombocytopenia, Pediatric HIV, Allogeneic bone marrow transplantation, Kidney transplantation, and Kawasaki syndrome.

IVIG is currently the main driver for manufacturers utilizing the Cohn Process. Approximately 25 million liters of plasma are processed to produce approximately $7 Billion of revenue. Licensor Process improves yields by at least 10% and is expected to extend half-life in circulation due to reduced denaturation. It also may eliminate thromboembolic events and other adverse events attributed to Cohn process.

AHF

AHF is used to treat Hemophilia A, a genetic disease occurring in 1:6,000 male births. Because dose weight is miniscule, a recombinant form can be produced in cell culture to augment production from human plasma. Plasma-derived AHF is extracted from the cryoprecipitate formed during the thawing of Source Plasma before salt or ethanol precipitation. Its use is growing in developing markets; however an estimated 300,000 potential patients worldwide, or ~70%, of potential patients remain untreated.

Other Potential Products

Because Licensor's patented sodium citrate extraction process does not have the destructive effects associated with the Cohn Cold Ethanol Process, it becomes possible to extract additional valuable low-dosage biotherapeutic agents for genetic deficiencies through the use of state-of-the-art affinity chromatography now widely available. The following examples include, but not limited to, other biotherapeutics, potentially available through the use of the PT process:

- C-1-esterase inhibitor treats hereditary angioma (HAE). Its genetic incidence: 1:10,000 – 1:50,000.
- Protein C is used to treat venous thromboembolic events. Prevalence of Protein C deficiency is 0.2 – 0.5%.
- Antithrombin III inactivates thrombin and is used to treat thrombotic disorders. Its deficiency occurs in 1:2000 – 1:5000 in a normal population, but can also be acquired as a result of various diseases.

Approved Products

MuGard®

Overview of MuGard

Mucositis is a debilitating condition involving extensive ulceration of the oral cavity that affects annually an estimated 400,000 cancer patients in the U.S. undergoing chemotherapy and radiation treatment. We believe that any treatment that would accelerate healing and/or diminish the rate of appearance of mucositis would have a significant beneficial impact on the quality of life of these patients and may allow for more aggressive chemotherapy. We believe the potential addressable market for a mucositis product could be over $2.1 billion world-wide.

MuGard is a viscous hydrogel polymer solution which provides a protective coating for the oral cavity. MuGard is dispensed in a ready to use form. A multi-site, randomized clinical study was performed in the U.S. testing MuGard and MuGard containing an anti-inflammatory drug to determine the effect of these products on the prevention and treatment of mucositis. The data from this trial indicated that the patients using MuGard displayed a lower incidence of mucositis than is typically seen in the studied population with no additional benefit from the drug.

The data were retrospectively compared with two historical patient databases to evaluate the potential advantages MuGard may provide in the prevention, treatment and management of mucositis. The patient evaluation was conducted using the oral mucositis assessment scale (OMAS), which qualifies the disease severity on a scale of 0 to 5. Key highlights of the comparison with the historical patient databases are as follows:

- the average severity of the disease was reduced by approximately 40%;
- the maximum intensity of the mucositis was approximately 35% lower; and

- the median peak intensity was approximately 50% lower.

These data confirmed the fact that MuGard could represent an important advancement in the management of mucositis. On December 13, 2006, we announced our receipt of marketing clearance for MuGard from the FDA for the indication of the management of oral wounds including mucositis, aphthous ulcers and traumatic ulcers.

On July 29, 2009, we took control of the North American rights to MuGard from a previous partner which had not received required funding to launch the product in the U.S.

On September 11, 2009, we announced the appointment of Accupac, Inc. as our U.S. manufacturer for MuGard.

We launched MuGard in the U.S. in the fourth quarter of 2010. MuGard had been launched in Germany, Italy, UK, Greece and the Nordic countries by our former European commercial partner, SpePharm. Our partners in China have received registration and marketing approvals.

On June 6, 2013 we entered into an exclusive license agreement with AMAG related to the commercialization of MuGard in the U.S. and its territories. Under the terms of the licensing agreement, we received an upfront licensing fee of $3.3 million and will receive a tiered, double-digit royalty on net sales of MuGard in the licensed territories. AMAG also purchased our existing MuGard inventory.

On August 7, 2014, we entered into an exclusive license agreement with Norgine, an independent European specialty pharmaceutical company, for the commercialization of MuGard in Europe. Under the terms of the license agreement, we could receive up to $10 million in milestone payments and an escalating double digit royalty on the net sales of the oral mucositis product, MuGard, in the licensed territories. Norgine will develop, manufacture, and commercialize MuGard in the European Union, Switzerland, Norway, Iceland and Lichtenstein. Norgine anticipates launching MuGard in 2015.

We initiated a new clinical study of the safety and effectiveness of MuGard in the first quarter of 2011. The study was a controlled, randomized, double-blinded trial of MuGard with a standard treatment for mucositis as a comparator in patients receiving chemoradiation for head and neck cancer. On February 18, 2014, we announced the online publication of the final results of our post-approval marketing study of MuGard in *Cancer*, the journal of the American Cancer Society. The publication, entitled “Multi-Institutional, Randomized, Double-Blind, Placebo-Controlled Trial to Assess the Efficacy of a Mucoadhesive Hydrogel (MuGard) in Mitigating Oral Mucositis Symptoms in Patients Being Treated With Chemoradiation Therapy for Cancers of the Head and Neck” is available at *http://onlinelibrary.wiley.com/doi/10.1002/cncr.28553/full*. The publication discusses the results of this post-marketing clinical trial, providing further evidence of the efficacy of MuGard in controlling symptoms caused by oral mucositis in 120 patients receiving chemoradiation therapy for the treatment of cancers of the head and neck.

ProctiGard™

ProctiGard™ is our product being developed for the management of radiation proctitis, a frequent side effect of radiation treatment to the pelvic region. RP is the inflammation and damage to the lower portion of the colon after exposure to x-rays or ionizing radiation as part of radiation therapy. RP is most common after treatments for cancer, such as cervical, colon and prostate cancer. RP can be acute, occurring within weeks of initiation of therapy, or can occur months or years after treatment. We intend to develop ProctiGard in a manner similar to the development of MuGard, which may include confirmatory clinical trials, with the objective of commercialization in collaboration with marketing partners globally. On July 22, 2014, we received 510(k) marketing clearance for ProctiGard™.

Products in Development

Drug Development Strategy

We have a rich potential pipeline of products and product candidates ranging from preclinical development candidates to one approved product. To maximize return on this portfolio, we plan to develop in-house or with collaborators the following products and technologies: MuGard, Mucoadhesive hydrogel technology and CobaCyte/CobOral.

A part of our integrated drug development strategy is to form alliances with centers of excellence in order to obtain alternative lead compounds while minimizing the overall cost of research. We do not spend significant resources on fundamental biological research but rather focus on our chemistry expertise and clinical development.

Our strategy is to focus on our mucoadhesive hydrogel technology for the prevention and treatment of side-effects of cancer therapies while continuing to develop technologies such as CobOral-mediated oral drug delivery and CobaCyte-mediated tumor targeting which could provide us with a revenue stream in the short term through commercialization or outlicensing. To reduce financial risk and financing requirements, we are directing our resources to the preclinical and early clinical phases of development. We plan to co-develop with or to outlicense to marketing partners our therapeutic product candidates where the size of the necessary clinical studies and cost associated with the later clinical development phases are significant. By forming strategic alliances with pharmaceutical and/or biotech companies, we believe that our technology can be more rapidly developed and successfully introduced into the marketplace.

We will continue to evaluate the most cost-effective methods to advance our programs. We plan to contract certain research and development, manufacturing and manufacturing scaleup, preclinical testing and product production to research organizations, contract manufacturers and strategic partners as appropriate to achieve cost savings and accelerate our development programs. We also plan to expand our internal core capabilities and infrastructure in the areas of chemistry, formulation, analytical methods development, clinical development, biology and project management to maximize product opportunities in a timely manner.

Process

We generally begin the product development effort by screening and formulating potential product candidates, selecting an optimal active component, developing a formulation, and developing the processes and analytical methods. Pilot stability, toxicity and efficacy testing are conducted prior to advancing the product candidate into formal preclinical development. Specialized skills are required to produce these product candidates utilizing our technology. We have a limited core internal development capability with significant experience in developing these formulations, but also depend upon the skills and expertise of our contractors.

Once the product candidate has been successfully screened in pilot testing, our scientists, together with external consultants, assist in designing and performing the necessary preclinical efficacy, pharmacokinetic and toxicology studies required to obtain regulatory approval to conduct clinical trials. External investigators and scaleup manufacturing facilities are selected in conjunction with our consultants. The initial Phase 1 and Phase 2 studies are conducted by institutions and investigators supervised and monitored by our employees and contract research organizations. We do not plan to have an extensive clinical development organization as we plan to have the advanced phases of this process conducted by a development partner. We expect to engage a contract research organization to perform Phase 3 clinical studies to the extent they are conducted.

We contract with third party contract research organizations to complete our large clinical trials and for data management of all of our clinical trials.

With all of our product development candidates, we cannot be certain that the results of the in vitro or animal studies are or will be indicative of the results that will be obtained if and when these product candidates are tested in humans. We cannot assure you that any of these projects will be successfully completed or that regulatory approval of any product will be obtained.

We expended approximately $884,000 and $2,010,000 on research and development during the years ended December 31, 2013 and 2012, respectively.

Scientific Background

We possess a broad range of technologies and intellectual property in the areas of drug delivery and oncology. Our core technologies rely on the use of nanopolymers for use in the management of oral conditions such as mucositis, and in drug delivery. In addition, we have small molecule, peptide, protein, and oligonucleotide programs which also embody the principals of drug delivery and drug targeting.

In our drug delivery programs for oncology, we believe the ultimate criteria for effective drug delivery is to control and optimize the localized release of the drug at the target site and rapidly clear the non-targeted

fraction. Conventional oncology drug delivery systems such as controlled release, sustained release, transdermal systems and others are designed for delivering active product into the systemic circulation over time with the objective of improving patient compliance and extending tumor exposure to drug. These systems do not address the biologically relevant issues such as site targeting, localized release and clearance of drug. The major factors that impact the achievement of this ultimate drug delivery goal are the physical characteristics of the drug and the delivery system, and the biological characteristics of the disease target sites. The physical characteristics of the drug affect solubility in biological systems, its biodistribution throughout the body, and its interactions with the intended pharmacological target sites and undesired areas of toxicity. The biological characteristics of the diseased area impact the ability of the drug to selectively interact with the intended target site to allow the drug to express the desired pharmacological activity.

We believe our drug delivery technologies are differentiated from conventional drug delivery systems in that they seek to apply a disease-specific approach to improve the drug delivery process with formulations to significantly enhance the therapeutic efficacy and reduce toxicity of a broad spectrum of products.

Our CobOral drug delivery technology seeks to deliver drugs orally to systemic circulation and CobaCyte to diseased cells. The main use of the CobOral technology will be to deliver drugs orally that otherwise could only be administered by injection because of poor natural oral absorption and/or degradation in the gastrointestinal tract. While other oral drug delivery technologies have been reported, the majority rely on permeation enhancement. Permeation enhancement temporarily increases the gaps between the cells which line the gastrointestinal tract to allow more drug to pass through. But this technique also allows many other materials, many potentially toxic, to enter the body more readily. Additionally, permeation enhancers only permit a small increase in oral uptake. The CobOral technology relies upon a natural receptor-mediated uptake mechanism which can facilitate uptake of larger quantities of drug. Our nanopolymer technology is used to encapsulate the drug, protecting it in the harsh environment of the gastrointestinal tract, and permits slow drug release once transported into systemic circulation.

Other Drug Delivery Technology Platforms and Technologies

Our current drug delivery technology platforms for use in cancer chemotherapy are:

- Mucoadhesive Hydrogel Technology;
- CobOral® — Mediated Oral Delivery Technology; and
- CobaCyte® — Mediated Targeted Delivery Technology.

Each of these platforms is discussed below:

Mucoadhesive Hydrogel Technology

MuGard® is the first product to be developed using our Mucoadhesive Hydrogel Technology. MuGard® is an innovative mucoadhesive hydrogel product that has been studied clinically in patients with head and neck cancer that are undergoing radiation treatment. Approximately 90% of patients undergoing radiation treatment for head and neck cancer, and 20 – 50% of patients receiving cytotoxic chemotherapy for various cancers experience a condition known as mucositis, a very painful and debilitating ulceration and infection of the oral cavity, which can be severe enough that the patient may forego proper treatment for the underlying cancer. In clinical trials, MuGard® was shown to lessen the severity and duration of the mucositis in patients, when compared to no treatment or standard of care practices. The protective coating provided by our Mucoadhesive Hydrogel Technology has the potential to treat other ulcerative conditions of the oral cavity such as oral lichen planus and aphthous ulcers. The Mucoadhesive Hydrogel Technology has the potential to provide the basis for additional products which protect other mucosal surfaces, particularly those which are accessible via an external orifice, such as the throat, esophagus, vagina, and rectum.

The Mucoadhesive Hydrogel Technology was originally developed as a drug-delivery vehicle, and the muco-protectant properties described above were discovered subsequently from clinical and preclinical studies of formulations of the Mucoadhesive Hydrogel Technology. PlasmaTech continues to explore new opportunities from the drug-delivery aspects of the Mucoadhesive Hydrogel Technology. Compounds such as drugs, nutritional supplements and medicinal foods normally diffuse rapidly from aqueous formulations. During the original development of the Mucoadhesive Hydrogel Technology, in vitro studies showed that

PlasmaTech' hydrogel formulations slowed the release of the drug amlexanox from the aqueous hydrogel formulation to a simulated mucosal surface. Prolonged drug exposure (compared with almost instant release) of the mucosa can be beneficial in treating a number of conditions. Slowed drug release can also provide benefit when the drug is required systemically, as evidenced by the large number of 'CR' solid-dose oral formulations that have been developed and brought to the market following initial development and approval of instant release tablet and capsule formulations. We are now applying its Mucoadhesive Hydrogel Technology to the development of products which benefit from both the mucosal protectant and drug delivery aspects of the technology.

ProctiGard™

ProctiGard™ is our product being developed for the management of radiation proctitis, a frequent side effect of radiation treatment to the pelvic region. RP is the inflammation and damage to the lower portion of the colon after exposure to x-rays or ionizing radiation as part of radiation therapy. RP is most common after treatments for cancer, such as cervical, colon and prostate cancer. RP can be acute, occurring within weeks of initiation of therapy, or can occur months or years after treatment. We intend to develop ProctiGard in a manner similar to the development of MuGard, which may include confirmatory clinical trials, with the objective of commercialization in collaboration with marketing partners globally. On July 22, 2014, we received 510(k) marketing clearance for ProctiGard™.

LexaGard™

LexaGard™, is our proprietary formulation of the generic pharmaceutical agent, amlexanox, a drug with known anti-inflammatory and anti-allergic properties that has been approved and used in the U.S., Japan and other countries. We are positioning LexaGard for treatment of conditions of the upper gastrointestinal tract including Barrett's esophagus and esophagitis.

CobOral™ — Mediated Oral Delivery Technology

Oral delivery is the preferred method of administration of drugs where either long-term or daily use (or both) is required. Many therapeutics, including peptide and protein drugs, are poorly absorbed when given orally. With more peptide and protein based biopharmaceuticals entering the market, there is an increasing need to develop an effective oral delivery system for them, as well as for long-standing injected drugs such as insulin.

The difficulty in administering proteins orally is their susceptibility to degradation by digestive enzymes, their inability to cross the intestinal wall and their rapid excretion by the body. Over the years, many different methodologies for making protein drugs available orally have been attempted. Most of the oral protein delivery technologies involve protecting the protein degradation in the intestine. More recently, strategies have been developed that involve co-administering the protein or peptide with permeation enhancers, which assist in passive transit through the gut wall or by attaching the protein or peptide to a molecule that transports the protein across the gut wall. However, the field of oral drug delivery of proteins and peptides has yet to achieve successful commercialization of a product (although positive results have been achieved in early clinical trials for some products under development).

Many pharmaceutically active compounds such as proteins, peptides and cytotoxic agents cannot be administered orally due to their instability in the gastrointestinal tract or their inability to be absorbed and transferred to the bloodstream. A technology that would allow many of these actives to be taken orally would greatly enhance their acceptance and value. Several technologies for the protection of sensitive actives in the gastro-intestinal tract and/or enhancement of gastro-intestinal absorption have been explored and many have failed.

Our proprietary technology for oral drug delivery utilizes the body's natural vitamin B12 ("VB12") transport system in the gut. The absorption of VB12 in the intestine occurs by way of a receptor-mediated endocytosis. Initially, VB12 binds to naturally-produced intrinsic factor ("IF") in the small intestine, and the VB12-IF complex then binds to the IF receptor on the surface of the intestine. Receptor-mediated endocytosis then allows the transport of VB12 across the gut wall. After binding to another VB12-binding protein, transcobalamin II, VB12 is transferred to the bloodstream.

Our scientists discovered that VB12 will still be transported by this process even when drugs, macromolecules, or nanoparticles are coupled to the VB12. Thus CobOral (VB12 conjugatges of drugs, macromolecules, or

nanoparticles) serves as a carrier to transfer these materials from the intestinal lumen to the bloodstream. For drugs and macromolecules that are stable in the gastro-intestinal tract, the drug or macromolecule can be coupled directly (or via a linker) to CobOral. If the capacity of the CobOral transport system is inadequate to provide an effective blood concentration of the active, transport can be amplified by attaching many molecules of the drug to a polymer, to which CobOral is also attached. A further option, especially for drugs and macromolecules that are unstable in the intestine, is to formulate the drug in a nanoparticle which is then coated with CobOral. Once in the bloodstream, the active is released by diffusion and/or erosion of the nanoparticle. Utilization of nanoparticles also serves to "amplify" delivery by transporting many molecules at one time due to the inherently large nanoparticle volume compared with the size of the drug.

Our proprietary position in this technology involves the conjugation of CobOral or its analogs to a polymer to which the drug to be delivered is also attached, or to a nanoparticle in which the drug is incorporated. Since many molecules of the drug are attached to a single polymer strand, or are incorporated in a single nanoparticle, oral uptake is amplified compared to simpler conjugates involving one molecule of the vitamin with one drug molecule. However, in situations when such a simple conjugate might be preferred, our patents also encompass these vitamin-drug conjugates.

CobaCyte™ — Mediated Targeted Delivery Technology

Most drugs are effective only when they reach a certain minimum concentration in the region of disease, yet are well distributed throughout the body following delivery to the bloodstream contributing to undesirable side effects. It is therefore advantageous to alter the natural biodistribution of a drug to have it more localized where it is needed. Our CobaCyte-mediated targeted delivery technology utilizes the fact that in many diseases where there is rapid growth and/or cell division, the demand for certain vitamins increases. By coupling the drug to a vitamin analog, the analog serves as a carrier to increase the amount of drug at the disease site relative to its normal distribution.

One application of this technology is in tumor targeting. The use of cytotoxic drugs is one of the most common methods for treating a variety of malignancies including solid and non-solid tumors. The drawbacks of chemotherapeutic treatments, which include tumor resistance, cancer relapse and toxicity from severe damage to healthy tissues, has fuelled a scientific quest for novel treatments that are specifically targeted to malignant cells thus reducing damage to collateral tissues.

The design of targeted therapies involves exploitation of the difference between the structure and function of normal cells compared with malignant cells. Differences include the increased levels of surface receptors on cancer cells, which makes them more sensitive to treatment regimes that target these cell surface receptors and differences in blood supply within and around tumor cells compared with normal cells.

Two basic types of targeting approaches are utilized — passive tumor targeting and active tumor targeting.

- passive tumor targeting involves transporting anti-cancer agents through the bloodstream to tumor cells using a "carrier" molecule. Many different carrier molecules, which can take a variety of forms (micelles, nanoparticles, liposomes and polymers), are being investigated as each provides advantages such as specificity and protection of the anti-cancer drug from degradation due to their structure, size (molecular weights) and particular interactions with tumor cells. Our ProLindac program uses a passive tumor targeting technology.
- active tumor targeting involves attaching an additional fragment to the anticancer drug and the carrier molecule to create a new "targeted" agent that will actively seek a complementary surface receptor to which it binds (preferentially located on the exterior of the tumor cells). The theory is that the targeting of the anti-cancer agent through active binding to the affected cells should allow more of the anti-cancer drug to enter the tumor cell, thus amplifying the response to the treatment and reducing the toxic effect on bystander, normal tissue.

Examples of active targeting fragments include antibodies, growth factors and vitamins. Our scientists have specifically focused on using CobaCyte compounds (analogs of vitamin B12), but we have also used and have certain intellectual property protection for the use of folate and biotin in combination with vitamin B12 which may more effectively target anti-cancer drugs to certain solid tumors.

It has been known for some time that vitamin B12 and folic acid are essential for tumor growth, and as a result, receptors for these vitamins are up-regulated in certain tumors. Vitamin B12 receptor over-expression occurs in breast, lung, leukemic cells, lymphoma cells, bone, thyroid, colon, prostate and brain cancers and some other tumor lines, while folate receptor over-expression occurs in breast, lung, ovarian, endometrial, renal, colon, brain and cancers of myeloid hemotopoietic cells and methotrexate-sensitive tumors.

Intellectual Property

We believe that the value of technology both to us and to our potential corporate partners is established and enhanced by our broad intellectual property positions. Consequently, we have already been issued and seek to obtain additional U.S. and foreign patent protection for products under development and for new discoveries. Patent applications are filed with the U.S. Patent and Trademark Office and, when appropriate, with the Paris Convention's Patent Cooperation Treaty (PCT) Countries (most major countries in Western Europe and the Far East) for our inventions and prospective products.

For our mucoadhesive liquid technology, used in MuGard, two U.S. patents have been issued and two European patents have been granted. One European patent has been issued in 19 European countries the other patent is in nationalization process. Patents have also been granted, or are under review, in several other major territories worldwide. Our mucoadhesive liquid technology patents and applications cover a range of products for a variety of diseases and conditions affecting the oral cavity, including the management of the various phases of mucositis.

We have two patented CobaCyte/CobOral-mediated targeted therapeutic technologies:

- two U.S. patents and several U.S. and worldwide patent applications for the use of vitamin B12 to target the transcobalamin II receptor which is upregulated in numerous diseases including cancer, rheumatoid arthritis, certain neurological and autoimmune disorders; and
- six U.S. patents and two European patents and several U.S. and worldwide patent applications for oral delivery of a wide variety of molecules which cannot otherwise be orally administered, utilizing the active transport mechanism which transports vitamin B12 into the systemic circulation.

Enhanced tumor delivery is achieved by targeting folate receptors, which are upregulated in certain tumor types.

Our patents for the following technologies expire in the years and during the date ranges indicated below:

- MuGard mucoadhesive technology in 2022, and
- CobaCyte/CobOral mediated technology between 2015 and 2019.

We licensed from Licensor issued US Patents #7,879,331, #7,879,332, and #8,293,242, the last of which expires in September 2025. We have issued patents in Europe, China, Australia and pending applications in Canada and India. Patents have also been filed in major patent jurisdictions outside the United States.

In addition to issued patents, we have a number of pending patent applications. If issued, the patents underlying these applications could extend the patent life of our technologies beyond the dates listed above.

We have a strategy of maintaining an ongoing line of patent continuation applications for each major category of patentable carrier and delivery technology. By this approach, we are extending the intellectual property protection of our basic targeting technology and initial agents to cover additional specific carriers and agents, some of which are anticipated to carry the priority dates of the original applications.

Government Regulation

We are subject to extensive regulation by the federal government, principally by the FDA, and, to a lesser extent, by other federal and state agencies as well as comparable agencies in foreign countries where registration of products will be pursued. Although a number of our formulations incorporate extensively tested drug substances, because the resulting formulations make claims of enhanced efficacy and/or improved side effect profiles, they are expected to be classified as new drugs by the FDA.

The Federal Food, Drug and Cosmetic Act and other federal, state and foreign statutes and regulations govern the testing, manufacturing, safety, labeling, storage, shipping and record keeping of our products. The FDA has the authority to approve or not approve new drug applications and inspect research, clinical and manufacturing records and facilities.

Among the requirements for drug approval and testing is that the prospective manufacturer's facilities and methods conform to the FDA's Code of Good Manufacturing Practices regulations, which establishes the minimum requirements for methods to be used in, and the facilities or controls to be used during, the production process. Such facilities are subject to ongoing FDA inspection to insure compliance.

The steps required before a pharmaceutical product may be produced and marketed in the U.S. include preclinical tests, the filing of an Investigational New Drug ("IND") application with the FDA, which must become effective pursuant to FDA regulations before human clinical trials may commence, numerous phases of clinical testing and the FDA approval of a New Drug Application (NDA) prior to commercial sale.

Preclinical tests are conducted in the laboratory, usually involving animals, to evaluate the safety and efficacy of the potential product. The results of preclinical tests are submitted as part of the IND application and are fully reviewed by the FDA prior to granting the sponsor permission to commence clinical trials in humans. All trials are conducted under International Conference on Harmonization, good clinical practice guidelines. All investigator sites and sponsor facilities are subject to FDA inspection to insure compliance. Clinical trials typically involve a three-phase process. Phase 1 the initial clinical evaluations, consists of administering the drug and testing for safety and tolerated dosages and in some indications such as cancer and HIV, as preliminary evidence of efficacy in humans. Phase 2 involves a study to evaluate the effectiveness of the drug for a particular indication and to determine optimal dosage and dose interval and to identify possible adverse side effects and risks in a larger patient group. When a product is found safe, and initial efficacy is established in Phase 2, it is then evaluated in Phase 3 clinical trials. Phase 3 trials consist of expanded multi-location testing for efficacy and safety to evaluate the overall benefit-to-risk index of the investigational drug in relationship to the disease treated. The results of preclinical and human clinical testing are submitted to the FDA in the form of an NDA for approval to commence commercial sales.

The process of forming the requisite testing, data collection, analysis and compilation of an IND and an NDA is labor intensive and costly and may take a protracted time period. In some cases, tests may have to be redone or new tests instituted to comply with FDA requests. Review by the FDA may also take considerable time and there is no guarantee that an NDA will be approved. Therefore, we cannot estimate with any certainty the length of the approval cycle.

We are also governed by other federal, state and local laws of general applicability, such as laws regulating working conditions, employment practices, as well as environmental protection.

License Agreements

On June 6, 2013 we entered into an exclusive license agreement with AMAG related to the commercialization of MuGard in the U.S. and its territories. Under the terms of the licensing agreement, we received an upfront licensing fee of $3.3 million and will receive a tiered, double-digit royalty on net sales of MuGard in the licensed territories. AMAG also purchased our existing MuGard inventory. The $3.3 million license fee is accounted for as deferred revenue and is recognized over ten years which is the life of the license agreement. The license term expires June 6, 2023. The license can also terminate in the event of breach by either us or AMAG or by AMAG at anytime with 180 days prior notice of termination.

On March 11, 2014, we announced we had entered into an exclusive license agreement with Hanmi related to MuGard commercialization in South Korea. Under the terms of the agreement, we received an upfront licensing fee and double digit royalties on sales of MuGard in the licensed territory. The license term expires February 26, 2024. The license can also terminate in the event of breach or by Hanmi at anytime with 180 days prior notice of termination.

On August 7, 2014, we entered into an exclusive license agreement with Norgine, a leading independent European specialty pharmaceutical company, for the commercialization of MuGard in Europe. Under the terms of the license agreement, we could receive up to $10 million in milestone payments and an escalating double digit royalty on the net sales of the oral mucositis product, MuGard, in the licensed territories. Norgine will

develop, manufacture, and commercialize MuGard in the European Union, Switzerland, Norway, Iceland and Lichtenstein. Norgine anticipates launching MuGard in 2015.

On September 22, 2014, we entered into an exclusive, world-wide, licensing agreement with Licensor to obtain rights to utilize and to sub-license to other pharmaceuticals firms, its recently patented methods for the extraction of therapeutic biologics from human plasma.

Under the terms of the licensing agreement, we will pay a license fee of $5 million in a combination of cash and common stock subject to the achievement of certain events, a regulatory approval milestone payment in common shares upon the first FDA regulatory approval of a drug derived from the Licensor's proprietary SDF process, and a tiered royalty on annual net sales of plasma fractions produced with Licensor's proprietary SDF process.

Licensor was founded to develop superior high-yield technology to extract a wide range of therapeutically useful proteins from human blood plasma. We believe that Licensor's proprietary fractionation process is expected to significantly enhance yields of key value blood proteins, including alpha-1 antitrypsin ("AAT"), expanding market opportunities, while greatly enhancing margins. The Company obtained rights to utilize and sub-license to other pharmaceutical firms the recently patented improved methods for the extraction of therapeutic biologics from human plasma. We believe that Licensor's lead product, ATT, offers a low-risk, high revenue, short time-to-market respiratory product for treatment of inherited COPD (pulmonary emphysema), among other genetic AAT deficiencies. Additionally, the ability to extract several additional therapeutically useful and important proteins, due to the process being less destructive than historical fractionation processes, may enable us to seek new therapeutic applications and address high-value-added orphan indications.

Competition

The pharmaceutical and biotechnology industry is characterized by intense competition, rapid product development and technological change. Competition is intense among manufacturers of prescription pharmaceuticals and other product areas where we may develop and market products in the future. Most of our potential competitors are large, well established pharmaceutical, chemical or healthcare companies with considerably greater financial, marketing, sales and technical resources than are available to us. Additionally, many of our potential competitors have research and development capabilities that may allow such competitors to develop new or improved products that may compete with our product lines. Our potential products could be rendered obsolete or made uneconomical by the development of new products to treat the conditions to be addressed by our developments, technological advances affecting the cost of production, or marketing or pricing actions by one or more of our potential competitors. Our business, financial condition and results of operation could be materially adversely affected by any one or more of such developments. We cannot assure you that we will be able to compete successfully against current or future competitors or that competition will not have a material adverse effect on our business, financial condition and results of operations. Academic institutions, governmental agencies and other public and private research organizations are also conducting research activities and seeking patent protection and may commercialize products on their own or with the assistance of major health care companies in areas where we are developing product candidates. We are aware of certain development projects for products to treat or prevent certain diseases targeted by us, and the existence of these potential products or other products or treatments of which we are not aware, or products or treatments that may be developed in the future, may adversely affect the marketability of products developed by us.

In the area of advanced drug delivery, which is the focus of our early stage research and development activities, a number of companies are developing or evaluating enhanced drug delivery systems. We expect that technological developments will occur at a rapid rate and that competition is likely to intensify as various alternative delivery system technologies achieve similar if not identical advantages.

Even if our products are fully developed and receive required regulatory approval, of which there can be no assurance, we believe that our products can only compete successfully if marketed by a company having expertise and a strong presence in the therapeutic area. Consequently, we do not currently plan to establish an internal marketing organization. By forming strategic alliances with major and regional pharmaceutical

companies, management believes that our development risks should be minimized and that the technology potentially could be more rapidly developed and successfully introduced into the marketplace.

ActoGeniX N.V., Alder Biopharmaceuticals, Inc., Applied Protein Sciences, LLC, Avaxia Biologics, Inc, BioAlliance Pharma S.A., BMG Pharma s.r.l., Camurus AB, DARA BioSciences, Inc. EUSA Pharma, Galera Therapeutics, Inc. Maya Biotech Ltd., NephRx, Piramal Healthcare Ltd., Soligenix, Inc. and Synedgen are developing products to treat mucositis that may compete with our mucoadhesive liquid technology. Products which are marketed to treat mucositis include Caphosol by EUSA Pharma, Gelclair by DARA BioSciences, Inc., Episil by Camurus AB, and Kepivance by Biovitrum.

Companies working on therapies and formulations that may be competitive with our vitamin mediated drug delivery system are Bristol-Myers Squibb, Centocor (acquired by Johnson & Johnson), Endocyte, GlaxoSmithKline, Imclone and Xoma which are developing targeted monoclonal antibody therapy.

BioDelivery Sciences International, Biocon Limited, Biodel, Inc. Biovail Corporation, Diasome Pharmaceuticals, Depomed Inc., Emisphere Technologies, Inc., Eurand, Flamel Technologies, Merrion Pharmaceuticals, OraMed and Xenoport are developing products which compete with our oral drug delivery system.

The plasma therapeutics industry is highly competitive and driven by several large competitors including Baxter International, Inc. (“Baxter”), CSL Behring (“CSL”) and Grifols SA (“Grifols”). Each of these groups produce AAT under the name of the following, Baxter (Aralast, license of Glassia from Kamada), CSL (Zemairia) and Grifols (Prolastin) Other regional competitors include, but are not limited to, BPL, Kedrion, LFB Group SA, and Octapharma AG. We face competition from both US based and international based producers of plasma products who may have greater access to capital, production facilities and resources for both research and development as well as supplies of plasma.

Furthermore, plasma derived products also face competition from products that are not derived from plasma, and other courses of treatment.

Many of these competitors have greater financial and other resources, including larger research and development, marketing and manufacturing organizations. As a result, our competitors may successfully develop technologies and drugs that are more effective or less costly than any that we are developing or which would render our technology and future products obsolete and noncompetitive.

In addition, some of our competitors have greater experience than we do in conducting preclinical and clinical trials and obtaining FDA and other regulatory approvals. Accordingly, our competitors may succeed in obtaining FDA or other regulatory approvals for drug candidates more rapidly than we do. Companies that complete clinical trials, obtain required regulatory agency approvals and commence commercial sale of their drugs before their competitors may achieve a significant competitive advantage. Drugs resulting from our research and development efforts or from our joint efforts with collaborative partners therefore may not be commercially competitive with our competitors' existing products or products under development.

Suppliers

Some materials used by us are specialized. We obtain materials from several suppliers based in different countries around the world. If materials are unavailable from one supplier we generally have alternate suppliers available.

Employees

As of October 23, 2014, we had five full-time employees. We have never experienced employment-related work stoppages and consider that we maintain good relations with our personnel.

Property

We maintain approximately 2,000 square feet of business office suites for administrative offices in New York, New York. We have a lease agreement for the facility, which terminates in February 2015. Our plans are to renew our lease. We closed our Dallas laboratory in October 2013.

We believe that our existing properties are suitable for the conduct of our business and adequate to meet our present needs.

Legal Proceedings

Alan Schmidt, a former shareholder of Genaera Corporation ("Genaera"), and a former unitholder of the Genaera Liquidating Trust (the "Trust"), filed a purported class action in the United States District Court for the Eastern District of Pennsylvania in June 2012. The lawsuit named thirty defendants, including PlasmaTech, MacroChem Corporation, which was acquired by us in February 2009, Jeffrey Davis, the then CEO and a director of PlasmaTech, and Steven H. Rouhandeh and Mark Alvino, both of whom are our directors (the "PlasmaTech Defendants"). With respect to the PlasmaTech Defendants, the complaint alleged direct and derivative claims asserting that directors of Genaera and the Trustee of the Trust breached their fiduciary duties to Genaera, Genaera's shareholders and the Trust's unitholders in connection with the licensing and disposition of certain assets, aided and abetted by numerous defendants including the PlasmaTech Defendants. Schmidt seeks monetary damages, disgorgement of any distributions received from the Trust, rescission of sales made by the Trust, attorneys' and expert fees, and costs. On December 19, 2012, Schmidt filed an amended complaint which asserted substantially the same allegations with respect to the PlasmaTech Defendants. On February 4, 2013, the PlasmaTech Defendants moved to dismiss all claims asserted against them. On August 12, 2013 the court granted the PlasmaTech Defendants' motions to dismiss and entered judgment in favor of the PlasmaTech Defendants on all claims. On August 26, 2013, Schmidt filed a motion for reconsideration. On September 10, 2013 Schmidt filed a Notice of Appeal with the District Court. On September 17, 2013, Schmidt filed his appeal with the U.S. Third Circuit Court of Appeals. On September 25, 2013, the District Court denied Schmidt's motion for reconsideration. On October 17, 2013, Schmidt amended his appeal to include the District court's denial of his motion for reconsideration. On March 20, 2014, Appellant filed their Brief and Joint Appendix. On May 22, 2014, Appellees filed their Oppositions to Appellant's Brief. On May 29, 2014, the Appellant was granted an extension of time until June 23, 2014 to file their Reply brief and filed his Reply brief on that date. The Third Circuit held oral argument on September 12, 2014. On October 17, 2014, in a split decision, the Third Circuit reversed the District Court's decision holding, among other things, that the District Court's determination that the Amended Complaint was time-barred on statute of limitations grounds was premature. The Third Circuit did not rule upon any of the other grounds for dismissal advanced in the District Court and on appeal. The Third Circuit remanded the case to the District Court for further proceedings. We intend to contest the claims vigorously.

We are not currently subject to any other material pending legal proceedings.

MANAGEMENT

The following table sets forth our directors and executive officers along with their respective ages and positions as of October 23, 2014:

Name	Age	Title
Steven H. Rouhandeh	57	Chairman of the Board*
Scott Schorer	46	Chief Executive Officer
Harrison Wehner	50	President and Chief Financial Officer
Jeffrey B. Davis	51	Director*
Mark J. Ahn, Ph.D.	51	Director
Mark J. Alvino	46	Director
Stephen B. Howell, M.D.	69	Director

* Appointed to the board of directors by SCO Capital Partners LLC ("SCO") pursuant to a Director Designation Agreement between SCO and PlasmaTech.

None of our directors, officers, affiliates or promoters has, within the past ten years, filed any bankruptcy petition, been convicted in or been the subject of any pending criminal proceedings, or is any such person the subject or any order, judgment or decree involving the violation of any state or federal securities laws.

The following is a brief account of the business experience during the past five years of each of our directors and executive officers, including principal occupations and employment during that period and the name and principal business of any corporation or other organization in which such occupation and employment were carried on.

Mr. Steven H. Rouhandeh became a director and Chairman of the Board on March 4, 2008. He has been Chief Investment Officer of SCO Capital Partners, a group of New York based life sciences funds since 1997. He possesses a diverse background in financial services that includes experience in asset management, corporate finance, investment banking and law. He has been active throughout recent years as an executive in venture capital and as a founder of several companies in the biotech field. His experience also includes positions as Managing Director of a private equity group at Metzler Bank, a private European investment firm and Vice President, Investment Banking at Deutsche Morgan Grenfell. Mr. Rouhandeh was also a corporate attorney at New York City-based Cravath, Swaine & Moore. Mr. Rouhandeh holds a J.D., from Harvard Law School, Harvard University and B.A. Government, Economics, from Southern Illinois University. Mr. Rouhandeh's qualifications to serve our Board include his institutional knowledge of our Company and his extensive domestic and international financial experience in the healthcare industry.

Mr. Scott Schorer became Chief Executive Officer on September 19, 2014. Mr. Schorer previously was Managing Director with Licensor since June 1, 2014. He has served over 18 years in a variety of senior management and board positions, including as CEO and President, and has experience in all aspects of operations including research and development, intellectual property, manufacturing, sales and marketing. Additionally, Mr. Schorer has extensive experience as advisor to operating companies, venture capital firms and private equity firms. Previously, he was President, Americas, of Systagenix Wound Management from February 2009 to May 2010, was President & CEO of Innovative Spinal Technologies from January 2003 to February 2009, and was Co-Founder, President & CEO of CentriMed. Mr. Schorer served with distinction in the US Army, 82nd Airborne, and holds a B.E and B.A. from Dartmouth College and Thayer School of Engineering.

Mr. Harrison Wehner became President and Chief Financial Officer on September 19, 2014. Mr. Wehner previously was a Managing Director with Licensor since June 1, 2014. He has over 20 years experience in investment banking advising on equity and debt finance and mergers and acquisitions advisory assignments. Previously, Mr. Wehner held various senior banking roles at Canaccord Genuity from October 2012 to December 2013, with CitiGroup from January 2005 to December 2011, and UBS where he worked on a variety of banking transactions in the healthcare sector, including advisory and transactional experience in the

blood fractionation business. Mr. Wehner holds a BA from The College of William and Mary, and an MBA from the Ross School of Business at the University of Michigan.

Mr. Jeffrey B. Davis became a director in March 2006. Mr. Davis was our Chief Executive Officer from December 26, 2007 to September 19, 2014. Mr. Davis was Acting Chief Financial Officer, Treasurer and Secretary from November 1, 2013 to September 19, 2014. From 1996 to 2007, Mr. Davis served in a variety of senior investment banking and management positions, and in senior management at a publicly traded healthcare technology company. Prior to that, Mr. Davis was an investment banker with various Deutsche Bank banking organizations, both in the U.S. and Europe. Mr. Davis also served in senior marketing and product management positions at AT&T Bell Laboratories, where he was also a member of the technical staff, and at Philips Medical Systems North America. Mr. Davis is currently on the board of Uluru, Inc., a public biotechnology company. Mr. Davis holds a B.S. in biomedical engineering from Boston University and an M.B.A. degree from the Wharton School, University of Pennsylvania. Mr. Davis' qualifications to serve on our Board include his current experience as our CEO leading the day to day operations of our Company, his prior experience serving our Board since 2006, as well as his extensive domestic and international financial experience in the healthcare industry.

Mark J. Ahn, Ph.D. became a director in September 2006 and is chairman of the Compensation Committee. Dr. Ahn is also a member of the Audit Committee and the Nominating and Corporate Governance Committee. Dr. Ahn was President and Chief Executive Officer since 2011 and a director since 2007 of Galena Biopharma, Inc. until August 2014; and adjunct Professor, Biosciences at Creighton University. He brings more than 21 years of experience in the biopharmaceutical industry. Prior to joining Galena, Dr. Ahn was Principal at Pukana Partners, Ltd. which provides strategic consulting to life science companies; and Associate Professor, Global Management at Atkinson Graduate School of Management, Willamette University. He previously served as Professor and Chair, Science & Technology Management, Victoria University at Wellington, New Zealand. Dr. Ahn was also founder, President, and Chief Executive Officer of Hana Biosciences. Prior to joining Hana, he served as Vice President, Hematology and corporate officer at Genentech, Inc., and held positions of increasing responsibility at Amgen and Bristol-Myers Squibb. Dr. Ahn also serves on public and venture capital-backed board of directors for Galena, Mesynthes and ScribesSTAT. Dr. Ahn is the author of over 50 peer reviewed journal articles and books. Dr. Ahn received a B.A. and M.B.A. from Chaminade University; and M.A. from Victoria University. He was a graduate fellow in Economics at Essex University, and obtained a Ph.D. from the University of South Australia. Dr. Ahn is a Henry Crown Fellow at the Aspen Institute. Dr. Ahn's qualifications to serve on our Board include his leadership skills and his experience in the areas of financial management and business strategy in the biopharmaceutical field.

Mr. Mark J. Alvino became a director in March 2006 initially as a designee of SCO Capital Partners LLC and is chairman of the Audit Committee. He is no longer a designee of SCO Capital Partners LLC. Mr. Alvino is also a member of the Nominating and Corporate Governance Committee. Mr. Alvino is currently leading the LifeSciences efforts of Bradley Woods, & Co. Ltd. and has been in this position since 2013. Mr. Alvino was Managing Director for Griffin Securities from 2007 to 2013. Mr. Alvino was Managing Director for SCO Financial Group LLC from 2002 to 2007. Mr. Alvino was a member of the board of directors of MacroChem Corporation from 2007 until February 2009. He previously worked at Feinstein Kean Healthcare, an Ogilvy Public Relations Worldwide Company. There he was Senior Vice President, responsible for managing both investor and corporate communications programs for many private and public companies and acted as senior counsel throughout the agency's network of offices. Prior to working at FKH, Mr. Alvino served as Vice President of Investor Relations and managed the New York Office of Allen & Caron, Inc., an investor relations agency. His base of clients included medical devices, biotechnology, and e-healthcare companies. Mr. Alvino also spent several years working with Wall Street brokerages including Ladenburg, Thalman & Co. and Martin Simpson & Co. Mr. Alvino's qualifications to serve our Board include his leadership skills and his experience in the areas of financial management and business strategy in the biopharmaceutical field.

Stephen B. Howell, M.D. became a director in 1996. Dr. Howell is a member of the Compensation Committee and Audit Committee of the Board. Dr. Howell has been Professor of Medicine at the University of California, San Diego since 1977, and director of the Cancer Pharmacology Program of the UCSD Cancer Center since 2006. Dr. Howell is a recipient of the Milken Foundation prize for his contributions to the field

of cancer chemotherapy. He has served on the National Research Council of the American Cancer Society and is on the editorial boards of multiple medical journals. Dr. Howell founded DepoTech, Inc. and served as a member of its board of directors from 1989 to 1999. Dr. Howell served on the board of directors of Matrix Pharmaceuticals from 2000 to 2002. Dr. Howell received his A.B. at the University of Chicago and his M.D. from Harvard Medical School. Dr. Howell's qualifications to serve our Board include his technical expertise and strong commitment to promoting and advancing innovation in the healthcare industry. In addition, Dr. Howell's qualifications include experience as a medical doctor in oncology, his experience as director of several biotech companies and his executive skills and experience as a founder of a biotech company.

Committees of the Board of Directors

The Board has an Audit Committee, a Compensation Committee and a Nominating and Corporate Governance Committee. Each of the committees of the Board acts pursuant to a separate written charter adopted by the Board.

The Audit Committee is currently comprised of Mr. Mark J. Alvino (chairman), Dr. Mark J. Ahn, Ph.D and Stephen B. Howell. The Board has determined that Mr. Alvino is an "audit committee financial expert," under applicable SEC rules and regulations. The Audit Committee's responsibilities and duties are, among other things, to engage the independent auditors, review the audit fees, supervise matters relating to audit functions and review and set internal policies and procedure regarding audits, accounting and other financial controls. The Board has determined that Dr. Ahn, Mr. Alvino and Mr. Howell are independent under applicable SEC and Nasdaq rules and regulations. The Audit Committee acts pursuant to a written charter which is available on our website at *www.plasmatechbio.com*.

The Compensation Committee is currently comprised of Dr. Mark J. Ahn, Ph.D. (chairman), Dr. Stephen B. Howell and Mark J. Alvino. Dr. Ahn, Dr. Howell and Mr. Alvino are non-employee directors under applicable SEC rules. The Board has determined that Dr. Ahn, Dr. Howell and Mr. Alvino are independent under applicable Nasdaq rules and regulations. The Compensation Committee acts pursuant to a written charter which is available on our website at *www.plasmatechbio.com*.

The Nominating and Corporate Governance Committee is currently comprised of Dr. Mark Ahn, Ph.D. and Mr. Mark J. Alvino. The Board has determined that Dr. Mark Ahn and Mr. Alvino are independent under applicable SEC and Nasdaq rules and regulations. The Nominating and Corporate Governance Committee is responsible for, among other things, considering potential Board members, making recommendations to the full Board as to nominees for election to the Board, assessing the effectiveness of the Board and implementing our corporate governance guidelines. The Nominating and Corporate Governance Committee acts pursuant to a written charter which is available on our website at *www.plasmatechbio.com*.

Director Independence

The Board has determined that each of Dr. Ahn, Mr. Alvino and Dr. Howell are independent under applicable Nasdaq rules. Based on the fully-diluted Common Stock ownership of SCO Capital Partners LLC and its affiliates, the Board has determined we are a "Controlled Company" under applicable Nasdaq rules and regulations and therefore under applicable Nasdaq rules and regulations, we are not required to comply with certain director independence requirements.

Board Leadership Structure

The Board has no set policy with respect to the separation of the offices of Chairman and the Chief Executive Officer. Currently, Steven H. Rouhandeh serves as our Chairman and Scott Schorer serves as our Chief Executive Officer. There are currently no lead independent directors serving on the Board.

Our Board leadership structure is commonly utilized by other public companies in the United States, and we believe that it is effective for us. This leadership structure is appropriate for us given the size and scope of our business, the experience and active involvement of our independent directors, and our corporate governance practices, which include regular communication with and interaction between and among the Chief Executive Officer and the independent directors. Of the five members of our Board, three are independent from management. At this time, we believe that having a separate Chairman and Chief Executive Officer and independent chairs for each of our Board committees provides the best form of leadership for us.

Board of Director's Role in Risk Oversight

The Board is responsible for overseeing our management and operations, including overseeing our risk assessment and risk management functions. We believe that our directors provide effective oversight of risk management functions. On a regular basis we perform a risk review wherein the management team evaluates the risks we expect to face in the upcoming year and over a longer term horizon. From this risk assessment plans are developed to deal with the risks identified. The results of this risk assessment are provided to the Board for their consideration and review. In addition members of our management periodically present to the Board the strategies, issues and plans for the areas of our business for which they are responsible. While the Board oversees risk management, our management is responsible for day-to-day risk management processes. Additionally, the Board requires that management raise exceptional issues to the Board. We believe this division of responsibilities is the most effective approach for addressing the risks we face and that the Board leadership structure supports this approach.

Code of Business Conduct and Ethics

We have adopted a written Code of Business Conduct and Ethics that applies to all of our directors, officers and employees. A copy of our Code of Business Conduct and Ethics is available on our website at *www.plasmatechbio.com* and print copies are available to any stockholder that requests a copy. Any amendment to the Code of Business Conduct and Ethics or any waiver of the Code of Business Conduct and Ethics will be disclosed on our website at *www.plasmatechbio.com* promptly following the date of such amendment or waiver.

EXECUTIVE AND DIRECTOR COMPENSATION

The following table sets forth the aggregate compensation paid to our CEO and our next two most highly paid executives whose aggregate salary and bonus exceeded $100,000 for services rendered in all capacities for the fiscal years ended December 31, 2013 and 2012.

Summary Compensation Table

Name and Principal Position	Year	Salary ($)[1]	Stock Awards ($)[2]	Option Awards ($)[3]	All Other Compensation[4]	Total ($)
Jeffrey B. Davis[5]	2013	$ 503,000	$ —	$ —	$ 2,000	$ 505,000
Former Chief Executive Officer	2012	163,000	—	—	2,000	165,000
David P. Nowotnik, Ph.D.[6]	2013	$ 129,000	$ 81,000	$ 25,000	$ 2,000	$ 237,000
Senior Vice President Research and Development	2012	203,000	4,000	40,000	2,000	249,000
Frank S. Jacobucci[7]	2013	$ 124,000	$ 57,000	$ 131,000	$ 32,000	$ 344,000
Vice President, Sales and Marketing	2012	274,000	15,000	88,000	2,000	379,000

(1) Includes amounts deferred under our 401(k) Plan.

(2) Represents expense recognized in 2013 and 2012 for the fair value of Common Stock vested. The fair value used is the stock price on the date the Common Stock is vested.

(3) The value listed in the above table represents the fair value of the options granted in prior years that was recognized in 2013 and 2012 under ASC 718. Fair value is calculated as of the grant date using a Black-Scholes option-pricing model. The determination of the fair value of share-based payment awards made on the date of grant is affected by our stock price as well as assumptions regarding a number of complex and subjective variables. Our assumptions in determining fair value are described in note 11 to our audited financial statements for the year ended December 31, 2013, included in this prospectus.

(4) Amounts reported for fiscal years 2013 and 2012 consist of: (i) termination fees, and (ii) amounts we paid for group term life insurance for each named individual.

(5) Includes 2013 salary of $271,000 and 2012 accrued salary paid in 2013 of $132,000.

(6) Dr. Nowotnik was our employee until October 31, 2013 and is now a consultant to us.

(7) Mr. Jacobucci was our employee until June 14, 2013 and was paid termination payments of $30,000 and granted 1,000 shares of our stock.

Outstanding Equity Awards at Fiscal Year-End

The following table summarizes the aggregate number of option awards held by our named executive officers at December 31, 2013. There were no outstanding stock awards held by any such officers at December 31, 2013:

Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#)	Option Exercise Price ($)[1]	Option Expiration Date
Jeffrey B. Davis[2]	500	—	—	$ 31.25	08/17/16
Frank S. Jacobucci[3]	2,000	—	—	11.50	06/15/14
	1,000	—		30.50	06/15/14
	1,000	—		113.50	06/15/14
	1,800	—		151.00	06/15/14

(1) On December 31, 2013, the closing price of our Common Stock as quoted on the OTC QB was $12.50 per share.

(2) Mr. Davis' employment agreement started January 4, 2008. The options included in this table were granted to him as a director before he became CEO.

(3) Mr. Jacobucci is no longer an employee since June 2014.

Compensation Pursuant to Agreements and Plans

Employment Agreements

Chief Executive Officer

We are a party to an employment letter agreement with Scott Schorer who was named by the Board as our Chief Executive Officer as of September 19, 2014. Pursuant to the terms of his employment agreement, Mr. Schorer is entitled to be paid an annual base salary of $350,000 subject to annual increases each year, at the discretion of the Board. He is entitled to a merit bonus up to 30% of the base salary at the discretion of the Compensation Committee of the Board. Mr. Schorer was awarded stock options to purchase 80,000 shares of our Common Stock. Mr. Schorer is entitled to similar employee benefits as our other executive officers. The employee agreement is effective September 19, 2014 and compensation and employee benefits will accrue until the closing of the planned offering.

President and Chief Financial Officer

We are a party to an employment letter agreement with Harrison G. Wehner, III who was named by the Board as our President and Chief Financial Officer as of September 19, 2014. Pursuant to the terms of his employment agreement, Mr. Wehner is entitled to be paid an annual base salary of $350,000 subject to annual increases each year, at the discretion of the Board. He is entitled to a merit bonus up to 30% of the base salary at the discretion of the Compensation Committee of the Board. Mr. Wehner was awarded stock options to purchase 80,000 shares of our Common Stock. Mr. Wehner is entitled to similar employee benefits as our other executive officers. The employee agreement is effective September 19, 2014 and compensation and employee benefits will accrue until the closing of the planned offering.

Former President and Chief Executive Officer

We were a party to an employment agreement, with Jeffrey B. Davis, who was named by the Board as our Chief Executive Officer, effective from December 26, 2007 until September 19, 2014. Mr. Davis' employment agreement, dated January 4, 2008, was amended April 9, 2008 and was renewed automatically every year. Pursuant to the terms of his employment agreement, as amended, Mr. Davis was entitled to be paid an annual salary of $325,000 in 2013 and $325,000 in 2012. Under this agreement, Mr. Davis was currently entitled to receive an annual base salary of $325,000. Mr. Davis has not taken a salary since November 1, 2013. Mr. Davis was previously awarded stock options to purchase 500 shares of our Common Stock prior to becoming CEO and on March 17, 2014 was awarded stock options to purchase 40,000 shares of our Common Stock. Mr. Davis was entitled to similar employee benefits as our other executive officers.

Compensation of Directors

Director Compensation Table — 2013

The table below represents the compensation paid to our outside directors during the year ended December 31, 2013:

Name	Fees earned or Paid in Cash ($)	Stock Awards ($)	Option Awards ($)[1]	All Other Compensation ($)	Total ($)
Mark J. Ahn, Ph.D.	16,000	—	17,000	—	33,000[2]
Mark J. Alvino	16,000	—	17,000	—	33,000[3]
Stephen B. Howell, MD	16,000	—	17,000	—	33,000[4]

(1) The value listed represents the fair value of the options recognized as expense under ASC 718 during 2012. Fair value is calculated as of the grant date using a Black-Scholes ("Black-Scholes") option-pricing model. The determination of the fair value of share-based payment awards made on the date of grant is affected by our stock price as well as assumptions regarding a number of complex and subjective variables. Our assumptions in determining fair value are described in note 11 to our audited financial statements for the year ended December 31, 2013, included in this prospectus.

(2) Represents expense recognized in 2013 in respect of the fair value of options to purchase 2,000 shares of our Common Stock based on a grant date, December 11, 2012. Dr. Ahn had options to purchase 5,320 shares of our Common Stock at December 31, 2013.

(3) Represents expense recognized in 2013 in respect of the fair value of options to purchase 2,000 shares of our Common Stock based on a grant date, December 11, 2012. Mr. Alvino had options to purchase 2,120 shares of our Common Stock at December 31, 2013.

(4) Represents expense recognized in 2013 in respect of the fair value of options to purchase 2,000 shares of our Common Stock based on a grant date, December 11, 2012. Dr. Howell had options to purchase 5,444 shares of our Common Stock at December 31, 2013.

Compensation of Directors

Each director who is not also an PlasmaTech employee receives a quarterly fee of $3,000 and also receives $1,000 per quarter in aggregate for all the committees of which he is a member. Each director will have $2,000 deducted from his fee if the director misses more than one Board meeting, and $1,000 deducted per committee meeting not attended. In addition, we reimbursed each director, whether an employee or not, the expense of attending Board and committee meetings. Each non-employee director is also entitled to receive options to purchase 500 shares of Common Stock when he is first appointed as a director.

During 2012, each of our directors elected to receive options to purchase 500 shares of Common Stock in lieu of their quarterly cash fees. For each committee of which a director was a member, he received options to purchase 200 shares of our Common Stock. Each director also received a 300 share stock grant. In December 2012 each of our independent directors elected to receive options to purchase 2,000 shares of Common Stock. No stock or stock options were granted in 2013.

PRINCIPAL STOCKHOLDERS

Based solely upon information made available to us, the following table sets forth certain information with respect to the beneficial ownership of our Common Stock as of October 23, 2014 by (i) each person who is known by us to beneficially own more than five percent of any class of our capital stock; (ii) each of our directors; (iii) each of our named executive officers; and (iv) all our executive officers and directors as a group. Beneficial ownership as reported in the following table has been determined in accordance with Rule 13d-3 under the Securities Exchange Act of 1934, as amended. The address of each holder listed below, except as otherwise indicated, is c/o PlasmaTech Biopharmaceuticals, Inc., 4848 Lemmon Avenue, Suite 517, Dallas, Texas 75219.

Name and Address of Beneficial Owner	Amount and Nature of Beneficial Ownership Common Stock[1]	Percent of Common Stock[2]	Amount and Nature of Beneficial Ownership Preferred Stock (on an as-if-converted basis)	Amount and Nature of Beneficial Ownership All Classes of Stock[1]	Percent of All Classes[3]
Steven H. Rouhandeh[4]	20,000	3.6	—	20,000	*
Jeffrey B. Davis[5]	10,647	1.9	—	10,647	*
Mark J. Ahn, Ph. D.[6]	8,320	1.5	—	8,320	*
Mark J. Alvino[7]	4,620	*	—	4,620	*
Stephen B. Howell, M.D.[8]	8,389	1.5	—	8,389	*
SCO Capital Partners LLC, SCO Capital Partners LP, and Beach Capital LLC[9]	548,463	54.0%	2,868,758	3,417,221	71.5%
Larry N. Feinberg[10]	9,873	1.8%	508,501	518,374	12.1%
Lake End Capital LLC[11]	17,023	3.1%	276,652	293,675	6.8%
All Directors and Executive Officers as a group (consisting of 7 persons)[12]	51,976	8.8%	—	57,976	1.2%

* — Less than 1%

(1) Includes our outstanding shares of Common Stock held plus all shares of Common Stock issuable upon exercise of options, warrants and other rights exercisable within 60 days of October 23, 2014.

(2) Based upon 536,089 shares of Common Stock issued and outstanding as of October 23, 2014.

(3) Based upon 536,089 shares of Common Stock issued and outstanding as of October 23, 2014 shares of Common Stock issuable upon conversion of the Series A and Series B Preferred Stock.

(4) Steven H. Rouhandeh, our Chairman, is known to beneficially own an aggregate of presently exercisable options for the purchase of 20,000 shares of our Common Stock pursuant to the 2005 Equity Incentive Plan. He is also Chairman of SCO Financial Group LLC. His address is c/o SCO Capital Partners LLC, 1325 Avenue of the Americas, 27 th Floor, New York, NY 10019. SCO Financial Group LLC and affiliates (SCO Capital Partners LP and Beach Capital LLC) are known to beneficially own an aggregate of 69,640 shares of our Common Stock, warrants to purchase an aggregate of 478,823 shares of our Common Stock, 2,468,758 shares of Common Stock issuable upon conversion of Series A Preferred Stock and 400,000 shares of Common Stock issuable upon conversion of Series B Preferred Stock. Mr. Rouhandeh disclaims beneficial ownership of all such shares except to the extent of his pecuniary interest therein.

(5) Mr. Davis, our former Chief Executive Officer, is known to beneficially own an aggregate of 147 shares of our Common Stock and presently exercisable options for the purchase of 10,500 shares of our Common Stock pursuant to the 2005 Equity Incentive Plan. Lake End Capital LLC's address is 33 Tall Oaks Drive, Summit, NJ 07901. Lake End Capital LLC is known to beneficially own an aggregate of 6,713 shares of our Common Stock, warrants to purchase an aggregate of 10,310 shares of our Common Stock and 276,652 shares of Common Stock issuable to them upon conversion of Series A Preferred Stock. Mr. Davis disclaims beneficial ownership of all such shares except to the extent of his pecuniary interest therein.

(6) Dr. Ahn, our Director, is known to beneficially own an aggregate of 500 shares of our Common Stock, presently exercisable options for the purchase of 7,820 shares of our Common Stock pursuant to the 2005 Equity Incentive Plan.

(7) Mr. Alvino, our Director, is known to beneficially own an aggregate of presently exercisable options for the purchase of 4,620 shares of our Common Stock pursuant to the 2005 Equity Incentive Plan.

(8) Dr. Howell is known to beneficially own an aggregate of 495 shares of our Common Stock, presently exercisable options for the purchase of 7,844 shares of our Common Stock pursuant to the 2005 Equity Incentive Plan and 50 shares of our Common Stock pursuant to the 1995 Stock Option Plan.

(9) SCO Capital Partners LLC, SCO Capital Partner LP, Beach Capital LLC and SCO Financial Group's address is 1325 Avenue of the Americas, 27 th Floor, New York, NY 10019. SCO Financial Group LLC and affiliates (SCO Capital Partners LP and Beach Capital LLC) are known to beneficially own an aggregate of 69,640 shares of our Common Stock, warrants to purchase an aggregate of 478,823 shares of our Common Stock, 2,468,758 shares of Common Stock issuable upon conversion of Series A Preferred Stock and 400,000 shares of Common Stock issuable upon conversion of Series B Preferred Stock. Each of Mr. Rouhandeh and Mr. Davis, directors of PlasmaTech and Mr. Rouhandeh and Mr. Davis are executives of SCO Capital Partners LLC and disclaim beneficial ownership of such shares except to the extent of their pecuniary interest therein.

(10) Larry N. Feinberg is a partner in Oracle Partners, L.P. His address is c/o Oracle Partners, L.P., 200 Greenwich Avenue, 3rd Floor, Greenwich, CT 06830. Oracle Partners, L.P. and affiliates (Oracle Institutional Partners, L.P., Oracle Investment Management, Inc., Sam Oracle Fund, Inc. and Mr. Feinberg) are known to beneficially own an aggregate of 9,873 shares of our Common Stock and Series A Preferred Stock which may be converted into an aggregate of 508,501 shares of our Common Stock.

(11) Lake End Capital LLC's address is 33 Tall Oaks Drive, Summit, NJ 07901. Lake End Capital LLC is known to beneficially own an aggregate of 6,713 shares of our Common Stock, warrants to purchase an aggregate of 10,310 shares of our Common Stock and 276,652 shares of Common Stock issuable to them upon conversion of Series A Preferred Stock.

(12) Does not include shares held by SCO Financial Group LLC and affiliates nor Lake End Capital LLC.

CERTAIN TRANSACTIONS

On occasion we may engage in certain related party transactions. Pursuant to our Audit Committee charter, our policy is that all related party transactions are reviewed and approved by the Board of Directors or Audit Committee prior to our entering into any related party transactions.

In the event SCO Capital Partners LLC (SCO) and its affiliates were to convert all of their shares of Series A Preferred Stock, Series B Preferred Stock and exercise all of their warrants, they would own approximately 71.5% of the voting securities of PlasmaTech. During 2013 and 2012, SCO and affiliates charged $300,000 each year in investor relations fees.

In connection with the sale and issuance of Series A Preferred Stock and warrants, we entered into a Director Designation Agreement on November 15, 2007 whereby we agreed to continue SCO's right to designate two individuals to serve on the Board of Directors of PlasmaTech.

On September 10, 2014, we entered into an Unsecured Grid Note, for up to $250,000 with SCO. As of October 23, 2014 we have drawn a total of $250,000. The interest rate is 8% per annum and the maturity date is August 31, 2015 unless a financing of at least $5,000,000 occurs, then the note is required to be paid in full.

On September 10, 2014 we entered into a Share Exchange Agreement for Series B Preferred Stock between us and SCO Capital Partners LLC and Beach Capital LLC whereby we agreed in connection with the consummation of the an offering for the Series B Preferred Stock to be converted into Common Stock. All Series B Preferred Stock dividends payable, interest on Series B Preferred Stock dividends payable and liquidated damages will be converted into Series B Preferred Stock just prior to an offering of at least $10 million. The Series B Preferred Stock, including the shares of Series B Preferred Stock issued upon conversion of all accrued dividends payable, interest on dividends payable and liquidated damages thereon, subject to a liquidation preference, will be exchanged for shares of Common Stock upon consummation of an offering at the offering price pursuant to a Share Exchange Agreement dated September 10, 2014.

DESCRIPTION OF SECURITIES

Our certificate of incorporation authorizes the issuance of 200,000,000 shares of common stock, $.01 par value per share, and 2,000,000 shares of preferred stock, $.01 par value per share, which may be issued in one or more series. Currently, 4,000 shares of preferred stock are designated as Series A Preferred Stock and 1,000 shares of preferred stock are designated as Series B Preferred Stock. As of October 23, 2014 there were 536,089 shares of common stock outstanding and held of record by approximately 6,700 stockholders, and there were 2,893.3617 shares of its Series A Preferred Stock outstanding convertible into shares of common stock and 1,000 shares of its Series B Preferred Stock outstanding convertible into shares of common stock.

Reverse Stock Split

Our Board of Directors and majority shareholders approved an amendment to our certificate of incorporation to effect a reverse stock split of our common stock at a ratio between 1 for 5 and 1 for 50 in order to satisfy requirements for the listing of our common stock on the NASDAQ Capital Market. Our stockholders further authorized the board of directors to determine the ratio at which the reverse stock split would be effected. Our board of directors authorized the ratio of the Reverse Split on October 16, 2014 and to be effective at the opening of business on October 24, 2014. We amended our certificate of incorporation to effect the reverse split at a ratio of 1 for 50 (the "Reverse Split").

Common Stock

Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of stockholders and have the right to vote cumulatively for the election of directors. This means that in the voting at our annual meeting, each stockholder or his proxy, may multiply the number of his shares by the number of directors to be elected then cast the resulting total number of votes for a single nominee, or distribute such votes on the ballot among the nominees as desired. Holders of our common stock are entitled to receive ratably such dividends, if any, as may be declared by our Board of Directors out of funds legally available therefor, subject to any preferential dividend rights for our outstanding preferred stock. Upon our liquidation, dissolution or winding up, the holders of our common stock are entitled to receive ratably our net assets available after the payment of all debts and other liabilities and subject to the prior rights of any of our outstanding preferred stock. Holders of our common stock have no preemptive, subscription, redemption or conversion rights. The rights, preferences and privileges of holders of our common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of our preferred stock which we may designate and issue in the future.

Warrants to be Issued as Part of this Offering

The warrants offered in this offering will be issued in a form filed as an exhibit to the registration statement of which this prospectus is a part. You should review a copy of the form of warrant for a complete description of the terms and conditions applicable to the warrants. The following is a brief summary of the warrants and is subject in all respects to the provisions contained in the form of warrant.

Each warrant represents the right to purchase one share of common stock at an exercise price equal to $, subject to adjustment as described below. Each warrant may be exercised on or after the closing date of this offering through and including the close of business on the fifth anniversary of the date of issuance. Each warrant will have a cashless exercise right in the event that the shares of common stock underlying such warrants are not covered by an effective registration statement at the time of such exercise.

The exercise price and the number of shares underlying the warrants are subject to appropriate adjustment in the event of stock splits, stock dividends on our common stock, stock combinations or similar events affecting our common stock. In addition, in the event we consummate any merger, consolidation, sale or other reorganization event in which our common stock is converted into or exchanged for securities, cash or other property or we consummate a sale of substantially all of our assets, in each case within two years of the date of issuance, and the exercise price of the warrants exceeds the consideration paid in respect of our common stock in connection with such transaction, then in connection with following such event, the holders of the warrants will be entitled to receive an amount equal to the Black-Scholes value of the warrants as of the date of such transaction.

No fractional shares of common stock will be issued in connection with the exercise of a warrant. In lieu of fractional shares, we will pay the holder an amount in cash equal to the fractional amount multiplied by the market value of a share of common stock. A warrant may be transferred by a holder, upon surrender of the warrant, properly endorsed (by the holder executing an assignment in the form attached to the warrant).

The warrants are not exercisable by their holder to the extent (but only to the extent) that such holder or any of its affiliates would beneficially own in excess of 4.99% of our common stock.

Amendments and waivers of the terms of the warrants require the written consent of the holder of such warrant and us.

Preferred Stock

Our Board of Directors is authorized, subject to certain limitations prescribed by law, without further stockholder approval, to issue from time to time up to an aggregate of 2,000,000 shares of preferred stock in one or more series and to fix or alter the designations, preferences, rights and any qualifications, limitations or restrictions of the shares of each such series thereof, including the dividend rights, dividend rates, conversion rights, voting rights and terms of redemption of shares constituting any series or designations of such series. The issuance of preferred stock may have the effect of delaying, deferring or preventing a change of control.

Series A Preferred Stock

Our Board of Directors has designated 4,000 shares of preferred stock as Series A Preferred Stock. The shares of Series A Preferred are convertible at the option of the holder into shares of our common stock at a conversion price of $25.00 per share of common stock.

The Series A Preferred Stock is entitled to a liquidation preference equal to $10,000 per share and is entitled to a dividend of 6% per annum, payable semi-annually in cash or if certain conditions are met, in common stock, at the option of the Company at time of payment. Our ability to pay dividends in shares of common stock is limited by among other things a requirement that (i) there is an effective registration statement on the shares of common stock, issuable to the holders of Series A Preferred Stock, in the 20 day period immediately prior to such dividend or (ii) that such shares of common stock referred to in (i) may be sold without restriction pursuant to Rule 144(k) during the 20 day period immediately prior to such dividend.

We have the right, but not the obligation, to force conversion of all, and not less than all, of the outstanding Series A Preferred Stock into common stock (i) as long as the closing price of our common stock exceeds $350.00 for at least 20 of the 30 consecutive trading days immediately prior to the conversion and the average daily trading volume is greater than 2,000 shares per day for at least 20 of the 30 consecutive trading days immediately prior to such conversion, in each case, immediately prior to the date on which we give notice of such conversion or (ii) if we close a sale of common stock in which the aggregate proceeds are equal to or greater than $10,000,000. Our ability to cause a mandatory conversion is subject to certain other conditions, including that a registration statement covering the common stock issuable upon such mandatory conversion is in effect and able to be used.

The conversion price of the Series A Preferred Stock is subject to a price adjustment upon the issuance of additional shares of common stock for a price below $25.00 per share and equitable adjustment for stock splits, dividends, combinations, reorganizations and the like.

The Series A Preferred Stock will vote together with the common stock on an as-if-converted basis.

Holders of Series A Preferred Stock are entitled to purchase their pro rata share of additional stock issuances in certain future financings.

On October 23, 2014, we filed in Delaware a Certificate of Amendment to Certificate of Designations, Rights and Preferences of Series A Cumulative Convertible Preferred Stock (the “Certificate of Amendment”) to amend the Certificate of Amendment to allow a special mandatory conversion of the Series A Cumulative Convertible Preferred Stock, $0.01 par value per share (the “Series A Preferred Stock”) under certain circumstances, including qualified financings, as described in the Certificate of Amendment.

Series A Preferred Stock and all accrued dividends thereon plus interest will convert into shares of Common Stock upon consummation of this offering.

Series B Preferred Stock

Our Board of Directors has designated 1,000 shares of preferred stock as Series B Preferred Stock. The shares of Series B Preferred are convertible at the option of the holder into shares of our common stock at a conversion price of $25.00 per share of common stock.

The Series B Preferred Stock is entitled to a liquidation preference equal to $10,000 per share and is entitled to a dividend of 12% per annum, payable quarterly in cash or through an increase in stated value, or a combination thereof. The form of dividend payment shall be determined at the election of the Majority Holders. Our ability to pay dividends in shares of common stock is limited by among other things a requirement that (i) if funds are legally available for the payment of cash dividends in cash on by accreting to and increasing the outstanding Stated Value per share of Series B Preferred Stock; or (ii) if funds are not legally available for the payment of cash dividends by accreting to and increasing the outstanding Stated Value per share of Series B Preferred Stock.

We have the right, but not the obligation, to force conversion of all, and not less than all, of the outstanding Series B Preferred Stock into common stock (i) as long as the closing price of our common stock exceeds $250.00 for at least 20 consecutive trading days immediately prior to the conversion and the average daily trading volume is not less than 4,000 shares per day for at least 20 consecutive trading days immediately prior to such conversion, in each case, immediately prior to the date on which we gives notice of such conversion. Our ability to cause a mandatory conversion is subject to certain other conditions, including that a registration statement covering the common stock issuable upon such mandatory conversion is in effect and able to be used.

The conversion price of the Series B Preferred Stock is subject to a price adjustment upon the issuance of additional shares of common stock for a price below $25.00 per share and equitable adjustment for stock splits, dividends, combinations, reorganizations and the like.

The Series B Preferred Stock will vote together with the common stock on an as-if-converted basis.

Holders of Series B Preferred Stock are entitled to purchase their pro rata share of additional stock issuances in certain future financings.

All Series B Preferred Stock dividends payable, interest on Series B Preferred Stock dividends payable and liquidated damages will be converted into Series B Preferred Stock just prior to an offering of at least $10 million. The Series B Preferred Stock, including the shares of Series B Preferred Stock issued upon conversion of all accrued dividends payable, interest on dividends payable and liquidated damages thereon, subject to a liquidation preference, will be exchanged for shares of Common Stock upon consummation of an offering at the offering price pursuant to a Share Exchange Agreement dated September 10, 2014.

Warrants

As of October 23, 2014, warrants for the issuance of 577,756 shares of our common stock were outstanding, all of which are exercisable at a weighted average exercise price of $46.62 per share, all of which are exercisable through various dates expiring between November 4, 2014 and October 24, 2018.

Representative's Warrants

We have agreed to issue to Aegis Capital Corp., the representative of the underwriters in this offering, warrants to purchase up to shares of our common stock (2.5% of the shares of common stock excluding the shares of common stock and warrants sold in the over-allotment and the shares of common stock underlying the warrants sold in the offering and the over-allotment) at a per share exercise price equal to 125% of the public offering price.

Transfer Agent and Registrar

The transfer agent and registrar of our common stock is American Stock Transfer & Trust Company, New York, New York.

Delaware Law and Certain Charter and By-Law Provisions

Certain anti-takeover provisions.

We are subject to the provisions of Section 203 of the General Corporation Law of Delaware. Section 203 prohibits certain publicly held Delaware corporations from engaging in a "business combination" with an "interested stockholder," for a period of three years after the date of the transaction in which the person became an "interested stockholder", unless the business combination is approved in a prescribed manner. A "business combination" includes mergers, asset sales and other transactions resulting in a financial benefit to the interested stockholder. Subject to certain exceptions, an "interested stockholder" is a person or entity who, together with affiliates and associates, owns (or within the preceding three years, did own) 15% or more of the corporation's voting stock. The statute contains provisions enabling a corporation to avoid the statute's restrictions if the stockholders holding a majority of the corporation's voting stock approve our Certificate of Incorporation provides that our directors shall be divided into three classes, with the terms of each class to expire on different years.

In addition, our Certificate of Incorporation, in order to combat "greenmail," provides in general that any direct or indirect purchase by us of any of our voting stock or rights to acquire voting stock known to be beneficially owned by any person or group which holds more than five percent of a class of our voting stock and which has owned the securities being purchased for less than two years must be approved by the affirmative vote of at least two-thirds of the votes entitled to be cast by the holders of voting stock, subject to certain exceptions. The prohibition of "greenmail" may tend to discourage or foreclose certain acquisitions of our securities which might temporarily increase the price of our securities. Discouraging the acquisition of a large block of our securities by an outside party may also have a potential negative effect on takeovers. Parties seeking control of us through large acquisitions of its securities will not be able to resort to "greenmail" should their bid fail, thus making such a bid less attractive to persons seeking to initiate a takeover effort.

We are a party to a Rights Agreement pursuant to which we agree to provide holders of our common stock with the right to buy shares of preferred stock should a party acquire or beneficially own more than 15% of our common stock without first being exempted by us. Such shares of preferred stock will entitle to the holder to certain voting, dividend and liquidation preferences and is designed to discourage take-over attempts not previously approved by our Board of Directors.

Elimination of Monetary Liability for Officers and Directors

Our Certificate of Incorporation incorporates certain provisions permitted under the General Corporation Law of Delaware relating to the liability of directors. The provisions eliminate a director's liability for monetary damages for a breach of fiduciary duty, including gross negligence, except in circumstances involving certain wrongful acts, such as the breach of director's duty of loyalty or acts or omissions, which involve intentional misconduct or a knowing violation of law. These provisions do not eliminate a director's duty of care. Moreover, these provisions do not apply to claims against a Director for certain violations of law, including knowing violations of federal securities law. Our Certificate of Incorporation also contains provisions to indemnify the directors, officers, employees or other agents to the fullest extent permitted by the General Corporation Law of Delaware. We believe that these provisions will assist us in attracting and retaining qualified individual to serve as directors.

Our Certificate of Incorporation also contains provisions to indemnify the directors, officers, employees or other agents to the fullest extent permitted by the General Corporation Law of Delaware. These provisions may have the practical effect in certain cases of eliminating the ability of shareholders to collect monetary damages from directors. We believe that these provisions will assist us in attracting or retaining qualified individuals to serve as our directors.

UNDERWRITING

Aegis Capital Corp. is acting as the sole manager of the offering and as representative of the underwriters, or the Representative. We have entered into an underwriting agreement dated , 2014 with the Representative. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to each underwriter named below and each underwriter named below has severally agreed to purchase, at the public offering price less the underwriting discount set forth on the cover page of this prospectus, the number of shares of common stock and warrants listed next to its name in the following table:

Name of Underwriter	Number of Shares	Number of Warrants
Aegis Capital Corp.		
Total		

The underwriters are committed to purchase all the shares of common stock and warrants offered by us other than those covered by the option to purchase additional shares described below, if they purchase any shares and warrants. The obligations of the underwriters may be terminated upon the occurrence of certain events specified in the underwriting agreement. Furthermore, pursuant to the underwriting agreement, the underwriters' obligations are subject to customary conditions, representations and warranties contained in the underwriting agreement, such as receipt by the underwriters of officers' certificates and legal opinions.

The underwriters are offering the shares and warrants, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel and other conditions specified in the underwriting agreement. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

We have granted the underwriters an over-allotment option. This option, which is exercisable for up to 45 days after the date of this prospectus, permits the underwriters to purchase a maximum of additional shares (15% of the shares sold in this offering) and/or warrants (15% of the warrants sold in this offering) from us to cover over-allotments, if any. If the underwriters exercise all or part of this option, they will purchase shares and/or warrants covered by the option at the public offering price per share or warrant that appears on the cover page of this prospectus, less the underwriting discount. If this option is exercised in full, the total price to the public will be $ and the total net proceeds, before expenses, to us will be $.

We have agreed to indemnify the underwriters against specified liabilities, including liabilities under the Securities Act, and to contribute to payments the underwriters may be required to make in respect thereof.

Discount

The following table shows the public offering price, underwriting discount and proceeds, before expenses, to us. The information assumes either no exercise or full exercise by the underwriters of their over-allotment option.

	Per Share	Per Warrant	Total Without Over-Allotment Option	Total With Over-Allotment Option
Public offering price	$	$	$	
Underwriting discount	$	$	$	
Proceeds, before expenses, to us	$	$	$	

The underwriters propose to offer the shares and warrants offered by us to the public at the public offering price set forth on the cover of this prospectus. In addition, the underwriters may offer some of the shares and warrants to other securities dealers at such price less a concession of $ per share. If all of the shares and warrants offered by us are not sold at the public offering price, the Representative may change the offering price and other selling terms by means of a supplement to this prospectus.

We have paid an expense deposit of $25,000 to the Representative, which will be applied against accountable expenses and reimbursed to us to the extent not actually incurred. The Representative will also be entitled to a

non-accountable expense allowance of $ or 1% of the offering proceeds (excluding the over-allotment option), that will be paid by us in connection with this offering.

We have also agreed to pay the Representative's expenses relating to the offering, estimated to be $.

We estimate that the total expenses of the offering payable by us, excluding the total underwriting discount, will be approximately $.

Discretionary Accounts

The underwriters do not intend to confirm sales of the securities offered hereby to any accounts over which they have discretionary authority.

Lock-Up Agreements

Pursuant to certain "lock-up" agreements, we, our directors and officers and certain holders of 5% or more of our outstanding shares of common stock have agreed, for a period ending 90 days from the date of the final prospectus for the offering, not to (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, encumber, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of our securities or any securities convertible into or exercisable or exchangeable for shares of our common stock owned or acquired on or prior to the closing date of this offering (including any shares of common stock acquired after the closing date of this offering upon the conversion, exercise or exchange of such securities); (2) file or caused to be filed any registration statement relating to the offering of any shares of our capital stock; or (3) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock, whether any such transaction described in clause (1), (2) or (3) above is to be settled by delivery of common stock or such other securities, in cash or otherwise, except for certain exceptions and limitations.

The above restrictions do not apply to (i) shares sold in this offering, (ii) the issuance of stock options, restricted stock or other equity-based compensation awards under any employee benefit or equity incentive plan, (iii) the filing of a registration statement on Form S-8, and (iv) securities issued in connection with a transaction that includes a commercial relationship (including but not limited to joint ventures, marketing or distribution arrangements, option or collaboration agreements or intellectual property license agreements) or any acquisition of assets or not less than a majority or controlling portion of the equity of another entity; provided that the aggregate number of shares or securities issued pursuant to clause (v) does not exceed [10%] of the total number of outstanding shares of common stock immediately following the issuance and sale of the shares in this offering.

Representative's Warrants. We have agreed to issue to the representative warrants to purchase up to a total of shares of common stock (2.5% of the shares of common stock sold in this offering, excluding the over-allotment and the shares of common stock underlying the warrants sold in this offering and the over-allotment). The warrants will be exercisable at any time, and from time to time, in whole or in part, during the four-year period commencing one year from the effective date of the offering, which period shall not extend further than five years from the effective date of the offering in compliance with FINRA Rule 5110(f)(2)(H)(i). The warrants are exercisable at a per share price equal to 125% of the public offering price per share in the offering. The warrants have been deemed compensation by FINRA and are therefore subject to a 180 day lock-up pursuant to Rule 5110(g)(1) of FINRA. The representative (or permitted assignees under Rule 5110(g)(1)) will not sell, transfer, assign, pledge, or hypothecate these warrants or the securities underlying these warrants, nor will they engage in any hedging, short sale, derivative, put, or call transaction that would result in the effective economic disposition of the warrants or the underlying securities for a period of 180 days from the effective date of the offering. In addition, the warrants provide for piggyback registration rights upon request, in certain cases. In addition, the warrants provide for one-time demand registration rights upon request, in certain cases. The demand registration right provided will not be greater than five years from the effective date of the offering in compliance with FINRA Rule 5110(f)(2)(H)(iv). The piggyback registration right provided will not be greater than seven years from the effective date of the offering in compliance with FINRA Rule 5110(f)(2)(H)(v). We will bear all fees and expenses attendant to registering the securities issuable on exercise of the warrants other than underwriting commissions incurred and payable by

the holders. The exercise price and number of shares issuable upon exercise of the warrants may be adjusted in certain circumstances including in the event of a stock dividend, extraordinary cash dividend or our recapitalization, reorganization, merger or consolidation. However, the warrant exercise price or underlying shares will not be adjusted for issuances of shares of common stock at a price below the warrant exercise price.

Right of First Refusal

Subject to certain limited exceptions, until twelve months from the effective date of this offering, the Representative has a right of first refusal to act as sole book-running manager for any public or private equity or public debt offerings in which we or any of our successors or subsidiaries may engage during that period.

Electronic Offer, Sale and Distribution of Securities

A prospectus in electronic format may be made available on the websites maintained by one or more of the underwriters or selling group members, if any, participating in this offering and one or more of the underwriters participating in this offering may distribute prospectuses electronically. The representative may agree to allocate a number of shares and warrants to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the underwriters and selling group members that will make internet distributions on the same basis as other allocations. Other than the prospectus in electronic format, the information on these websites is not part of, nor incorporated by reference into, this prospectus or the registration statement of which this prospectus forms a part, has not been approved or endorsed by us or any underwriter in its capacity as underwriter, and should not be relied upon by investors.

Stabilization

In connection with this offering, the underwriters may engage in stabilizing transactions, over-allotment transactions, syndicate-covering transactions, penalty bids and purchases to cover positions created by short sales.

- Stabilizing transactions permit bids to purchase securities so long as the stabilizing bids do not exceed a specified maximum, and are engaged in for the purpose of preventing or retarding a decline in the market price of the securities while the offering is in progress.
- Over-allotment transactions involve sales by the underwriters of securities in excess of the number of securities the underwriters are obligated to purchase. This creates a syndicate short position which may be either a covered short position or a naked short position. In a covered short position, the number of securities over-allotted by the underwriters is not greater than the number of securities that they may purchase in the over-allotment option. In a naked short position, the number of securities involved is greater than the number of securities in the over-allotment option. The underwriters may close out any short position by exercising their over-allotment option and/or purchasing securities in the open market.
- Syndicate covering transactions involve purchases of securities in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of securities to close out the short position, the underwriters will consider, among other things, the price of securities available for purchase in the open market as compared with the price at which they may purchase securities through exercise of the over-allotment option. If the underwriters sell more securities than could be covered by exercise of the over-allotment option and, therefore, have a naked short position, the position can be closed out only by buying securities in the open market. A naked short position is more likely to be created if the underwriters are concerned that after pricing there could be downward pressure on the price of the securities in the open market that could adversely affect investors who purchase in the offering.
- Penalty bids permit the representative to reclaim a selling concession from a syndicate member when the s securities originally sold by that syndicate member are purchased in stabilizing or syndicate covering transactions to cover syndicate short positions.

These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our securities or preventing or retarding a decline in the market price of

our securities. As a result, the price of our securities in the open market may be higher than it would otherwise be in the absence of these transactions. Neither we nor the underwriters make any representation or prediction as to the effect that the transactions described above may have on the price of our securities. These transactions may be effected on The NASDAQ Capital Market, in the rest of the over-the-counter market or otherwise and, if commenced, may be discontinued at any time.

Passive Market Making

In connection with this offering, underwriters and selling group members may engage in passive market making transactions in our common stock and warrants on The NASDAQ Capital Market in accordance with Rule 103 of Regulation M under the Exchange Act, during a period before the commencement of offers or sales of the shares and extending through the completion of the distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. However, if all independent bids are lowered below the passive market maker's bid, then that bid must then be lowered when specified purchase limits are exceeded.

Other Relationships

Certain of the underwriters and their affiliates may in the future provide various investment banking and other financial services for us and our affiliates for which they may in the future receive customary fees. However, except for the right of first refusal disclosed in this prospectus, we have no present arrangements with any of the underwriters for any further services.

Offer Restrictions Outside the United States

Other than in the United States, no action has been taken by us or the underwriters that would permit a public offering of the securities offered by this prospectus in any jurisdiction where action for that purpose is required. The securities offered by this prospectus may not be offered or sold, directly or indirectly, nor may this prospectus or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus in any jurisdiction in which such an offer or a solicitation is unlawful.

Australia

This prospectus is not a disclosure document under Chapter 6D of the Australian Corporations Act, has not been lodged with the Australian Securities and Investments Commission and does not purport to include the information required of a disclosure document under Chapter 6D of the Australian Corporations Act. Accordingly, (i) the offer of the securities under this prospectus is only made to persons to whom it is lawful to offer the securities without disclosure under Chapter 6D of the Australian Corporations Act under one or more exemptions set out in section 708 of the Australian Corporations Act, (ii) this prospectus is made available in Australia only to those persons as set forth in clause (i) above, and (iii) the offeree must be sent a notice stating in substance that by accepting this offer, the offeree represents that the offeree is such a person as set forth in clause (i) above, and, unless permitted under the Australian Corporations Act, agrees not to sell or offer for sale within Australia any of the securities sold to the offeree within 12 months after its transfer for the offeree under this prospectus.

China

The information in this document does not constitute a public offer of the securities, whether by way of sale or subscription, in the People's Republic of China (excluding, for purposes of this paragraph, Hong Kong Special Administrative Region, Macau Special Administrative Region and Taiwan). The securities may not be offered or sold directly or indirectly in the PRC to legal or natural persons other than directly to "qualified domestic institutional investors."

European Economic Area — Belgium, Luxembourg and Netherlands

The information in this document has been prepared on the basis that all offers of common stock will be made pursuant to an exemption under the Directive 2003/71/EC ("Prospectus Directive"), as implemented in Member States of the European Economic Area (each, a "Relevant Member State"), from the requirement to produce a prospectus for offers of securities.

An offer to the public of common stock has not been made, and may not be made, in a Relevant Member State except pursuant to one of the following exemptions under the Prospectus Directive as implemented in that Relevant Member State:

(a) to legal entities that are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;

(b) to any legal entity that has two or more of (i) an average of at least 250 employees during its last fiscal year; (ii) a total balance sheet of more than €43,000,000 (as shown on its last annual unconsolidated or consolidated financial statements) and (iii) an annual net turnover of more than €50,000,000 (as shown on its last annual unconsolidated or consolidated financial statement);

(c) to fewer than 100 natural or legal persons (other than qualified investors within the meaning of Article 2(1)I of the Prospectus Directive) subject to obtaining the prior consent of the Company or any underwriter for any such offer; or

(d) in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of common stock shall result in a requirement for the publication by the Company of a prospectus pursuant to Article 3 of the Prospectus Directive.

France

This document is not being distributed in the context of a public offering of financial securities (offre au public de titres financiers) in France within the meaning of Article L.411-1 of the French Monetary and Financial Code (Code monétaire et financier) and Articles 211-1 et seq. of the General Regulation of the French Autorité des marchés financiers ("AMF"). The securities have not been offered or sold and will not be offered or sold, directly or indirectly, to the public in France.

This document and any other offering material relating to the securities have not been, and will not be, submitted to the AMF for approval in France and, accordingly, may not be distributed or caused to distributed, directly or indirectly, to the public in France.

Such offers, sales and distributions have been and shall only be made in France to (i) qualified investors (investisseurs qualifiés) acting for their own account, as defined in and in accordance with Articles L.411-2-II-2° and D.411-1 to D.411-3, D.744-1, D.754-1 and D.764-1 of the French Monetary and Financial Code and any implementing regulation and/or (ii) a restricted number of non-qualified investors (cercle restreint d'investisseurs) acting for their own account, as defined in and in accordance with Articles L.411-2-II-2° and D.411-4, D.744-1, D.754-1 and D.764-1 of the French Monetary and Financial Code and any implementing regulation.

Pursuant to Article 211-3 of the General Regulation of the AMF, investors in France are informed that the securities cannot be distributed (directly or indirectly) to the public by the investors otherwise than in accordance with Articles L.411-1, L.411-2, L.412-1 and L.621-8 to L.621-8-3 of the French Monetary and Financial Code.

Ireland

The information in this document does not constitute a prospectus under any Irish laws or regulations and this document has not been filed with or approved by any Irish regulatory authority as the information has not been prepared in the context of a public offering of securities in Ireland within the meaning of the Irish Prospectus (Directive 2003/71/EC) Regulations 2005 (the "Prospectus Regulations"). The securities have not been offered or sold, and will not be offered, sold or delivered directly or indirectly in Ireland by way of a public offering, except to (i) qualified investors as defined in Regulation 2(l) of the Prospectus Regulations and (ii) fewer than 100 natural or legal persons who are not qualified investors.

Israel

The securities offered by this prospectus have not been approved or disapproved by the Israeli Securities Authority, or the ISA, nor have such securities been registered for sale in Israel. The shares may not be offered or sold, directly or indirectly, to the public in Israel, absent the publication of a prospectus. The ISA has not issued permits, approvals or licenses in connection with the offering or publishing the prospectus; nor has it authenticated the details included herein, confirmed their reliability or completeness, or rendered an opinion as to the quality of the securities being offered. Any resale in Israel, directly or indirectly, to the public of the securities offered by this prospectus is subject to restrictions on transferability and must be effected only in compliance with the Israeli securities laws and regulations.

Italy

The offering of the securities in the Republic of Italy has not been authorized by the Italian Securities and Exchange Commission (Commissione Nazionale per le Società e la Borsa, "CONSOB") pursuant to the Italian securities legislation and, accordingly, no offering material relating to the securities may be distributed in Italy and such securities may not be offered or sold in Italy in a public offer within the meaning of Article 1.1(t) of Legislative Decree No. 58 of 24 February 1998 ("Decree No. 58"), other than:

- to Italian qualified investors, as defined in Article 100 of Decree no. 58 by reference to Article 34-ter of CONSOB Regulation no. 11971 of 14 May 1999 ("Regulation no. 1197l") as amended ("Qualified Investors"); and
- in other circumstances that are exempt from the rules on public offer pursuant to Article 100 of Decree No. 58 and Article 34-ter of Regulation No. 11971 as amended.

Any offer, sale or delivery of the securities or distribution of any offer document relating to the securities in Italy (excluding placements where a Qualified Investor solicits an offer from the issuer) under the paragraphs above must be:

- made by investment firms, banks or financial intermediaries permitted to conduct such activities in Italy in accordance with Legislative Decree No. 385 of 1 September 1993 (as amended), Decree No. 58, CONSOB Regulation No. 16190 of 29 October 2007 and any other applicable laws; and
- in compliance with all relevant Italian securities, tax and exchange controls and any other applicable laws.

Any subsequent distribution of the securities in Italy must be made in compliance with the public offer and prospectus requirement rules provided under Decree No. 58 and the Regulation No. 11971 as amended, unless an exception from those rules applies. Failure to comply with such rules may result in the sale of such securities being declared null and void and in the liability of the entity transferring the securities for any damages suffered by the investors.

Japan

The securities have not been and will not be registered under Article 4, paragraph 1 of the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948), as amended (the "FIEL") pursuant to an exemption from the registration requirements applicable to a private placement of securities to Qualified Institutional Investors (as defined in and in accordance with Article 2, paragraph 3 of the FIEL and the regulations promulgated thereunder). Accordingly, the securities may not be offered or sold, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan other than Qualified Institutional Investors. Any Qualified Institutional Investor who acquires securities may not resell them to any person in Japan that is not a Qualified Institutional Investor, and acquisition by any such person of securities is conditional upon the execution of an agreement to that effect.

Portugal

This document is not being distributed in the context of a public offer of financial securities (oferta pública de valores mobiliários) in Portugal, within the meaning of Article 109 of the Portuguese Securities Code (Código dos Valores Mobiliários). The securities have not been offered or sold and will not be offered or sold, directly or indirectly, to the public in Portugal. This document and any other offering material relating to the securities

have not been, and will not be, submitted to the Portuguese Securities Market Commission (Comissão do Mercado de Valores Mobiliários) for approval in Portugal and, accordingly, may not be distributed or caused to distributed, directly or indirectly, to the public in Portugal, other than under circumstances that are deemed not to qualify as a public offer under the Portuguese Securities Code. Such offers, sales and distributions of securities in Portugal are limited to persons who are "qualified investors" (as defined in the Portuguese Securities Code). Only such investors may receive this document and they may not distribute it or the information contained in it to any other person.

Sweden

This document has not been, and will not be, registered with or approved by Finansinspektionen (the Swedish Financial Supervisory Authority). Accordingly, this document may not be made available, nor may the securities be offered for sale in Sweden, other than under circumstances that are deemed not to require a prospectus under the Swedish Financial Instruments Trading Act (1991:980) (Sw. lag (1991:980) om handel med finansiella instrument). Any offering of securities in Sweden is limited to persons who are "qualified investors" (as defined in the Financial Instruments Trading Act). Only such investors may receive this document and they may not distribute it or the information contained in it to any other person.

Switzerland

The securities may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange ("SIX") or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering material relating to the securities may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering material relating to the securities have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of securities will not be supervised by, the Swiss Financial Market Supervisory Authority.

This document is personal to the recipient only and not for general circulation in Switzerland.

United Arab Emirates

Neither this document nor the securities have been approved, disapproved or passed on in any way by the Central Bank of the United Arab Emirates or any other governmental authority in the United Arab Emirates, nor has the Company received authorization or licensing from the Central Bank of the United Arab Emirates or any other governmental authority in the United Arab Emirates to market or sell the securities within the United Arab Emirates. This document does not constitute and may not be used for the purpose of an offer or invitation. No services relating to the securities, including the receipt of applications and/or the allotment or redemption of such shares, may be rendered within the United Arab Emirates by the Company.

No offer or invitation to subscribe for securities is valid or permitted in the Dubai International Financial Centre.

United Kingdom

Neither the information in this document nor any other document relating to the offer has been delivered for approval to the Financial Services Authority in the United Kingdom and no prospectus (within the meaning of section 85 of the Financial Services and Markets Act 2000, as amended ("FSMA")) has been published or is intended to be published in respect of the securities. This document is issued on a confidential basis to "qualified investors" (within the meaning of section 86(7) of FSMA) in the United Kingdom, and the securities may not be offered or sold in the United Kingdom by means of this document, any accompanying letter or any other document, except in circumstances which do not require the publication of a prospectus pursuant to section 86(1) FSMA.

This document should not be distributed, published or reproduced, in whole or in part, nor may its contents be disclosed by recipients to any other person in the United Kingdom.

Any invitation or inducement to engage in investment activity (within the meaning of section 21 of FSMA) received in connection with the issue or sale of the securities has only been communicated or caused to be communicated and will only be communicated or caused to be communicated in the United Kingdom in circumstances in which section 21(1) of FSMA does not apply to us.

In the United Kingdom, this document is being distributed only to, and is directed at, persons (i) who have professional experience in matters relating to investments falling within Article 19(5) (investment professionals) of the Financial Services and Markets Act 2000 (Financial Promotions) Order 2005 ("FPO"), (ii) who fall within the categories of persons referred to in Article 49(2)(a) to (d) (high net worth companies, unincorporated associations, etc.) of the FPO or (iii) to whom it may otherwise be lawfully communicated (together "relevant persons"). The investments to which this document relates are available only to, and any invitation, offer or agreement to purchase will be engaged in only with, relevant persons. Any person who is not a relevant person should not act or rely on this document or any of its contents.

Each of our executive officers and directors reside in and are citizens of the United States.

EXPERTS

The consolidated financial statements of PlasmaTech (formerly Access Pharmaceuticals, Inc.) for the years ended December 31, 2013 and 2012 included in this prospectus, and included in the Registration Statement, were audited by Whitley Penn LLP, an independent registered public accounting firm, as stated in their report appearing with the consolidated financial statements herein and included in this Registration Statement, and are included in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

The independent registered public accounting firm named above has no interest in the prospectus.

LEGAL MATTERS

Bingham McCutchen LLP will pass upon the validity of the securities offered hereby. Several partners and attorneys of Bingham McCutchen LLP are also shareholders of PlasmaTech. Certain legal matters related to the offering will be passed upon for the underwriters by Sichenzia Ross Friedman Ference LLP, New York, New York.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the Securities and Exchange Commission, Washington, D.C. 20549, under the Securities Act of 1933, a registration statement on Form S-1 relating to the shares of common stock and warrants offered hereby. This prospectus does not contain all of the information set forth in the registration statement and the exhibits and schedules thereto. For further information with respect to our company and the shares and warrants we are offering by this prospectus you should refer to the registration statement, including the exhibits and schedules thereto. You may inspect a copy of the registration statement without charge at the Public Reference Section of the Securities and Exchange Commission at Room 1024, 450 Fifth Street, N.W., Washington, D.C. 20549. The public may obtain information on the operation of the Public Reference Room by calling the Securities and Exchange Commission. The Securities and Exchange Commission also maintains an Internet site that contains reports, proxy and information statements and other information regarding registrants that file electronically with the Securities and Exchange Commission. The Securities and Exchange Commission's World Wide Web address is *http://www.sec.gov*.

We file periodic reports, proxy statements and other information with the Securities and Exchange Commission in accordance with requirements of the Exchange Act. These periodic reports, proxy statements and other information are available for inspection and copying at the regional offices, public reference facilities and Internet site of the Securities and Exchange Commission referred to above.

Information contained on our website is not a prospectus and does not constitute a part of this prospectus.

You should rely only on the information contained in or provided in this prospectus. We have not authorized anyone else to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume the information in this prospectus is accurate as of any date other than the date on the front of this prospectus.

INDEX TO THE FINANCIAL STATEMENTS
PLASMATECH BIOPHARMACEUTICALS, INC.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of
PlasmaTech Biopharmaceuticals, Inc.

We have audited the accompanying consolidated balance sheets of PlasmaTech Biopharmaceuticals, Inc. (formerly Access Pharmaceuticals, Inc.) and subsidiaries, as of December 31, 2013 and 2012, and the related consolidated statements of operations, stockholders' deficit, and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of PlasmaTech Biopharmaceuticals, Inc. and subsidiaries as of December 31, 2013 and 2012, and the consolidated 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 the Company will continue as a going concern. As discussed in Note 2 to the consolidated financial statements, the Company has had recurring losses from operations, negative cash flows from operating activities and has an accumulated deficit. Management's plans in regard to these matters are also described in Note 2. These conditions raise substantial doubt about the Company's ability to continue as a going concern. These consolidated financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from the outcome of this uncertainty.

/s/ WHITLEY PENN LLP

Dallas, Texas
March 26, 2014, except for Note 1 as it relates to Reverse Stock Split and Note 13, Subsequent Events, as to which the date is October 24, 2014.

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

CONSOLIDATED BALANCE SHEETS

	December 31, 2013	December 31, 2012
ASSETS		
Current assets		
Cash and cash equivalents	$ 424,000	$ 396,000
Receivables	74,000	840,000
Inventory	—	194,000
Prepaid expenses and other current assets	77,000	251,000
Total current assets	575,000	1,681,000
Property and equipment, net	6,000	7,000
Other assets	32,000	42,000
Total assets	$ 613,000	$ 1,730,000
LIABILITIES AND STOCKHOLDERS' DEFICIT		
Current liabilities		
Accounts payable	$ 863,000	$ 2,039,000
Accrued expenses	857,000	857,000
Dividends payable	6,663,000	3,486,000
Current portion of deferred revenue	578,000	247,000
Total current liabilities	8,961,000	6,629,000
Derivative liability – warrants	—	271,000
Derivative liability – preferred stock	1,190,000	9,200,000
Long-term deferred revenue	5,241,000	2,706,000
Total liabilities	15,392,000	18,806,000
Commitments and contingencies		
Stockholders' deficit		
Convertible preferred stock A – $.01 par value; authorized 2,000,000 shares; 2,903.3617 issued at December 31, 2013; 2,913.3617 issued at December 31, 2012	—	—
Convertible preferred stock B – $.01 par value; authorized 2,000,000 shares; 1,000 issued at December 31, 2013 and December 31, 2012	—	—
Common stock – $.01 par value; authorized 200,000,000 shares; issued 514,589 at December 31, 2013; issued 494,647 at December 31, 2012	6,000	6,000
Additional paid-in capital	251,640,000	250,894,000
Treasury stock, at cost – 4 shares	(4,000)	(4,000)
Accumulated deficit	(266,421,000)	(267,972,000)
Total stockholders' deficit	(14,779,000)	(17,076,000)
Total liabilities and stockholders' deficit	$ 613,000	$ 1,730,000

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

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

CONSOLIDATED STATEMENTS OF OPERATIONS

	For the year ended December 31,	
	2013	**2012**
Revenues		
Product sales	$ 1,529,000	$ 2,865,000
License revenues	435,000	1,446,000
Royalties	78,000	93,000
Total revenues	2,042,000	4,404,000
Expenses		
Research and development	884,000	2,010,000
Product costs	125,000	267,000
Selling, general and administrative	4,834,000	6,024,000
Depreciation and amortization	3,000	419,000
Total expenses	5,846,000	8,720,000
Loss from operations	(3,804,000)	(4,316,000)
Interest and miscellaneous income	251,000	242,000
Interest and other expense	(279,000)	(608,000)
Warrant extension expense	—	(2,316,000)
Gain on change in fair value of derivative – warrants	271,000	1,236,000
Gain (loss) on change in fair value of derivative – preferred stock	8,010,000	(4,770,000)
	8,253,000	(6,216,000)
Net income (loss)	4,449,000	(10,532,000)
Less preferred stock dividends	(2,898,000)	(1,999,000)
Net income (loss) allocable to common stockholders	$ 1,551,000	$ (12,531,000)
Net income (loss) per common share		
Basic	$ 3.07	$ (25.91)
Diluted	$ 3.04	$ (25.91)
Weighted average number of common shares outstanding		
Basic	504,864	483,576
Diluted	509,479	483,576

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

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' DEFICIT

	Common Stock		Preferred Stock – A		Preferred Stock – B		Additional paid-in capital	Treasury stock	Accumulated deficit
	Shares	Amount	Shares	Amount	Shares	Amount			
Balance, December 31, 2011	477,816	$5,000	2,938.3617	$ —	—	$ —	$237,834,000	$(4,000)	$(255,441,000)
Restricted common stock issued for services	400	—	—	—	—	—	27,000	—	—
Common stock issued for services	1,618	—	—	—	—	—	40,000	—	—
Warrants issued for services	—	—	—	—	—	—	10,000	—	—
Common stock issued to directors and employees	4,450	—	—	—	—	—	305,000	—	—
Preferred stock converted into common stock	10,000	1,000	(25.0000)	—	—	—	(1,000)	—	—
Common stock issued for preferred dividends	363	—	—	—	—	—	22,000	—	—
Stock option compensation expense	—	—	—	—	—	—	390,000	—	—
Preferred stock issued $0.50 share, net of costs	—	—	—	—	470.27	—	4,654,000	—	—
Preferred stock issued $0.50 share in exchange of dividends payable	—	—	—	—	529.73	—	5,297,000	—	—
Warrant extension expense	—	—	—	—	—	—	2,316,000		
Preferred dividends	—	—	—	—	—	—	—	—	(1,999,000)
Net loss	—	—	—	—	—	—	—	—	(10,532,000)
Balance, December 31, 2012	494,647	$6,000	2,913.3617	—	1,000.00	—	250,894,000	(4,000)	(267,972,000)
Common stock issued for services	4,852	—	—	—	—	—	111,000	—	—
Common stock issued to directors and employees	8,590	—	—	—	—	—	167,000	—	—
Common stock issued for cash exercise of options	2,500	—	—	—	—	—	29,000		
Preferred stock converted into common stock	4,000	—	(10.0000)	—	—	—	—	—	—
Stock option compensation expense	—	—	—	—	—	—	439,000	—	—
Preferred dividends	—	—	—	—	—	—	—	—	(2,898,000)
Net income	—	—	—	—	—	—	—	—	4,449,000
Balance, December 31, 2013	514,589	$6,000	2,903.3617	$ —	1,000.00	$ —	$251,640,000	$(4,000)	$(266,421,000)

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

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year ended December 31,	
	2013	2012
Cash flows from operating activities:		
Net income (loss)	$ 4,449,000	$ (10,532,000)
Adjustments to reconcile net income (loss) to net cash Provided by (used in) operating activities:		
(Gain) on change in fair value of derivative – warrants	(271,000)	(1,236,000)
(Gain) loss on change in fair value of derivative – preferred stock	(8,010,000)	4,770,000
Warrant extension expense	—	2,316,000
Gain on negotiated payables	—	(241,000)
Depreciation and amortization	3,000	419,000
Stock option compensation expense	439,000	390,000
Stock issued to directors and employees	167,000	305,000
Stock and warrants issued for services	111,000	77,000
Change in operating assets and liabilities:		
Receivables	766,000	(507,000)
Inventory	194,000	(43,000)
Prepaid expenses and other current assets	174,000	(212,000)
Restricted cash	—	330,000
Other assets	10,000	17,000
Accounts payable and accrued expenses	(1,176,000)	567,000
Dividends payable	279,000	319,000
Accrued interest payable	—	(98,000)
Deferred revenue	2,866,000	(596,000)
Net cash provided by (used in) operating activities	1,000	(3,955,000)
Cash flows from investing activities:		
Capital expenditures	(2,000)	(13,000)
Net cash used in investing activities	(2,000)	(13,000)
Cash flows from financing activities:		
Payment of debt	—	(2,750,000)
Proceeds from exercise of stock options	29,000	—
Proceeds from preferred stock issuances, net of costs	—	4,654,000
Net cash provided by financing activities	29,000	1,904,000
Net increase (decrease) in cash and cash equivalents	28,000	(2,064,000)
Cash and cash equivalents at beginning of year	396,000	2,460,000
Cash and cash equivalents at end of year	$ 424,000	$ 396,000
Supplemental cash flow information:		
Cash paid for interest	*$ —*	*$ 388,000*
Supplemental disclosure of noncash transactions		
Shares issued for dividends on preferred stock	*—*	*22,000*
Preferred stock dividends in dividends payable	*2,898,000*	*1,999,000*
Dividends payable exchanged for preferred stock	*—*	*5,297,000*

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

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Two years ended December 31, 2013

NOTE 1 — NATURE OF OPERATIONS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Nature of Operations

PlasmaTech Biopharmaceuticals, Inc. (formerly Access Pharmaceuticals, Inc.) (the "Company", "we", "our", or "PlasmaTech") is an emerging pharmaceutical company engaged in the development of novel therapeutics for the treatment of cancer and supportive care of cancer patients. This development work is based primarily on the adaptation of existing therapeutic agents using the Company's proprietary drug delivery technology. Our efforts have been principally devoted to research and development, resulting in significant losses.

Certain amounts have been reclassified to conform with current period classification.

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

Reverse Stock Split

All per share information reflect a one for fifty reverse stock split of our outstanding common stock effected October 24, 2014. Accordingly, all shares and per share amounts were retroactively adjusted to reflect this reverse split, including adjustments for common stock par value and additional paid-in capital.

Principles of Consolidation

The consolidated financial statements include the financial statements of PlasmaTech Biopharmaceuticals, Inc. and our wholly-owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amount of assets and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenue and expenses during the reported period.

Segments

The Company operates in a single segment.

Cash and Cash Equivalents

We consider all highly liquid investments with a maturity of three months or less when purchased to be cash equivalents. At December 31, 2013 and 2012, we had no such investments. We maintain deposits primarily in two financial institutions, which may at times exceed amounts covered by insurance provided by the U.S. Federal Deposit Insurance Corporation (FDIC). We have not experienced any losses related to amounts in excess of FDIC limits.

Receivables

Receivables are reported in the balance sheets at the outstanding amount net of an allowance for doubtful accounts. We continually evaluate the creditworthiness of our customers and their financial condition and generally do not require collateral. The allowance for doubtful accounts is based upon reviews of specific customer balances, historic losses, and general economic conditions. As of December 31, 2013 and 2012, no allowance was recorded as all accounts are considered collectible.

Property and Equipment

Property and equipment are recorded at cost. Depreciation is provided using the straight-line method over estimated useful lives ranging from three to seven years. Expenditures for major renewals and betterments that extend the useful lives are capitalized. Expenditures for normal maintenance and repairs are expensed as

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Two years ended December 31, 2013

NOTE 1 — NATURE OF OPERATIONS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - (continued)

incurred. The cost of assets sold or abandoned and the related accumulated depreciation are eliminated from the accounts and any gains or losses are recognized in the accompanying consolidated statements of operations of the respective period.

Product Sales and Allowances

We sold MuGard to wholesalers, and specialty and retail pharmacies. We began shipping to customers in September 2010 through June 6, 2013 when we licensed MuGard to AMAG Pharmaceuticals. Since June 6, 2013 we receive royalties from AMAG Pharmaceuticals for their sales of MuGard. We recognized revenue for MuGard product sales at the time title transferred to our customers, which occurred at the time product was shipped to our customers.

We recognized product sales allowances as a reduction of product sales in the same period the related revenue was recognized. Product sales allowances were based on amounts owed or to be claimed on the related sales. These estimates take into consideration the terms of our agreements with customers, rebates or discounts taken. If actual future results varied from our estimates, we may have needed to adjust these estimates, which could have had an effect on product sales and earnings in the period of adjustment. Our product sales allowances included:

- Wholesaler and Specialty and Retail Pharmacy Discounts — we offered contractually determined discounts to certain wholesale distributors and specialty and retail pharmacies that purchase directly from us. These discounts are either taken off the invoice at the time of shipment or paid to the customer on a monthly or quarterly basis.
- Prompt Pay Discounts — we offered cash discounts to our customers, generally 2% of the sales price, as an incentive for prompt payment. Based on our experience many of the customers comply with the payment terms to earn the cash discount.
- Patient Discount Programs — we offered discount card programs in which patients receive certain discounts off their prescription.
- Managed Care Rebates — we offered discounts under contracts with certain managed care providers who do not purchase directly from us.

We believe our estimates related to gross-to-net sales adjustments for MuGard do not have a high degree of estimation complexity or uncertainty as the related amounts were settled within a short period of time.

Below is a table showing gross sales and net sales by quarter for the years ended December 31, 2013 and 2012.

(in thousands)	Three months ended March 31, 2013	Three months ended June 30, 2013	Three months ended Sept 30, 2013	Three months ended Dec 31, 2013	Twelve months ended Dec 31, 2013
Gross sales	$ 1,255	$ 508	$ —	$ —	$ 1,763
Cash discounts	10	36	—	5	51
Contract discounts	83	92	—	8	183
Net sales	$ 1,162	$ 380	$ —	$ (13)	$ 1,529

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Two years ended December 31, 2013

NOTE 1 — NATURE OF OPERATIONS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - (continued)

	Three months ended March 31, 2012	Three months ended June 30, 2012	Three months ended Sept 30, 2012	Three months ended Dec 31, 2012	Twelve months ended Dec 31, 2012
Gross sales	$ 577	$ 712	$ 877	$ 1,048	$ 3,214
Cash discounts	5	13	7	9	34
Contract discounts	18	84	89	124	315
Net sales	$ 554	$ 615	$ 781	$ 915	$ 2,865

License Revenues and Royalties

Our revenues are generated from licensing, research and development agreements, royalties and product sales. We recognize revenue in accordance with SEC Staff Accounting Bulletin No. 104 (SAB 104), *Revenue Recognition*. License revenue is recognized over the remaining life of the underlying patent.

Research and development revenues are recognized as services are performed. Royalties are recognized in the period of sales.

Research and Development Expenses

Research and development costs are expensed as incurred. Research and development expenses include, but are not limited to, payroll and personnel expense, lab supplies, preclinical, development cost, clinical trial expense, outside manufacturing and consulting. The cost of materials and equipment or facilities that are acquired for research and development activities and that have alternative future uses are capitalized when acquired.

Cost of product sales

Cost of product sales consists of costs of the contract manufacturing, product costs and packaging costs, product quality testing, distribution costs and shipping costs related to our product sales of MuGard.

Selling, general and administrative expense

Selling, general and administrative expenses primarily consist of personnel, contract personnel, marketing and promotion expenses associated with MuGard, personnel expenses to support our administrative and operating activities, facility costs and professional expenses (i.e., legal expenses), and investor relations fees.

Other Income

In 2013 and 2012, we recognized miscellaneous income of $251,000 and $242,000, respectively, due to sales of platinum and monomers and write-offs and settlements of other accounts payable.

Fair Value of Financial Instruments

We calculate the fair value of our assets and liabilities which qualify as financial instruments and include additional information in the notes to the consolidated financial statements when the fair value is different than the carrying value of these financial instruments. The estimated fair value of accounts receivable, accounts payable and accrued expenses and dividends payable approximate their carrying amounts due to the relatively short maturity of these instruments.

We consider the conversion options and warrants related to our Series A Cumulative Convertible Preferred Stock to be derivatives, and we record the fair value of the derivative liabilities in our consolidated balance sheets. Changes in the fair value of the derivative liabilities are included in gain or loss on change in fair value of derivative in the consolidated statements of operations.

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Two years ended December 31, 2013

NOTE 1 — NATURE OF OPERATIONS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - (continued)

Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. A valuation allowance is provided for deferred tax assets to the extent their realization is in doubt.

We account for uncertain income tax positions in accordance with FASB ASC 740, *Income Taxes*. Interest costs and penalties related to income taxes are classified as interest expense and general and administrative costs, respectively, in our consolidated financial statements. For the years ended December 31, 2013 and 2012, we did not recognize any uncertain tax positions or interest or penalty expense related to income taxes. It is determined not to be reasonably likely for the amounts of unrecognized tax benefits to significantly increase or decrease within the next 12 months. We are currently subject to a three year statute of limitations by major tax jurisdictions. We and our subsidiaries file income tax returns in the U.S. federal jurisdiction.

Income (Loss) Per Share

We have presented basic income (loss) per share, computed on the basis of the weighted average number of common shares outstanding during the year, and diluted income (loss) per share, computed on the basis of the weighted average number of common shares and all dilutive potential common shares outstanding during the year. Potential common shares result from stock options, preferred stock and warrants. Common equivalent shares have not been included in the net loss per share calculations for year ended December 31, 2012 because the effect of including them would have been anti-dilutive.

Basic and diluted net income (loss) per share were determined as follows:

(in thousands, except share and per share amounts)

	For the year ended December 31,	
	2013	2012
Net income (loss)	$ 1,551	$ (12,531)
Weighted average shares outstanding	504,864	483,576
Basic net income (loss) per common share	$ 3.07	$ (25.91)
Net income (loss)	$ 1,551	$ (12,531)
Weighted average shares outstanding	504,864	483,576
Effect of dilutive options and warrants	4,615	—
Weighted average shares outstanding assuming dilution	509,479	483,576
Diluted net income (loss) per common share	$ 3.04	$ (25.91)

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Two years ended December 31, 2013

NOTE 1 — NATURE OF OPERATIONS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - (continued)

We did not include the following securities in the table below in the computation of diluted net income (loss) per common share because the securities were anti-dilutive during the periods presented:

	For the year ended December 31,	
	2013	2012
Warrants	637,640	714,679
Stock options	18,834	54,066
Preferred stock Series A	1,161,348	1,165,348
Preferred stock Series B	400,000	400,000
Total	2,217,822	2,334,093

Stock-Based Compensation

We account for stock based compensation expense in accordance with FASB ASC 718, *Stock Based Compensation*. We have several stock-based compensation plans under which incentive and non-incentive qualified stock options and restricted shares may be granted to employees, directors and consultants. We measure the cost of the employee/director/consultant services received in exchange for an award of equity instruments based on the grant date fair value of the award. We use the Black-Scholes option pricing model to value our options.

During 2013 and 2012, no stock options and 24,700 stock options, respectively, were granted under the 2005 Equity Incentive Plan. Assumptions for 2012 are:

	2012
Expected volatility assumption was based upon a combination of historical stock price volatility measured on a weekly basis and is considered a reasonable indicator of expected volatility.	98%
Risk-free interest rate assumption is based upon U.S. Treasury bond interest rates appropriate for the term of the our employee stock options.	0.45%
Dividend yield assumption is based on our history and expectation of dividend payments.	None
Estimated expected term (average of number years) is based on the simplified method as prescribed by SAB 107/110 as we do not have sufficient information to calculate an expected term.	5.5 years

At December 31, 2013, the balance of unearned stock-based compensation to be expensed in future periods related to unvested share-based awards, as adjusted for expected forfeitures, is approximately $53,000. The weighted-average period over which the unearned stock-based compensation is expected to be recognized is approximately three years. We anticipate that we will grant additional share-based awards to employees and consultants in the future, which will increase our stock-based compensation expense by the additional unearned compensation resulting from these grants.

The following table summarizes stock-based compensation for the years ended December 31, 2013 and 2012 which was allocated as follows (in thousands):

	Year ended December 31, 2013	Year ended December 31, 2012
Research and development	$ 31	$ 93
General and administrative	408	297

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Two years ended December 31, 2013

NOTE 1 — NATURE OF OPERATIONS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - (continued)

	Year ended December 31, 2013	Year ended December 31, 2012
Stock-based compensation expense included in operating expense	439	390
Total stock-based compensation expense	439	390
Tax benefit	—	—
Stock-based compensation expense, net of tax	$ 439	$ 390

NOTE 2 — LIQUIDITY

The accompanying consolidated financial statements have been prepared assuming that we are a going concern. We have incurred negative cash flows from operations since inception, and have expended, and expect to continue to expend in the future, substantial funds to complete our planned product development efforts. Since inception, our expenses have significantly exceeded revenues, resulting in an accumulated deficit as of December 31, 2013 of $266,421,000. We expect that our capital resources, revenues from MuGard royalties and expected receipts due under our license agreements will be adequate to fund our current level of operations for the next twelve months. However, our ability to fund operations over this time could change significantly depending upon changes to future operational funding obligations or capital expenditures. As a result, we are required to seek additional financing sources within the next twelve months. We cannot assure you that we will ever be able to generate significant product revenue or achieve or sustain profitability.

Management believes that our current cash, royalties and expected license fees should fund our expected burn rate for the next twelve months. We will require additional funds to support ongoing and planned operations. These funds are expected to come from the future sales of equity and/or license agreements.

NOTE 3 — RELATED PARTY TRANSACTIONS

On occasion we may engage in certain related party transactions. Pursuant to our Audit Committee charter, our policy is that all related party transactions are reviewed and approved by the Audit Committee prior to our entering into any related party transactions.

In the event SCO Capital Partners LLC (SCO) and its affiliates were to convert all of their shares of Series A Preferred Stock, Series B Preferred Stock and exercise all of their warrants, they would own approximately 70.5% of the voting securities of PlasmaTech. During 2013 and 2012, SCO and affiliates charged $300,000 each year in investor relations fees.

In connection with the sale and issuance of Series A Preferred Stock and warrants, we entered into a Director Designation Agreement whereby we agreed to continue SCO's right to designate two individuals to serve on the Board of Directors of PlasmaTech.

NOTE 4 — PROPERTY AND EQUIPMENT

Property and equipment consists of the following:

	December 31,	
	2013	2012
Laboratory equipment	$ —	$ 818,000
Laboratory and building improvements	—	17,000
Furniture and equipment	14,000	63,000
	14,000	898,000
Less accumulated depreciation and amortization	8,000	891,000
Property and equipment, net	$ 6,000	$ 7,000

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Two years ended December 31, 2013

NOTE 4 — PROPERTY AND EQUIPMENT - (continued)

Depreciation and amortization on property and equipment was $3,000 and $57,000 for the years ended December 31, 2013 and 2012, respectively. The laboratory equipment was sold in 2013 when the laboratory was closed.

NOTE 5 — 401(k) PLAN

We have a tax-qualified employee savings and retirement plan (the 401(k) Plan) covering all our employees. Pursuant to the 401(k) Plan, employees may elect to reduce their current compensation by up to the statutorily prescribed annual limit ($17,500 in 2013 and $17,000 in 2012) and to have the amount of such reduction contributed to the 401(k) Plan. The 401(k) Plan is intended to qualify under Section 401 of the Internal Revenue Code so that contributions by employees or by us to the 401(k) Plan, and income earned on 401(k) Plan contributions, are not taxable to employees until withdrawn from the 401(k) Plan, and so that contributions by us, if any, will be deductible by us when made. At the direction of each participant, we invest the assets of the 401(k) Plan in any of 60 investment options. Company contributions under the 401(k) Plan were approximately $0 in 2013 and $0 in 2012.

NOTE 6 — DEBT

We had a note payable of $2,750,000 at December 31, 2011 which was due on September 13, 2012. The note and interest due was paid in full on November 2, 2012. The note had interest at 12% per annum with $330,000 of interest due and paid on September 13, 2012.

NOTE 7 — COMMITMENTS AND CONTINGENCIES

Operating Leases

At December 31, 2013, we had a commitment under a non-cancelable operating lease for our New York office until August 31, 2014 totaling $130,000. Rent expense for the years ended December 31, 2013 and 2012 was $270,000 and $288,000, respectively. Rent expense included rent for our Dallas office which was closed on September 30, 2013. We also have one non-cancelable operating lease — for a copier with future obligations totaling approximately $10,000 ending in 2014.

Legal

Alan Schmidt, a former shareholder of Genaera Corporation (“Genaera”), and a former unitholder of the Genaera Liquidating Trust (the “Trust”), filed a purported class action in the United States District Court for the Eastern District of Pennsylvania in June 2012. The lawsuit named thirty defendants, including the Company, MacroChem Corporation, which was acquired by the Company in February 2009, Jeffrey Davis, the CEO and a director of the Company, and Steven H. Rouhandeh and Mark Alvino, both of whom are Company directors (the “PlasmaTech Defendants”). With respect to the PlasmaTech Defendants, the complaint alleged direct and derivative claims asserting that directors of Genaera and the Trustee of the Trust breached their fiduciary duties to Genaera, Genaera’s shareholders and the Trust’s unitholders in connection with the licensing and disposition of certain assets, aided and abetted by numerous defendants including the PlasmaTech Defendants. Schmidt seeks money damages, disgorgement of any distributions received from the Trust, rescission of sales made by the Trust, attorneys’ and expert fees, and costs. On December 19, 2012, Schmidt filed an amended complaint which asserted substantially the same allegations with respect to the PlasmaTech Defendants. On February 4, 2013, the PlasmaTech Defendants moved to dismiss all claims asserted against them. On August 12, 2013 the court granted the PlasmaTech Defendants’ motions to dismiss and entered judgment in favor of the PlasmaTech Defendants on all claims. On August 26, 2013, Schmidt filed a motion for reconsideration. On September 10, 2013 Schmidt filed a Notice of Appeal with the District Court. On September 17, 2013, Schmidt filed his appeal with the U.S. Third Circuit Court of Appeals. On September 25, 2013, the District Court denied Schmidt’s motion for reconsideration. On October 17, 2013, Schmidt amended his appeal to include the District court’s denial of his motion for reconsideration. The Company intends to contest the claims vigorously.

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Two years ended December 31, 2013

NOTE 7 — COMMITMENTS AND CONTINGENCIES - (continued)

We are not currently subject to any other material pending legal proceedings.

NOTE 8 — FAIR VALUE MEASUREMENTS

We calculate the fair value of our assets and liabilities which qualify as financial instruments and include additional information in the notes to the consolidated financial statements when the fair value is different than the carrying value of these financial instruments. The estimated fair value of accounts receivable, accounts payable and accrued expenses and dividends payable approximate their carrying amounts due to the relatively short maturity of these instruments.

Generally Accepted Accounting Principles define's fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants at the measurement date. This guidance establishes a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. The hierarchy requires entities to maximize the use of observable inputs and minimize the use of unobservable inputs. The three levels of inputs used to measure fair value are as follows:

- Level 1 — Quoted prices in active markets for identical assets or liabilities.
- Level 2 — Observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in markets that are not active; or other inputs that are observable or can be corroborated by observable market data.
- Level 3 — Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets and liabilities. This includes certain pricing models, discounted cash flow methodologies and similar valuation techniques that use significant unobservable inputs.

The guidance requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value.

We have segregated all financial assets and liabilities that are measured at fair value on a recurring basis (at least annually) into the most appropriate level within the fair value hierarchy based on the inputs used to determine the fair value at the measurement date in the table below.

Financial assets and liabilities measured at fair value on a recurring basis as of December 31, 2013 and December 31, 2012 are summarized below:

(in thousands)

Description	As of December 31, 2013	Level 1	Level 2	Level 3	Total Gains (Losses)
Liabilities:					
Derivative liability – warrants	$ —	$ —	$ —	$ —	$ 271
preferred stock	$ 1,190	$ —	$ —	$ 1,190	$ 8,010

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Two years ended December 31, 2013

NOTE 8 — FAIR VALUE MEASUREMENTS - (continued)

(in thousands)

Description	As of December 31, 2012	Level 1	Level 2	Level 3	Total Gains (Losses)
Liabilities:					
Derivative liability – warrants	$ 271	$ —	$ 271	$ —	$ 1,236
preferred stock	$ 9,200	$ —	$ —	$ 9,200	$ (4,770)

In order to calculate the Level 3 Derivative liability — preferred stock, we used the Monte Carlo simulation to estimate future stock prices. The use of valuation techniques requires the Company to make various key assumptions for inputs into the model, including assumptions about the expected future volatility of the price of the Company's stock. In estimating the fair value at December 31, 2013, we based our selected volatility on the one-year historic volatility of the Company's stock as we believe this is most representative of the expected volatility in the near future for the Company.

NOTE 9 — PREFERRED STOCK

Series A Cumulative Convertible Preferred Stock

On November 7, 2007, and February 4, 2008, we entered into securities purchase agreements (the Purchase Agreements) with accredited investors to sell shares of a newly created series of our preferred stock, designated "Series A Cumulative Convertible Preferred Stock", par value $0.01 per share, for an issue price of $10,000 per share, (the Series A Preferred Stock) and agreed to issue warrants to purchase shares of our common stock at an exercise price of $175.00 per share. The shares of Series A Preferred Stock were convertible into common stock at the initial conversion price of $150.00 per share. The exercise and conversion price have changed, as described below.

As a condition to closing, we entered into an Investor Rights Agreement with each of the investors purchasing shares of Series A Preferred Stock, and our Board of Directors approved with respect to the shareholder rights plan any action necessary under our shareholder rights plan to accommodate the issuance of the Series A Preferred Stock and warrants without triggering the applicability of the shareholder rights plan.

In connection with the sale and issuance of Series A Preferred Stock and warrants, we entered into a Director Designation Agreement whereby we agreed to continue SCO's right to designate two individuals to serve on the Board of Directors of PlasmaTech.

The issued and outstanding shares of Series A Preferred Stock grants the holders of such preferred stock anti-dilution, dividend and liquidations rights that are superior to those held by the holders of our common stock. Under these terms, should PlasmaTech issue additional shares of common stock, in certain circumstances, for a price below $150.00 per share, the conversion price of the Series A Preferred Stock will be lowered to the lowest subsequent issue price below $150.00 per share until the shares are converted or redeemed. This will have the effect of diluting the holders of our common stock. Under the terms of the Purchase Agreement, should PlasmaTech issue additional shares of common stock, in certain circumstances, for a price below $175.00 per share, the exercise price of the warrants will be lowered to the lowest subsequent issue price below $175.00 per share until the warrants are exercised or expire. Additionally, as discussed below, if we are unable to maintain an effective registration statement related to the Series A Preferred Stock, we would be required to pay liquidating damages.

On October 25, 2012, we issued Series B Preferred Stock with a conversion into common stock at $25.00 per share in a private placement offering. Per the terms of the agreement with the outstanding Series A Preferred Stock holders their stock became convertible into shares of common stock at $25.00 per share. The Series A Preferred Stock at December 31, 2012 was convertible into 1,165,348 shares of common stock, an increase of

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Two years ended December 31, 2013

NOTE 9 — PREFERRED STOCK - (continued)

760,054 shares of common stock from December 31, 2011. At December 31, 2013 the Series A Preferred Stock was convertible into 1,164,348 shares of common stock.

On November 10, 2011, we issued common stock in a private placement offering at $72.50 per share. Per the terms of the agreement with the outstanding Series A Preferred Stock holders their stock became convertible into shares of common stock at $72.50 per share. The Series A Preferred Stock at December 31, 2011 was convertible into 1,169,348 shares of common stock, an increase of 171,695 shares of common stock from December 31, 2010.

In addition, warrants to acquire 82,990 shares of common stock that were granted to the holders of Series A Preferred Stock were re-priced from $175.00 to $150.00 due to an offering on January 26, 2010; then re-priced from $150.00 to $127.50 due to an offering on December 14, 2010; then re-priced from $127.50 to $72.50 due to an offering on November 10, 2011; and further re-priced from $72.50 to $25.00 due to the offering on October 25, 2012.

November 7, 2007 Series A Preferred Stock

On November 7, 2007, we entered into the Purchase Agreements with accredited investors whereby we agreed to sell 954.0001 shares of a newly created series of our Series A Preferred Stock and agreed to issue warrants to purchase 31,800 shares of our common stock at an exercise price of $175.00 per share, for an aggregate purchase price for the Series A Preferred Stock and Warrants of $9,540,001. The shares of Series A Preferred Stock were convertible into common stock at the initial conversion price of $150.00 per share. Due to the offering on October 25, 2012, the conversion price and warrant exercise price changed to $25.00 per share. The warrants expired November 10, 2013.

As a condition to closing, SCO Capital Partners LLC and affiliates, along with the other holders of an aggregate of $6,000,000 Secured Convertible Notes, also exchanged their notes and accrued interest for an additional 1,836.0512 shares of Series A Preferred Stock and were issued warrants to purchase 22,441 shares of our common stock at an exercise price of $175.00 per share, and Oracle Partners LP and affiliates, along with the other holders of an aggregate of $4,015,000 Convertible Notes also exchanged their notes and accrued interest for 437.3104 shares of the Series A Preferred Stock and were issued warrants to purchase 14,577 shares of our common stock at an exercise price of $175.00 per share. In connection with the exchange of the notes, all security interests and liens relating thereto were terminated. Due to the offering on October 25, 2012, the conversion price and warrant exercise price changed to $25.00 per share.

The conversion of debt into equity resulted in a loss on extinguishment of debt of $11,628,000. This represented the difference between the fair value of the equity interest granted, based on recent sales of identical equity instruments, and the carrying amount of the debt and interest settled.

In connection with the preferred stock offering, we issued warrants for placement agent fees, to purchase a total of 4,180 shares of common stock. All of the warrants are exercisable immediately and expire six years from date of issue. The fair value of the warrants was $129.50 per share on the date of the grant using the Black-Scholes pricing model with the following assumptions: expected dividend yield 0.0%, risk-free interest rate 3.84%, expected volatility 110% and a term of 6 years. The warrants expired November 10, 2013.

February 4, 2008 Series A Preferred Stock

On February 4, 2008, we entered into Purchase Agreements with accredited investors whereby we agreed to sell 272.50 shares of our Series A Preferred Stock and agreed to issue warrants to purchase 9,083 shares of our common stock at an exercise price of $175.00 per share, for an aggregate purchase price for the Series A Preferred Stock and Warrants of $2,725,000. Proceeds, net of cash issuance costs from the sale were $2,444,000. The shares of Series A Preferred Stock were convertible into common stock at the initial conversion price of $150.00 per share. Due to the offering on October 25, 2012 the conversion price changed to $25.00 per share. The warrants expired February 4, 2014.

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Two years ended December 31, 2013

NOTE 9 — PREFERRED STOCK - (continued)

In connection with the preferred stock offering, we issued warrants for placement agent fees to purchase a total of 909 shares of common stock. All of the warrants were exercisable immediately and expired six years from the date of issue. The fair value of the warrants was $114.50 per share on the date of grant using the Black-Scholes option pricing model with the following assumptions: expected dividend yield 0.0%, risk-free interest rate 2.75%, expected volatility 110% and an expected term of 6 years. The warrants expired February 4, 2014.

Derivative Liability

Effective January 1, 2009, we adopted the provisions of FASB ASC 815, *"Derivatives and Hedging"* (FASB ASC 815) (previously EITF 07-5, *"Determining Whether an Instrument (or an Embeded Feature) is Indexed to an Entity's Own Stock"*). As a result of adopting FASB ASC 815, warrants to purchase 77,901 of our common stock previously treated as equity pursuant to the derivative treatment exemption were no longer afforded equity treatment. These warrants had an exercise price of $175.00 and expired on November 10, 2013 and February 4, 2014. Effective January 1, 2009, we reclassified the fair value of these common stock warrants, from equity to liability status, as if these warrants were treated as a derivative liability since origination.

We determined that the anti-dilution provision built into the preferred shares and warrants issued should be considered for derivative accounting. FASB ASC 815 requires freestanding contracts that are settled in a company's own stock to be designated as an equity instrument, assets or liability. Under the provisions of FASB ASC 815, a contract designated as an asset or liability must be initially recorded and carried at fair value until the contract meets the requirements for classification as equity, until the contract is exercised or until the contract expires. We determined that the anti-dilution provision associated with the November 2007 and February 2008 preferred shares and warrants no longer met the criteria for equity accounting through the revised criteria in FASB ASC 815.

Accordingly, at January 1, 2009, we determined that the warrants and the preferred stock conversion feature should be accounted for as derivative liabilities. The preferred stock conversion feature was determined to have no fair market value at both issuance dates as well as each reporting period until the third quarter of 2010 since management asserted that the likelihood of issuing any new equity at a price that would trigger the anti-dilution effect to be nil. During the third quarter of 2010 we were actively raising capital. With our stock price below $150.00 a share it was possible that we would sell shares below $150.00 per share. Since this would require an adjustment to our convertible preferred stock we recorded a derivative liability and expense at September 30, 2010. The derivative liability and expense was revalued at December 31, 2010 and was $5,840,000; at December 31, 2011 and was $4,430,000; at December 31, 2012 and was $9,200,000; and at December 31, 2013 was $1,190,000. The change in the fair value of the derivative was a loss of $4,770,000 in 2012 and a gain of $8,010,000 in 2013. We will continue to reevaluate the derivative liability in future reporting periods and adjust the derivative liability as necessary. The warrants were valued at issuance and each reporting period since using the Black-Scholes model. Both of these derivatives will continue to be marked to market in accordance with FASB ASC 815.

On January 1, 2009 we reclassified the fair value of the warrants from equity to liability as if these warrants were treated as a derivative liability since their issue date. We recorded derivative gain of $1,236,000 for the year ended December 31, 2012 and $271,000 gain for the year ended December 31, 2013. Warrants to purchase 72,998 shares of our common stock expired November 10, 2013. The remaining 9,992 warrants expired February 4, 2014.

Series B Cumulative Convertible Preferred Stock

On October 25, 2012, we entered into a Preferred Stock and Warrant Purchase Agreement (the "Purchase Agreement") with existing investors whereby we agreed to sell 1,000 shares of a newly created series of our preferred stock, designated "Series B Cumulative Convertible Preferred Stock", par value $0.01 per share, for

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Two years ended December 31, 2013

NOTE 9 — PREFERRED STOCK - (continued)

an issue price of $10,000 per share, (the "Series B Preferred Stock") and agreed to issue warrants to purchase 400,000 shares of our common stock at an exercise price of $25.00 per share, for an aggregate purchase price of $10,000,000. The financing consisted of $4,703,000 of new investment and the conversion of approximately $5,297,000 of outstanding dividends payable on our Series A Preferred Stock. Certain terms of the Series B Preferred Stock are senior in right to the Company's outstanding Series A Preferred Stock. The Series B financing was approved by the requisite percentage of the holders of the Company's Series A Preferred Stock and closed on October 25, 2012.

The shares of Series B Preferred Stock issued upon closing are convertible at the option of the holder into shares of our common stock at a conversion price of $25.00 per share of common stock (the "Conversion Price"). The Conversion Price is not subject to adjustment, except in cases of stock splits, stock dividends or similar transactions.

The Series B Preferred Stock is entitled to a liquidation preference, senior to the liquidation preference of the Series A Preferred Stock, equal to the greater of (i) (A) two times (2x) the Stated Value for the Series B Preferred Stock, plus any accumulated and unpaid dividends (whether or not declared) on the Series B Preferred Stock if such liquidation takes place prior to the fifth anniversary of the original issue date or (B) three times (3x) the Stated Value for the Series B Preferred Stock, plus any accumulated and unpaid dividends (whether or not declared) on the Series B Preferred Stock if such liquidation takes place on or after to the fifth anniversary of the original issue date, or (ii) the cash or other property distributable upon such liquidation with respect to the shares of Common Stock into which such shares of Series B Preferred Stock, including any accrued dividends thereon, could have been converted immediately prior to such payment. "Stated Value" shall mean $10,000 per share of Series B Preferred Stock, as it may be increased from time to time as set forth in the Certificate of Designations. The Series B Preferred Stock is also entitled to a dividend of 12% per annum, payable quarterly in cash or additional Stated Value, at the election of the majority holders at time of payment.

The Company has the right, but not the obligation, and with the written consent of the majority holders, to force conversion ("Mandatory Conversion") of all, but not less than all, of the outstanding Series B Preferred Stock into common stock as long as the closing price of our common stock exceeds $250.00 for at least 20 consecutive trading days immediately prior to the conversion and the average daily trading volume is not less than 4,000 shares per day for at least 20 consecutive trading days immediately prior to such date on which the Company gives notice of such conversion. The Company's ability to cause a Mandatory Conversion is subject to certain other conditions, including that a registration statement covering the common stock issuable upon such Mandatory Conversion is in effect and able to be used.

The Series B Preferred Stock will vote together with the common stock on an as-if-converted basis. The consent of the Series B Preferred Stock is required for the Company to take certain actions.

The common stock purchase warrants issued are for an aggregate of 400,000 shares of our common stock at an exercise price of $25.00. The warrants can also be exercised on a cashless basis. The warrants will expire six years from the date of issuance.

The warrant exercise price is subject to equitable adjustment for stock splits, dividends, combinations, and reorganizations only.

Liquidated Damages

Pursuant to the terms of an Investor Rights Agreement with the Purchasers of Series A Preferred Stock, we are required to maintain an effective registration statement. The Securities and Exchange Commission declared the registration statement effective November 13, 2008 relating to a portion of such securities, and as a result, we accrued $857,000 in potential liquidated damages as of December 31, 2013 and December 31, 2012. Potential liquidated damages are capped at 10% of each holder's investment. However, pursuant to the terms

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Two years ended December 31, 2013

NOTE 9 — PREFERRED STOCK - (continued)

of the Investor Rights Agreement, we may not be required to pay such liquidated damages if such shares are saleable without restriction pursuant to Rule 144 of the Securities Act of 1933.

Preferred Stock Dividends — Series A

Preferred stock dividends of $5,122,000 were accrued at December 31, 2013, plus interest. Dividends are payable semi-annually in either cash or common stock.

Preferred Stock Dividends — Series B

Preferred stock dividends of $1,541,000 were accrued at December 31, 2013, plus interest. Dividends are payable quarterly in either cash or Series B preferred stock.

NOTE 10 — STOCKHOLDERS' EQUITY

Warrants

There were warrants to purchase a total of 637,640 shares of common stock outstanding at December 31, 2013. All warrants were exercisable at December 31, 2013. The warrants had various exercise prices and terms as follows:

Summary of Warrants	Warrants Outstanding	Exercise Price	Expiration Date
2012 Series B private placement[a]	400,000	$ 25.00	10/24/18
2012 investor relations advisor[b]	600	58.50	4/19/14
2011 November private placement[c]	42,899	83.50	5/10 & 30/14
2011 November private placement[c]	42,889	100.00	11/10 & 30/16
2011 November placement agent warrants[c]	744	83.50 & 100.00	11/10 & 30/16
2011 investor relations advisor[d]	250	115.00	4/15/14
2010 December registered direct offering[e]	18,625	153.00	12/14/15
2010 January registered direct offering[f]	20,837	150.00	1/26/15
2010 January placement agent warrants[f]	2,505	187.50	1/26/15
2009 investor relations advisor[g]	500	175.00	11/4/14
2009 business consultant[h]	1,200	103.50	7/23/14
2008 preferred stock offering[i]	9,992	25.00	2/04/14
2008 Somanta accounts payable[j]	4,939	175.00	1/04/14
2006 convertible note[k]	76,370	66.00	2/16/15
2006 convertible note[k]	7,729	66.00	10/24/15
2006 convertible note[k]	7,547	66.00	12/06/15
Total	637,640		

a) In connection with a private placement offering on October 25, 2012, warrants to purchase 400,000 shares of common stock at $25.00 per share were issued. All of the warrants are exercisable immediately and expire on October 24, 2018.

b) During 2012, an investor relations advisor received warrants to purchase 600 shares of common stock at an exercise price of $58.50 per share exercisable at any time until April 19, 2014, for investor relations consulting services rendered in 2012. The expense recorded for the year ended December 31, 2012 was $10,000.

c) In connection with a private placement offering on November 10 and 30, 2011, warrants to purchase 42,899 shares of common stock at $83.50 per share were issued. All of the warrants are exercisable immediately and 37,149 warrants expire May 10, 2014 and 5,750 warrants expire May 30, 2014.

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Two years ended December 31, 2013

NOTE 10 — STOCKHOLDERS' EQUITY - (continued)

In connection with a private placement offering on November 10 and 30, 2011, additional warrants to purchase 42,899 shares of common stock at $100.00 per share were issued. All of the warrants are exercisable immediately and 37,149 warrants expire November 10, 2016 and 5,750 warrants expire November 30, 2016.

Also in connection with a private placement offering on November 10 and 30, 2011, placement agent warrants to purchase 372 shares of common stock at $83.50 per share were issued. Also in connection with a private placement offering on November 10 and 30, 2011, placement agent warrants to purchase 372 shares of common stock at $100.00 per share were issued. All the placement agent warrants are exercisable immediately and 372 warrants expire November 10, 2016 and 372 warrants expire November 30, 2016.

d) During 2011, an investor relations advisor received warrants to purchase 250 shares of common stock at an exercise price of $115.00 per share at any time until April 15, 2014, for investor relations consulting services rendered in 2011.

e) In connection with a registered direct offering on December 14, 2010, warrants to purchase 18,625 shares of common stock at $153.00 per share were issued. All of the warrants are exercisable immediately and expire December 14, 2015.

f) In connection with a registered direct offering on January 26, 2010, warrants to purchase 20,837 shares of common stock at $150.00 per share were issued. All of the warrants are exercisable immediately and expire January 26, 2015.

In addition, we issued warrants for placement agent fees to purchase 2,505 shares of our common stock at an exercise price of $187.50 per share. All of the warrants are exercisable immediately and expire January 26, 2015.

g) During 2010, an investor relations advisor received warrants to purchase 500 shares of common stock at an exercise price of $175.00 per share at any time until November 4, 2014, for investor relations consulting services rendered in 2010.

h) During 2009, a business consultant received warrants to purchase 3,000 shares of common stock at an exercise price of $103.50 per share at any time until July 23, 2014, for business consulting services rendered in 2009. 1,200 of the warrants were exercisable on December 31, 2011. The remaining 1,800 warrants expired July 23, 2010 because our stock did not reach specified trading prices.

i) In connection with the preferred stock offering in February 2008, warrants to purchase a total of 9,992 shares of common stock were issued. All of the warrants expired February 4, 2014. The fair value of the warrants was $114.50 per share on the date of the grant using the Black-Scholes pricing model with the following assumptions: expected dividend yield 0.0%, risk-free interest rate 2.75%, expected volatility 110% and a term of 6 years. The exercise price of $175.00 was decreased to $150.00 after the January 2010 placement; to $127.50 after the December 2010 placement; to $72.50 after the November 2011 placement; and, to $25.00 after the October 2012 placement.

j) In connection with our acquisition of Somanta Pharmaceuticals, Inc. (Somanta) we exchanged for $1,576,000 due to Somanta vendors, for 10,762 shares of our common stock and warrants to purchase 4,939 shares of common stock at $175.00. The warrants expired January 4, 2014.

k) In connection with the convertible note offerings in 2006, warrants to purchase a total of 91,646 shares of common stock at $66.00 per share were issued. All of the warrants are exercisable immediately and expire six years from date of issue. On February 10, 2012 these warrants were extended an additional three years.

2012 Warrant Adjustments

On February 10, 2012, we entered into amendment agreements for 91,646 currently outstanding warrants which extended the expiration dates of such warrants to February 16, 2015 for 76,370 warrants; to October 24, 2015 for 7,728 warrants; and to December 6, 2015 for 7,547 warrants. The holders of such warrants are SCO Capital Partners LLC, Lake End Capital LLC and Beach Capital LLC. These holders may be deemed to be affiliates of Jeffrey B. Davis and Steven H. Rouhandeh, our former Chief Executive Officer

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Two years ended December 31, 2013

NOTE 10 — STOCKHOLDERS' EQUITY - (continued)

and a director, respectively, as well as other un-affiliated warrant holders. The warrants that were amended were for the purchase of an aggregate of 91,646 shares of our common stock. In connection with the amendments, the holders of such warrants agreed to waive any damages that they may have incurred relating to the Company's inability to register the shares of common stock issuable upon exercise of the warrants, other than liquidated damages that may have already accrued relating to such inability to register such shares.

NOTE 11 — STOCK OPTION PLANS

We account for stock based compensation expense in accordance with FASB ASC 718, *Stock Based Compensation*. We have two stock-based compensation plans under which incentive and non-incentive qualified stock options and restricted shares may be granted to employees, directors and consultants. We measure the cost of the employee/director/consultant services received in exchange for an award of equity instruments based on the grant date fair value of the award.

Our stock-based employee compensation plans described below:

2005 Equity Incentive Plan

We have a stock awards plan, (the 2005 Equity Incentive Plan), under which 500,000 shares of our authorized but unissued common stock were reserved for issuance to employees, consultants, or to non-employee members of the Board or to any board of directors (or similar governing authority) of any affiliate of the Company. The 2005 Equity Incentive Plan replaced the previously approved stock option plan (the 1995 Stock Awards Plan).

For the 2005 Equity Incentive Plan, the fair value of options was estimated at the date of grant using the Black-Scholes option pricing model with the following weighted average assumptions used for grants in fiscal 2012: dividend yield of 0%; volatility of 98%; risk-free interest rate of 0.45%; and expected lives of 5.5 years. The weighted average fair value of options granted was $14.50 per share during 2012. No options were granted in 2013.

Summarized information for the 2005 Equity Incentive Plan is as follows:

	Options	Weighted-average exercise Price
Outstanding options at January 1, 2012	45,336	$ 108.50
Granted, fair value of $14.50 per share	24,700	19.50
Exerpiredforfeited	(16,760)	107.00
Outstanding options at December 31, 2012	53,276	68.00
Expired/forfeited	(21,992)	85.97
Exercised	(2,500)	11.50
Outstanding options at December 31, 2013	28,784	58.87
Exercisable at December 31, 2013	35,199	60.00

The intrinsic value of options under this plan related to the outstanding and exercisable options were $11,000 and $10,000 at December 31, 2013, respectively. The intrinsic value of options under this plan related to the outstanding and exercisable options were $7,000 and $1,000, respectively at December 31, 2012.

The total intrinsic value of options exercised during 2013 was $3,000 and during 2012 was none.

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Two years ended December 31, 2013

NOTE 11 — STOCK OPTION PLANS - (continued)

Further information regarding options outstanding under the 2005 Equity Incentive Plan at December 31, 2013 is summarized below:

		Weighted average			Weighted-average	
Range of exercise prices	Number of options outstanding	Remaining Exercise life in years	Exercise price	Number of options exercisable	Remaining life in years	Exercise price
$11.50	10,500	9.0	$ 11.50	9,875	9.0	$ 11.50
$30.50 – 42.50	6,400	7.4	$ 31.56	6,400	7.4	$ 31.56
$69.00	1,400	6.0	$ 69.00	1,400	6.0	$ 69.00
$113.50 – 157.50	10,484	7.7	$ 121.64	10,484	7.7	$ 121.64
	28,784			28,159		

1995 Stock Awards Plan

Under the 1995 Stock Awards Plan, as amended, 10,000 shares of our authorized but unissued common stock were reserved for issuance to optionees including officers, employees, and other individuals performing services for us. At December 31, 2013, there were no additional shares available for grant under the 1995 Stock Awards Plan. A total of 100 options were outstanding under this plan at December 31, 2013.

Options granted under all the plans generally vest ratably over a four to five year period and are generally exercisable over a ten-year period from the date of grant. Stock options were generally granted with an exercise price equal to the market value at the date of grant.

Summarized information for the 1995 Stock Awards Plan is as follows:

	Options	Weighted-average exercise price
Outstanding options at January 1, 2012	1,150	$ 829.00
Expired	(360)	907.00
Outstanding options at December 31, 2012	790	793.50
Expired	(690)	760.50
Outstanding options at December 31, 2013	100	1,022.50
Exercisable at December 31, 2013	100	1,022.50

There was no intrinsic value related to outstanding or exercisable options under this plan at December 31, 2013 or 2012.

Further information regarding options outstanding under the 1995 Stock Awards Plan at December 31, 2013 is summarized below:

		Weighted average			Weighted-average	
Range of exercise prices	Number of Options outstanding	Remaining life in years	Exercise price	Number of options exercisable	Remaining life in years	Exercise price
$620.00	50	2.0	$ 620.00	50	2.0	$ 620.00
$1,425.00	50	1.0	$ 1,425.00	50	1.0	$ 1,425.00
	100			100		

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Two years ended December 31, 2013

NOTE 12 — INCOME TAXES

Income tax expense differs from the statutory amounts as follows:

	2013	2012
Income taxes at U.S. statutory rate	$ 1,513,000	$ (3,581,000)
Current year reserve	224,000	2,794,000
Expenses not deductible	(1,737,000)	787,000
Total tax expense	$ —	$ —

Deferred taxes are provided for the temporary differences between the financial reporting bases and the tax bases of our assets and liabilities. The temporary differences that give rise to deferred tax assets were as follows:

	December 31,	
	2013	2012
Deferred tax assets		
Net operating loss carryforwards	$ 63,087,000	$ 64,147,000
General business credit carryforwards	2,362,000	2,450,000
State credits	3,053,000	3,072,000
Property and equipment	—	57,000
Stock options	473,000	1,531,000
Derivatives	(92,000)	4,007,000
Deferred revenue	1,072,000	899,000
Intangible assets	418,000	517,000
Accrued interest	253,000	253,000
Other	231,000	230,000
Gross deferred tax assets	70,857,000	77,163,000
Valuation allowance	(70,857,000)	(77,163,000)
Net deferred taxes	$ —	$ —

At December 31, 2013, we had approximately $188,549,000 of net operating loss carryforwards and approximately $2,363,000 of general business credit carryforwards. These carryforwards expire as follows:

	Net operating loss carryforwards	General business credit carryforwards
2012	$ —	$ —
2013	—	—
2014	—	—
2015	—	—
Thereafter	188,549,000	2,363,000
	$ 188,549,000	$ 2,363,000

As a result of a merger on January 25, 1996, a change in control occurred for federal income tax purposes, which limits the utilization of pre-merger net operating loss carryforwards of approximately $3,100,000 to approximately $530,000 per year.

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Two years ended December 31, 2013

NOTE 12 — INCOME TAXES - (continued)

Additionally, we acquired MacroChem Corporation on February 25, 2009 and Somanta Pharmaceuticals, Inc. on January 4, 2008. Both corporations were loss companies at the time of the acquisition. Therefore, the net operating losses related to those acquisitions may be subject to annual limitations as provided by IRC Sec. 382.

NOTE 13 — SUBSEQUENT EVENTS

On October 24, 2014, we effected a one for fifty reverse stock split approved by our Board of Directors and majority shareholders.

On September 10, 2014, we entered into an Unsecured Grid Note, for up to $250,000 with SCO. As of October 23, 2014 we have drawn a total of $250,000. The interest rate is 8% per annum and the maturity date is August 31, 2015 unless a financing of at least $5,000,000 occurs, then the note is required to be paid in full.

On September 22, 2014, we entered into an exclusive, world-wide licensing agreement with Licensor to obtain rights to utilize and to sub-license to other pharmaceuticals firms, its recently patented methods for the extraction of therapeutic biologics from human plasma.

Under the terms of the licensing agreement, we will pay a license fee of $5 million in a combination of cash and common stock subject to the achievement of certain events, a regulatory approval milestone payment in common shares upon the first FDA regulatory approval of a drug derived from the Licensor’s proprietary SDF process, and a tiered royalty on annual net sales of plasma fractions produced with Licensor’s proprietary SDF process.

On October 24, 2014, we changed our name to PlasmaTech Biopharmaceuticals, Inc.

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

Condensed Consolidated Balance Sheets

	June 30, 2014 (unaudited)	December 31, 2013
ASSETS		
Current assets		
Cash and cash equivalents	$ 55,000	$ 424,000
Receivables	58,000	74,000
Prepaid expenses and other current assets	90,000	77,000
Total current assets	203,000	575,000
Property and equipment, net	5,000	6,000
Other assets	32,000	32,000
Total assets	$ 240,000	$ 613,000
LIABILITIES AND STOCKHOLDERS' DEFICIT		
Current liabilities		
Accounts payable	$ 1,340,000	$ 863,000
Accrued expenses	857,000	857,000
Dividends payable	8,373,000	6,663,000
Current portion of deferred revenue	602,000	578,000
Total current liabilities	11,172,000	8,961,000
Derivative liability – preferred stock	12,300,000	1,190,000
Long-term deferred revenue	5,170,000	5,241,000
Total liabilities	28,642,000	15,392,000
Commitments and contingencies		
Stockholders' deficit		
Convertible preferred stock Series A – $.01 par value; authorized 2,000,000 shares; 2,893.3617 shares issued at June 30, 2014 and 2,903.3617 at December 31, 2013	—	—
Convertible preferred stock Series B – $.01 par value; authorized 2,000,000 shares; 1,000.0 shares issued at June 30, 2014 and at December 31, 2013	—	—
Common stock – $.01 par value; authorized 200,000,000 shares; issued, 528,989 at June 30, 2014 and 514,589 at December 31, 2013	6,000	6,000
Additional paid-in capital	252,834,000	251,640,000
Treasury stock, at cost – 5 shares	(4,000)	(4,000)
Accumulated deficit	(281,238,000)	(266,421,000)
Total stockholders' deficit	(28,402,000)	(14,779,000)
Total liabilities and stockholders' deficit	$ 240,000	$ 613,000

The accompanying notes are an integral part of these condensed consolidated statements.

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

Condensed Consolidated Statements of Operations
(unaudited)

	Three months ended June 30,		Six months ended June 30,	
	2014	2013	2014	2013
Revenues				
Product sales	$ —	$ 380,000	$ —	$ 1,542,000
License revenues	150,000	84,000	296,000	146,000
Royalties	97,000	3,000	159,000	3,000
Total revenues	247,000	467,000	455,000	1,691,000
Expenses				
Research and development	81,000	197,000	225,000	520,000
Product costs	—	53,000	—	119,000
Selling, general and administrative	868,000	2,137,000	2,260,000	3,475,000
Depreciation and amortization	1,000	1,000	1,000	1,000
Total expenses	950,000	2,388,000	2,486,000	4,115,000
Loss from operations	(703,000)	(1,921,000)	(2,031,000)	(2,424,000)
Interest and miscellaneous income	26,000	75,000	34,000	169,000
Interest and other expense	(137,000)	(43,000)	(259,000)	(86,000)
Gain (loss) on change in fair value of derivative – warrants	—	219,000	—	(28,000)
Gain (loss) on change in fair value of derivative – preferred stock	(11,693,000)	3,270,000	(11,110,000)	8,050,000
	(11,804,000)	3,521,000	(11,335,000)	8,105,000
Net income (loss)	(12,507,000)	1,600,000	(13,366,000)	5,681,000
Less preferred stock dividends	726,000	733,000	1,451,000	1,460,000
Net income (loss) allocable to common stockholders	$(13,233,000)	$ 867,000	$(14,817,000)	$ 4,221,000
Net income (loss) per common share				
Basic	$ (25.26)	$ 1.73	$ (28.46)	$ 8.46
Diluted	$ (25.26)	$ 1.70	$ (28.46)	$ 8.34
Weighted average number of common shares outstanding				
Basic	523,826	502,234	520,700	499,144
Diluted	523,826	509,385	520,700	506,294

The accompanying notes are an integral part of these condensed consolidated statements.

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

Condensed Consolidated Statements of Stockholders' Deficit
(unaudited)

	Common Stock		Preferred Stock – A		Preferred Stock – B		Additional paid-in capital	Treasury stock	Accumulated deficit
	Shares	Amount	Shares	Amount	Shares	Amount			
Balance December 31, 2013	514,589	$6,000	2,903.3617	$ —	1,000.0	$ —	$251,640,000	$(4,000)	$(266,421,000)
Common stock issued for services	4,500	—	—	—	—	—	75,000	—	—
Stock option compensation expense	—	—	—	—	—	—	795,000	—	—
Preferred dividends	—	—	—	—	—	—	—	—	(725,000)
Net loss	—	—	—	—	—	—	—	—	(859,000)
Balance March 31, 2014	519,089	$6,000	2,903.3617	$ —	1,000.0	$ —	$252,510,000	$(4,000)	$(268,005,000)
Common stock issued for services	5,900	—	—	—	—	—	132,000	—	—
Preferred stock converted into common stock	4,000	—	(10.0000)	—	—	—	—	—	—
Stock option compensation expense	—	—	—	—	—	—	192,000	—	—
Preferred dividends	—	—	—	—	—	—	—	—	(726,000)
Net loss	—	—	—	—	—	—	—	—	(12,507,000)
Balance June 30, 2014	528,989	$6,000	2,893.3617	$ —	1,000.0	$ —	$252,834,000	$(4,000)	$(281,238,000)

The accompanying notes are an integral part of these condensed consolidated statements.

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

Condensed Consolidated Statements of Cash Flows
(unaudited)

	Six Months ended June 30,	
	2014	**2013**
Cash flows from operating activities:		
Net income (loss)	$ (13,366,000)	$ 5,681,000
Adjustments to reconcile net income (loss) to cash provided by (used in) operating activities:		
Gain (loss) on change in fair value of derivative – warrants	—	28,000
Gain (loss) on change in fair value of derivative – preferred stock	11,110,000	(8,050,000)
Depreciation and amortization	1,000	1,000
Stock option compensation expense	987,000	328,000
Stock issued to directors and employees	—	66,000
Stock issued for services	207,000	97,000
Change in operating assets and liabilities:		
Receivables	16,000	581,000
Inventory	—	194,000
Prepaid expenses and other current assets	(13,000)	(41,000)
Accounts payable and accrued expenses	477,000	(734,000)
Interest payable on dividends	259,000	86,000
Deferred revenue	(47,000)	3,154,000
Net cash provided by (used in) operating activities	(369,000)	1,391,000
Cash flows from financing activities:		
Proceeds from exercise of stock options	—	11,000
Net cash provided by financing activities	—	11,000
Net increase (decrease) in cash and cash equivalents	(369,000)	1,402,000
Cash and cash equivalents at beginning of period	424,000	396,000
Cash and cash equivalents at end of period	$ 55,000	$ 1,798,000
Supplemental cash flow information:		
Cash paid for interest	*$ —*	*$ —*
Supplemental disclosure of noncash transactions:		
Preferred stock dividends in dividends payable	*$ 1,451,000*	*$ 1,460,000*

The accompanying notes are an integral part of these condensed consolidated statements.

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

Notes to Condensed Consolidated Financial Statements
Six Months Ended June 30, 2014 and 2013
(unaudited)

PlasmaTech Biopharmaceuticals, Inc. (formerly Access Pharmaceuticals, Inc.) (together with our subsidiaries, "We", "PlasmaTech" or the "Company") is a Delaware corporation. We are an emerging biopharmaceutical company focused on developing a range of pharmaceutical and medical device products primarily based upon our nanopolymer chemistry technologies and other drug delivery technologies.

All per share information reflect a one for fifty reverse stock split of our outstanding common stock effected October 24, 2014. Accordingly, all shares and per share amounts were retroactively adjusted to reflect this reverse split, including adjustments for common stock par value and additional paid-in capital.

(1) Interim Financial Statements

The condensed consolidated balance sheet as of June 30, 2014, the condensed consolidated statements of operations for the three and six months ended June 30, 2014 and 2013, the condensed consolidated statements of stockholders' deficit for the three and six months ended June 30, 2014, and the condensed consolidated statements of cash flows for the six months ended June 30, 2014 and 2013, were prepared by management without audit. In the opinion of management, all adjustments, consisting only of normal recurring adjustments, except as otherwise disclosed, necessary for the fair presentation of the financial position, results of operations, and changes in financial position for such periods, have been made.

Certain information and footnote disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America have been condensed or omitted. It is suggested that these interim financial statements be read in conjunction with the consolidated financial statements and notes thereto included in our Annual Report on Form 10-K for the year ended December 31, 2013. The results of operations for the period ended June 30, 2014 are not necessarily indicative of the operating results which may be expected for a full year. The condensed consolidated balance sheet as of December 31, 2013 contains financial information taken from the audited PlasmaTech financial statements as of that date.

The report of our independent registered public accounting firm for the fiscal year ended December 31, 2013 contained an explanatory paragraph to reflect substantial doubt about our ability to continue as a going concern as a result of our history of losses and our liquidity position, as discussed therein and in this Quarterly Report on Form 10-Q. We expect that our capital resources, revenues from MuGard royalties and expected receipts due under our license agreements will be adequate to fund our current level of operations into the first quarter of 2015. If we are unable to obtain adequate capital funding in the future or enter into future license agreements for our products, we may not be able to continue as a going concern, which would have an adverse effect on our business and operations, and investors' investment in us may decline.

Certain reclassifications to the consolidated financial statements for all periods presented have been made to conform to the June 30, 2014 presentation.

(2) Liquidity

The Company generated net loss allocable to common stockholders of $14,817,000 for the six months ended June 30, 2014 and net income of $1,551,000 for the year ended December 31, 2013. At June 30, 2014, our working capital deficit was $10,969,000. Management believes that our current cash, revenues from MuGard royalties and expected license fees should fund our expected burn rate into the first quarter of 2015. We will require additional funds to continue operations. These funds are expected to come from royalties, the future sales of equity and/or license agreements. If we are unable to obtain adequate royalties or capital funding in the future or enter into future license agreements for our products, we may not be able to continue as a going concern, which would have an adverse effect on our business and operations, and investors' investment in us may decline.

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

Notes to Condensed Consolidated Financial Statements
Six Months Ended June 30, 2014 and 2013
(unaudited)

(3) Fair Value of Financial Instruments

The carrying value of cash equivalents, receivables, accounts payable and accruals approximate fair value due to the short maturity of these items.

U.S. GAAP defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants at the measurement date. U.S. GAAP establishes a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. The hierarchy requires entities to maximize the use of observable inputs and minimize the use of unobservable inputs. The three levels of inputs used to measure fair value are as follows:

- Level 1 — Quoted prices in active markets for identical assets or liabilities.
- Level 2 — Observable inputs other than quoted prices included in Level 1, such as quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in markets that are not active; or other inputs that are observable or can be corroborated by observable market data.
- Level 3 — Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets and liabilities. This includes certain pricing models, discounted cash flow methodologies and similar valuation techniques that use significant unobservable inputs.

The guidance requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value.

We have segregated all financial assets and liabilities that are measured at fair value on a recurring basis (at least annually) into the most appropriate level within the fair value hierarchy based on the inputs used to determine the fair value at the measurement date in the table below.

Financial assets and liabilities measured at fair value on a recurring basis as of June 30, 2014 and December 31, 2013 are summarized below:

(in thousands)

Description	As of June 30, 2014	Level 1	Level 2	Level 3	Total Gains (Losses)
Liabilities:					
Derivative liability – preferred stock	$ 12,300	$ —	$ —	$ 12,300	$ (11,110)

(in thousands)

Description	As of December 31, 2013	Level 1	Level 2	Level 3	Total Gains
Liabilities:					
Derivative liability – preferred stock	$ 1,190	$ —	$ —	$ 1,190	$ 8,010

In order to calculate the Level 3 Derivative liability — preferred stock, we used the Monte Carlo simulation to estimate future stock prices. The use of valuation techniques requires the Company to make various key assumptions for inputs into the model, including assumptions about the expected future volatility of the price of the Company's stock. In estimating the fair value at June 30, 2014 and December 31, 2013, we based our selected volatility on the one-year historic volatility of the Company's stock as we believe this is most representative of the expected volatility in the near future for the Company.

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

Notes to Condensed Consolidated Financial Statements
Six Months Ended June 30, 2014 and 2013
(unaudited)

(4) Stock Based Compensation

For the three and six months ended June 30, 2014, we recognized stock-based compensation expense of $192,000 and $987,000, respectively. For the three and six months ended June 30, 2013 we recognized stock-based compensation expense of $251,000 and $328,000, respectively.

The following table summarizes stock-based compensation for the three and six months ended June 30, 2014 and 2013:

	Three months ended June 30,		Six months ended June 30,	
	2014	2013	2014	2013
Research and development	$ 18,000	$ 10,000	$ 95,000	$ 19,000
Selling, general and administrative	174,000	241,000	892,000	309,000
Stock-based compensation expense included in operating expense	$192,000	$251,000	$987,000	$ 328,000

For the three and six months ended June 30, 2014 we granted no stock options and 210,000 stock options, respectively. For the three and six months ended June 30, 2013 we granted no stock options, respectively.

Our weighted average Black-Scholes fair value assumptions used to value the grants in the first six months of 2014 are as follows:

	6/30/14
Expected life[(b)]	5.5 yrs
Risk free interest rate	1.65%
Expected volatility[(a)]	102%
Expected dividend yield	0.0%

(a) Reflects movements in our stock price over the most recent historical period equivalent to the expected life.

(b) Based on the simplified method.

For the three and six months ended June 30, 2014, stock valued at $132,000 and $207,000, respectively, was granted to consultants. For the three and six months ended June 30, 2013, stock valued at $123,000 and $167,000, respectively, was granted to employees and consultants.

(5) Litigation

Alan Schmidt, a former shareholder of Genaera Corporation ("Genaera"), and a former unitholder of the Genaera Liquidating Trust (the "Trust"), filed a purported class action in the United States District Court for the Eastern District of Pennsylvania in June 2012. The lawsuit named thirty defendants, including PlasmaTech, MacroChem Corporation, which was acquired by us in February 2009, Jeffrey Davis, the CEO and a director of PlasmaTech, and Steven H. Rouhandeh and Mark Alvino, both of whom are our directors (the "PlasmaTech Defendants"). With respect to the PlasmaTech Defendants, the complaint alleged direct and derivative claims asserting that directors of Genaera and the Trustee of the Trust breached their fiduciary duties to Genaera, Genaera's shareholders and the Trust's unitholders in connection with the licensing and disposition of certain assets, aided and abetted by numerous defendants including the PlasmaTech Defendants. Schmidt seeks money damages, disgorgement of any distributions received from the Trust, rescission of sales made by the Trust, attorneys' and expert fees, and costs. On December 19, 2012, Schmidt filed an amended complaint which asserted substantially the same allegations with respect to the PlasmaTech Defendants. On February 4, 2013, the PlasmaTech Defendants moved to dismiss all claims asserted against them. On August 12, 2013 the court granted PlasmaTech Defendants' motions to dismiss and entered judgment in favor

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

Notes to Condensed Consolidated Financial Statements
Six Months Ended June 30, 2014 and 2013
(unaudited)

(5) Litigation - (continued)

of PlasmaTech Defendants on all claims. On August 26, 2013, Schmidt filed a motion for reconsideration. On September 10, 2013 Schmidt filed a Notice of Appeal with the District Court. On September 17, 2013, Schmidt filed his appeal with the U.S. Third Circuit Court of Appeals. On September 25, 2013, the District Court denied Schmidt's motion for reconsideration. On October 17, 2013, Schmidt amended his appeal to include the District court's denial of his motion for reconsideration. On March 20, 2014, Appellant Schmidt filed his Brief and Joint Appendix. On May 22, 2014, Appellees filed their Oppositions to Appellant's Brief. On May 29, 2014, the Appellant was granted an extension of time until June 23, 2014 to file their Reply brief, and filed his Reply brief on that date. The Third Circuit has scheduled oral argument for September 12, 2014. The Company intends to contest the claims vigorously.

We are not currently subject to any other material pending legal proceedings.

(6) Basic and Diluted Net Income (Loss) Per Common Share

Basic net income or loss per share is based upon the weighted average number of common shares outstanding during the period. Diluted net income or loss per share is based upon the weighted average number of common shares outstanding during the period, plus the effect of additional weighted average common equivalent shares outstanding during the period when the effect of adding such shares is dilutive. Common equivalent shares result from the assumed exercise of outstanding stock options and warrants (the proceeds of which are then assumed to have been used to repurchase outstanding stock using the treasury stock method). In addition, the assumed proceeds under the treasury stock method include the average unrecognized compensation expense of stock options that are in-the-money. This results in the "assumed" buyback of additional shares, thereby reducing the dilutive impact of stock options and warrants. Common equivalent shares have not been included in the net loss per share calculations for three and six months ended June 30, 2014, because the effect of including them would have been anti-dilutive.

Basic and diluted net income (loss) per share were determined as follows:

	Three months ended June 30,		Six months ended June 30,	
(in thousands, except share and per share amounts)	2014	2013	2014	2013
Net income (loss)	$ (13,233)	$ 867	$ (14,817)	$ 4,221
Weighted average shares outstanding	523,826	502,234	520,700	499,144
Basic net income (loss) per common share	$ (25.26)	$ 1.73	$ (28.46)	$ 8.46
Net income (loss)	$ (13,233)	$ 867	$ (14,817)	$ 4,221
Weighted average shares outstanding	523,826	502,234	520,700	499,144
Effect of dilutive options and warrants	—	7,150	—	7,150
Weighted average shares outstanding assuming dilution	523,826	509,385	520,700	506,294
Diluted net income (loss) per common share	$ (25.26)	$ 1.70	$ (28.46)	$ 8.34

PlasmaTech Biopharmaceuticals, Inc. and Subsidiaries

Notes to Condensed Consolidated Financial Statements
Six Months Ended June 30, 2014 and 2013
(unaudited)

(6) Basic and Diluted Net Income (Loss) Per Common Share - (continued)

We did not include the following securities in the table below in the computation of diluted net income (loss) per common share because the securities were anti-dilutive during the periods presented:

	Three months ended June 30,		Six months ended June 30,	
	2014	2013	2014	2013
Warrants	577,711	713,679	577,711	713,679
Stock options	238,834	39,345	238,834	39,345
Preferred stock Series A	1,157,345	1,165,345	1,157,345	1,165,345
Preferred stock Series B	400,000	400,000	400,000	400,000
Total	2,373,890	2,318,369	2,373,890	2,318,369

(7) Subsequent Event

On October 24, 2014, we effected a one for fifty reverse stock split approved by our Board of Directors and majority shareholders.

On September 10, 2014, we entered into an Unsecured Grid Note, for up to $250,000 with SCO. As of October 23, 2014 we have drawn a total of $250,000. The interest rate is 8% per annum and the maturity date is August 31, 2015 unless a financing of at least $5,000,000 occurs, then the note is required to be paid in full.

On September 22, 2014, we entered into an exclusive, world-wide licensing agreement with Licensor to obtain rights to utilize and to sub-license to other pharmaceuticals firms, its recently patented methods for the extraction of therapeutic biologics from human plasma.

Under the terms of the licensing agreement, we will pay a license fee of $5 million in a combination of cash and common stock subject to the achievement of certain events, a regulatory approval milestone payment in common shares upon the first FDA regulatory approval of a drug derived from the Licensor's proprietary SDF process, and a tiered royalty on annual net sales of plasma fractions produced with Licensor's proprietary SDF process.

On October 24, 2014, we changed our name to PlasmaTech Biopharmaceuticals, Inc.

TABLE OF CONTENTS

Up to $20 Million in Shares of Common Stock and Warrants to Purchase Shares of Common Stock

PlasmaTech Biopharmaceuticals, Inc.

PROSPECTUS

Aegis Capital Corp.

, 2014

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

The following table sets forth all expenses, other than the underwriting discounts and commissions, payable by the registrant in connection with the sale of the common stock being registered. All the amounts shown are estimates except the SEC registration fee and FINRA filing fee.

SEC Registration Fee	$	5,491
FINRA Filing Fee	$	9,000
Printing and Engraving Expenses	$	32,000
Legal Fees and Expenses	$	150,000
Accountants' Fees and Expenses	$	50,000
The NASDAQ Capital Market initial listing fee	$	30,000
Transfer Agent fees	$	30,000
Miscellaneous	$	25,000
Total	$	331,491

Item 14. Indemnification of Directors and Officers

Section 145 of the Delaware General Corporation law empowers a Delaware corporation to indemnify its officers and directors and certain other persons to the extent and under the circumstances set forth therein.

Our Certificate of Incorporation, as amended, and By-laws, as amended, provide for indemnification of our officers and directors and certain other persons against liabilities and expenses incurred by any of them in certain stated proceedings and under certain stated conditions.

The above discussion of the Registrant's Certificate of Incorporation, as amended, By-laws, as amended, and Section 145 of the Delaware General Corporation Law is not intended to be exhaustive and is qualified in its entirety by such Certificate of Incorporation, By-Laws and statute.

Item 15. Recent Sales of Unregistered Securities

In April 2012, we issued 100 shares of our common stock to a consultant as payment for his consulting expenses. The issuance of shares of our common stock in settlement of these accounts was made pursuant to Section 4(2) and Rule 506 of the Securities Act of 1933, as amended.

In March 2012, we issued 100 shares of our common stock to a consultant as payment for his consulting expenses. The issuance of shares of our common stock in settlement of these accounts was made pursuant to Section 4(2) and Rule 506 of the Securities Act of 1933, as amended.

In February 2012, we issued 100 shares of our common stock to a consultant as payment for his consulting expenses. The issuance of shares of our common stock in settlement of these accounts was made pursuant to Section 4(2) and Rule 506 of the Securities Act of 1933, as amended.

In January 2012, we issued 100 shares of our common stock to a consultant as payment for his consulting expenses. The issuance of shares of our common stock in settlement of these accounts was made pursuant to Section 4(2) and Rule 506 of the Securities Act of 1933, as amended.

Item 16. Exhibits

The following is a list of exhibits filed as a part of this registration statement:

Exhibit Number	Description of Document
1.1	Form of Underwriting Agreement
2.1	Amended and Restated Agreement of Merger and Plan of Reorganization between the Registrant and Chemex Pharmaceuticals, Inc., dated as of October 31, 1995 (Incorporated by reference to Exhibit A of our Registration Statement on Form S-4 dated December 20, 1995, Commission File No. 33-64031)
2.2	Agreement and Plan of Merger, by and among the Registrant, Somanta Acquisition Corporation, Somanta Pharmaceuticals, Inc., Somanta Incorporated and Somanta Limited, dated April 19, 2007 (Incorporated by reference to Exhibit 2.1 to our Form 8-K dated April 18, 2007)
2.3	Agreement and Plan of Merger, by and among the Registrant, MACM Acquisition Corporation and MacroChem Corporation, dated July 9, 2008 (Incorporated by reference to Exhibit 2.3 of our Form 10-Q for the quarter ended June 30, 2008)
3.1	Certificate of Incorporation (Incorporated by reference to Exhibit 3(a) of our Form 8-K dated July 12, 1989, Commission File Number 9-9134)
3.2	Certificate of Amendment of Certificate of Incorporation filed August 13, 1992 (Incorporated by reference to Exhibit 3.3 of our Form 10-K for year ended December 31, 1995)
3.3	Certificate of Merger filed January 25, 1996 (Incorporated by reference to Exhibit E of our Registration Statement on Form S-4 dated December 20, 1995, Commission File No. 33-64031)
3.4	Certificate of Amendment of Certificate of Incorporation filed January 25, 1996 (Incorporated by reference to Exhibit E of our Registration Statement on Form S-4 dated December 20, 1995, Commission File No. 33-64031)
3.5	Certificate of Amendment of Certificate of Incorporation filed July 18, 1996 (Incorporated by reference to Exhibit 3.7 of our Form 10-K for the year ended December 31, 1996)
3.6	Certificate of Amendment of Certificate of Incorporation filed June 18, 1998. (Incorporated by reference to Exhibit 3.8 of our Form 10-Q for the quarter ended June 30, 1998)
3.7	Certificate of Amendment of Certificate of Incorporation filed July 31, 2000 (Incorporated by reference to Exhibit 3.8 of our Form 10-Q for the quarter ended March 31, 2001)
3.8	Certificate of Designations of Series A Junior Participating Preferred Stock filed November 7, 2001 (Incorporated by reference to Exhibit 4.1.H of our Registration Statement on Form S-8 dated December 14, 2001, Commission File No. 333-75136)
3.9	Amended and Restated Bylaws (Incorporated by reference to Exhibit 2.1 of our Form 10-Q for the quarter ended June 30, 1996)
3.10	Certificate of Designation, Rights and Preferences of Series A Cumulative Convertible Preferred Stock filed November 9, 2007 (Incorporated by reference to Exhibit 3.10 to our Form SB-2 filed on December 10, 2007)
3.11	Certificate of Amendment to Certificate of Designations, Rights and Preferences of Series A Cumulative Convertible Preferred Stock filed June 11, 2008 (Incorporated by reference to Exhibit 3.11 of our Form 10-Q for the quarter ended June 30, 2008)
3.12	Certificate of Designations, Rights and Preferences of Series B Cumulative Convertible Preferred Stock filed October 26, 2012 (Incorporated by reference to Exhibit 10.3 of our Form 8-K filed October 26, 2012)
3.13	Certificate of Amendment of Certificate of Incorporation filed July 1, 2013 increasing the aggregate number of shares of Common Stock which we have authority to issue to Two Hundred Million (200,000,000) shares with a par value of one cent ($0.01) per share (Incorporated by reference to Exhibit 3.3 of our Form 10-Q for the quarter ended June 30, 2014).
3.14	Certificate of Amendment of Certificate of Incorporation filed October 23, 2014 (Incorporated by reference to Exhibit 3.14 of our Form 8-K filed October 23, 2014)

Exhibit Number	Description of Document
3.15	Certificate of Amendment to Certificate of Designations, Rights and Preferences of Series A Cumulative Convertible Preferred Stock (Incorporated by reference to Exhibit 3.15 of our Form 8-K filed on October 23, 2014)
4.1	Form of Warrant Agreement between the Registrant and American Stock Transfer & Trust Company (Incorporated by reference to Exhibit 4.1 of our Pre-effective Amendment No. 1 to Form S-1 filed October 24, 2014)
5.1	Opinion of Bingham McCutchen LLP
10.1**	1995 Stock Option Plan (Incorporated by reference to Exhibit F of our Registration Statement on Form S-4 dated December 20, 1995, Commission File No. 33-64031)
10.2**	Amendment to 1995 Stock Option Plan (Incorporated by reference to Exhibit 10.25 of our Form 10-K for the year ended December 31, 2001)
10.3**	401(k) Plan (Incorporated by reference to Exhibit 10.20 of our Form 10-K for the year ended December 31, 1999)
10.4**	2005 Equity Incentive Plan (Incorporated by reference to Exhibit 1 of our Proxy Statement filed on April 18, 2005)
10.5	Asset Sale Agreement dated as of October 12, 2005, between the Registrant and Uluru, Inc. (Incorporated by reference to Exhibit 10.25 of our 10-K for the year ended December 31, 2005)
10.6	Amendment to Asset Sale Agreement dated as of December 8, 2006, between the Registrant and Uluru, Inc. (Incorporated by reference to Exhibit 10.16 of our Form 10-KSB filed on April 2, 2007)
10.7	License Agreement dated as of October 12, 2005, between the Registrant and Uluru, Inc. (Incorporated by reference to Exhibit 10.26 of our 10-K for the year ended December 31, 2005)
10.8	Form of Warrant dated February 16, 2006, issued by the Registrant to certain Purchasers (Incorporated by reference to Exhibit 10.31 of our Form 10-Q for the quarter ended March 31, 2006)
10.9	Form of Warrant dated October 24, 2006, issued by the Registrant to certain Purchasers (Incorporated by reference to Exhibit 10.27 of our Form 10-KSB filed on April 2, 2007)
10.10	Form of Warrant December 6, 2006, issued by the Registrant to certain Purchasers (Incorporated by reference to Exhibit 10.32 of our Form 10-KSB filed on April 2, 2007)
10.11	Preferred Stock and Warrant Purchase Agreement, dated November 7, 2007, between the Registrant and certain Purchasers (Incorporated by reference to Exhibit 10.23 of our Form S-1 filed on March 11, 2008)
10.12	Investor Rights Agreement dated November 10, 2007, between the Registrant and certain Purchasers (Incorporated by reference to Exhibit 10.24 of our Form S-1 filed on March 11, 2008)
10.13	Form of Warrant Agreement dated November 10, 2007, between the Registrant and certain Purchasers (Incorporated by reference to Exhibit 10.25 of our Form S-1 filed on March 11, 2008)
10.14	Board Designation Agreement dated November 15, 2007, between the Registrant and SCO Capital Partners LLC (Incorporated by reference to Exhibit 10.26 of our Form S-1 filed on March 11, 2008)
10.15	Amendment and Restated Purchase Agreement, dated February 4, 2008 between the Registrant and certain Purchasers (Incorporated by reference to Exhibit 10.27 of our Form S-1 filed on March 11, 2008)
10.16	Amended and Restated Investor Rights Agreement, dated February 4, 2008, between the Registrant and certain Purchasers (Incorporated by reference to Exhibit 10.28 of our Form S-1 filed on March 11, 2008)
10.17**	Employment Agreement dated January 4, 2008, between the Registrant and Jeffrey B. Davis (Incorporated by reference to Exhibit 10.29 of our Form S-1 filed on March 11, 2008)

Exhibit Number	Description of Document
10.18	Form of Securities Purchase Agreement (Incorporated by reference to Exhibit 10.29 of our Form S-1 filed on January 15, 2010)
10.19	Form of Warrant (Incorporated by reference to Exhibit 10.30 of our Form S-1 filed on January 15, 2010)
10.20	Form of Securities Purchase Agreement dated as of December 10, 2010 by and among us and the Purchasers named therein (Incorporated by reference to Exhibit 10.1 of our Form 8-K filed on December 14, 2010)
10.21	Form of Common Stock Warrant issued by us (Incorporated by reference to Exhibit 10.1 of our Form 8-K filed on December 14, 2010)
10.22	Form of Securities Purchase Agreement dated as of November 1, 2011 by and among us and the Purchasers named therein (Incorporated by reference to Exhibit 10.1 of our Form 8-K filed on November 10, 2011)
10.23	Form of Common Stock Warrant (Two and One Half Year Warrant) issued by us (Incorporated by reference to Exhibit 10.2 of our Form 8-K filed on November 10, 2011)
10.24	Form of Common Stock Warrant (Five Year Warrant) issued by us (Incorporated by reference to Exhibit 10.3 of our Form 8-K filed on November 10, 2011)
10.25	Amendment No. 1 to Warrant Agreement dated February 10, 2012 by and among us and warrant holders including certain affiliates named therein extending the term of certain warrants until 2015 (Incorporated by reference to Exhibit 99.1 of our Form 8-K filed on February 10, 2012)
10.26	Preferred Stock and Warrant Purchase Agreement dated October 25, 2012 by and among us and the Purchasers named therein (Incorporated by reference to Exhibit 10.1 of our Form 8-K filed October 26, 2012)
10.27	Investor Rights Agreement dated October 25, 2012, between the Registrant and certain Purchasers (Incorporated by reference to Exhibit 10.2 of our Form 8-K filed on October 26, 2012)
10.28	Form of Common Stock Warrant issued by us (Incorporated by reference to Exhibit 10.3 of our Form 8-K filed on October 26, 2012)
10.29	License Agreement, dated June 6, 2013, by and between us and AMAG Pharmaceuticals, Inc. (Incorporated by reference to Exhibit 10.16 of our Form 10-Q for the quarter ended June 30, 2014).
10.30+	License Agreement, dated September 19, 2014, by and between us and Plasma Technologies, LLC. (Incorporated by reference to Exhibit 10.30 of our Form 8-K filed September 25, 2014)
10.31*	Employment Letter Agreement dated September 19, 2014, by and between us and Scott Schorer. (Incorporated by reference to Exhibit 10.30 of our Form 8-K filed September 25, 2014)
10.32*	Employment Letter Agreement dated September 19, 2014, by and between us and Harrison Wehner. (Incorporated by reference to Exhibit 10.30 of our Form 8-K filed September 25, 2014)
10.33	Share Exchange Agreement for Series B Preferred Stock, dated September 10, 2014, by and between us and SCO Capital Partners LLC and Beach Capital LLC (Incorporated by reference to Exhibit 10.33 of our Form 8-K filed October 23, 2014)
20.1	Unsecured Grid Note $250,000, dated September 10, 2014, by and between us and SCO Capital Partners LLC (Incorporated by reference to Exhibit 10.33 of our Form 8-K filed October 23, 2014)
23.1	Consent of Whitley Penn LLP
23.2	Consent of Bingham McCutchen LLP (included in Exhibit 5.1)
24**	Powers of Attorney (included on signature page)

* Management contract or compensatory plan or agreement.

** Filed previously

+ Portions of this exhibit were omitted and filed separately with the U.S. Securities and Exchange Commision pursuant to a request for confidential treatment.

Item 17. Undertakings

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) of this chapter) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) (A) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

(B) For the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(C) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or

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

(i) The undersigned Registrant hereby undertakes that it will:

(1) for determining any liability under the Securities Act, treat the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant under Rule 424(b)(1), or (4) or 497(h) under the Securities Act as part of this registration statement as of the time the Commission declared it effective.

(2) for determining any liability under the Securities Act, treat each post-effective amendment that contains a form of prospectus as a new registration statement for the securities offered in the registration statement, and that offering of the securities at that time as the initial bona fide offering of those securities.

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

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this Registration Statement on Pre-effective Amendment No. 2 to Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Dallas, State of Texas, on this 6th day of November, 2014.

PlasmaTech Biopharmaceuticals, Inc.

Date November 6, 2014 By: /s/ Scott Schorer
Scott Schorer
Chief Executive Officer
(Principal Executive Officer)

Date November 6, 2014 By: /s/ Harrison Wehner
Harrison Wehner
President and Chief Financial Officer and Treasurer
(Principal Financial and Accounting Officer)

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Date November 6, 2014 By: /s/ Scott Schorer
Scott Schorer
Chief Executive Officer
(Principal Executive Officer)

Date November 6, 2014 By: /s/ Harrison Wehner
Harrison Wehner
President and Chief Financial Officer and Treasurer
(Principal Financial and Accounting Officer)

Date November 6, 2014 By: /s/ Jeffrey B. Davis
Jeffrey B. Davis, Director

Date November 6, 2014 By: *
Mark J. Ahn, Director

Date November 6, 2014 By: *
Mark J. Alvino, Director

Date November 6, 2014 By: *
Stephen B. Howell, Director

Date November 6, 2014 By: *
Steven H. Rouhandeh, Chairman of the Board

* Executed November 5, 2014 by Jeffrey B. Davis as attorney-in-fact under power of attorney granted in Registration Statement previously filed July 2, 2014.

Exhibit Number	Description of Document
1.1	Form of Underwriting Agreement
2.1	Amended and Restated Agreement of Merger and Plan of Reorganization between the Registrant and Chemex Pharmaceuticals, Inc., dated as of October 31, 1995 (Incorporated by reference to Exhibit A of our Registration Statement on Form S-4 dated December 20, 1995, Commission File No. 33-64031)
2.2	Agreement and Plan of Merger, by and among the Registrant, Somanta Acquisition Corporation, Somanta Pharmaceuticals, Inc., Somanta Incorporated and Somanta Limited, dated April 19, 2007 (Incorporated by reference to Exhibit 2.1 to our Form 8-K dated April 18, 2007)
2.3	Agreement and Plan of Merger, by and among the Registrant, MACM Acquisition Corporation and MacroChem Corporation, dated July 9, 2008(Incorporated by reference to Exhibit 2.3 of our Form 10-Q for the quarter ended June 30, 2008)
3.1	Certificate of Incorporation (Incorporated by reference to Exhibit 3(a) of our Form 8-K dated July 12, 1989, Commission File Number 9-9134)
3.2	Certificate of Amendment of Certificate of Incorporation filed August 13, 1992 (Incorporated by reference to Exhibit 3.3 of our Form 10-K for year ended December 31, 1995)
3.3	Certificate of Merger filed January 25, 1996 (Incorporated by reference to Exhibit E of our Registration Statement on Form S-4 dated December 20, 1995, Commission File No. 33-64031)
3.4	Certificate of Amendment of Certificate of Incorporation filed January 25, 1996 (Incorporated by reference to Exhibit E of our Registration Statement on Form S-4 dated December 20, 1995, Commission File No. 33-64031)
3.5	Certificate of Amendment of Certificate of Incorporation filed July 18, 1996 (Incorporated by reference to Exhibit 3.7 of our Form 10-K for the year ended December 31, 1996)
3.6	Certificate of Amendment of Certificate of Incorporation filed June 18, 1998. (Incorporated by reference to Exhibit 3.8 of our Form 10-Q for the quarter ended June 30, 1998)
3.7	Certificate of Amendment of Certificate of Incorporation filed July 31, 2000 (Incorporated by reference to Exhibit 3.8 of our Form 10-Q for the quarter ended March 31, 2001)
3.8	Certificate of Designations of Series A Junior Participating Preferred Stock filed November 7, 2001 (Incorporated by reference to Exhibit 4.1.H of our Registration Statement on Form S-8 dated December 14, 2001, Commission File No. 333-75136)
3.9	Amended and Restated Bylaws (Incorporated by reference to Exhibit 2.1 of our Form 10-Q for the quarter ended June 30, 1996)
3.10	Certificate of Designation, Rights and Preferences of Series A Cumulative Convertible Preferred Stock filed November 9, 2007 (Incorporated by reference to Exhibit 3.10 to our Form SB-2 filed on December 10, 2007)
3.11	Certificate of Amendment to Certificate of Designations, Rights and Preferences of Series A Cumulative Convertible Preferred Stock filed June 11, 2008 (Incorporated by reference to Exhibit 3.11 of our Form 10-Q for the quarter ended June 30, 2008)
3.12	Certificate of Designations, Rights and Preferences of Series B Cumulative Convertible Preferred Stock filed October 26, 2012 (Incorporated by reference to Exhibit 10.3 of our Form 8-K filed October 26, 2012)
3.13	Certificate of Amendment of Certificate of Incorporation filed July 1, 2013 increasing the aggregate number of shares of Common Stock which we have authority to issue to Two Hundred Million (200,000,000) shares with a par value of one cent ($0.01) per share (Incorporated by reference to Exhibit 3.3 of our Form 10-Q for the quarter ended June 30, 2014)
3.14	Certificate of Amendment of Certificate of Incorporation filed October 23, 2014 (Incorporated by reference to Exhibit 3.14 of our Form 8-K filed October 23, 2014)
3.15	Certificate of Amendment to Certificate of Designations, Rights and Preferences of Series A Cumulative Convertible Preferred Stock (Incorporated by reference to Exhibit 3.15 of our Form 8-K filed on October 23, 2014)

Exhibit Number	Description of Document
4.1	Form of Warrant Agreement between the Registrant and American Stock Transfer & Trust Company (Incorporated by reference to Exhibit 4.1 of our Pre-effective Amendment No. 1 to Form S-1 filed October 24, 2014)
5.1	Opinion of Bingham McCutchen LLP
10.1**	1995 Stock Option Plan (Incorporated by reference to Exhibit F of our Registration Statement on Form S-4 dated December 20, 1995, Commission File No. 33-64031)
10.2**	Amendment to 1995 Stock Option Plan (Incorporated by reference to Exhibit 10.25 of our Form 10-K for the year ended December 31, 2001)
10.3**	401(k) Plan (Incorporated by reference to Exhibit 10.20 of our Form 10-K for the year ended December 31, 1999)
10.4**	2005 Equity Incentive Plan (Incorporated by reference to Exhibit 1 of our Proxy Statement filed on April 18, 2005)
10.5	Asset Sale Agreement dated as of October 12, 2005, between the Registrant and Uluru, Inc. (Incorporated by reference to Exhibit 10.25 of our 10-K for the year ended December 31, 2005)
10.6	Amendment to Asset Sale Agreement dated as of December 8, 2006, between the Registrant and Uluru, Inc. (Incorporated by reference to Exhibit 10.16 of our Form 10-KSB filed on April 2, 2007)
10.7	License Agreement dated as of October 12, 2005, between the Registrant and Uluru, Inc. (Incorporated by reference to Exhibit 10.26 of our 10-K for the year ended December 31, 2005)
10.8	Form of Warrant dated February 16, 2006, issued by the Registrant to certain Purchasers (Incorporated by reference to Exhibit 10.31 of our Form 10-Q for the quarter ended March 31, 2006)
10.9	Form of Warrant dated October 24, 2006, issued by the Registrant to certain Purchasers (Incorporated by reference to Exhibit 10.27 of our Form 10-KSB filed on April 2, 2007)
10.10	Form of Warrant December 6, 2006, issued by the Registrant to certain Purchasers (Incorporated by reference to Exhibit 10.32 of our Form 10-KSB filed on April 2, 2007)
10.11	Preferred Stock and Warrant Purchase Agreement, dated November 7, 2007, between the Registrant and certain Purchasers (Incorporated by reference to Exhibit 10.23 of our Form S-1 filed on March 11, 2008)
10.12	Investor Rights Agreement dated November 10, 2007, between the Registrant and certain Purchasers (Incorporated by reference to Exhibit 10.24 of our Form S-1 filed on March 11, 2008)
10.13	Form of Warrant Agreement dated November 10, 2007, between the Registrant and certain Purchasers (Incorporated by reference to Exhibit 10.25 of our Form S-1 filed on March 11, 2008)
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10.16	Amended and Restated Investor Rights Agreement, dated February 4, 2008, between the Registrant and certain Purchasers (Incorporated by reference to Exhibit 10.28 of our Form S-1 filed on March 11, 2008)
10.17**	Employment Agreement dated January 4, 2008, between the Registrant and Jeffrey B. Davis (Incorporated by reference to Exhibit 10.29 of our Form S-1 filed on March 11, 2008)
10.18	Form of Securities Purchase Agreement (Incorporated by reference to Exhibit 10.29 of our Form S-1 filed on January 15, 2010)
10.19	Form of Warrant (Incorporated by reference to Exhibit 10.30 of our Form S-1 filed on January 15, 2010)
10.20	Form of Securities Purchase Agreement dated as of December 10, 2010 by and among us and the Purchasers named therein (Incorporated by reference to Exhibit 10.1 of our Form 8-K filed on December 14, 2010)

Exhibit Number	Description of Document
10.21	Form of Common Stock Warrant issued by us (Incorporated by reference to Exhibit 10.1 of our Form 8-K filed on December 14, 2010)
10.22	Form of Securities Purchase Agreement dated as of November 1, 2011 by and among us and the Purchasers named therein (Incorporated by reference to Exhibit 10.1 of our Form 8-K filed on November 10, 2011)
10.23	Form of Common Stock Warrant (Two and One Half Year Warrant) issued by us (Incorporated by reference to Exhibit 10.2 of our Form 8-K filed on November 10, 2011)
10.24	Form of Common Stock Warrant (Five Year Warrant) issued by us (Incorporated by reference to Exhibit 10.3 of our Form 8-K filed on November 10, 2011)
10.25	Amendment No.1 to Warrant Agreement dated February 10, 2012 by and among us and warrant holders including certain affiliates named therein extending the term of certain warrants until 2015 (Incorporated by reference to Exhibit 99.1 of our Form 8-K filed on February 10, 2012)
10.26	Preferred Stock and Warrant Purchase Agreement dated October 25, 2012 by and among us and the Purchasers named therein (Incorporated by reference to Exhibit 10.1 of our Form 8-K filed October 26, 2012)
10.27	Investor Rights Agreement dated October 25, 2012, between the Registrant and certain Purchasers (Incorporated by reference to Exhibit 10.2 of our Form 8-K filed on October 26, 2012)
10.28	Form of Common Stock Warrant issued by us (Incorporated by reference to Exhibit 10.3 of our Form 8-K filed on October 26, 2012)
10.29	License Agreement, dated June 6, 2013, by and between us and AMAG Pharmaceuticals, Inc. (Incorporated by reference to Exhibit 10.16 of our Form 10-Q for the quarter ended June 30, 2014).
10.30+	License Agreement, dated September 19, 2014, by and between us and Plasma Technologies, LLC. (Incorporated by reference to Exhibit 10.30 of our Form 8-K filed September 25, 2014)
10.31*	Employment Letter Agreement dated September 19, 2014, by and between us and Scott Schorer. (Incorporated by reference to Exhibit 10.30 of our Form 8-K filed September 25, 2014)
10.32*	Employment Letter Agreement dated September 19, 2014, by and between us and Harrison Wehner. (Incorporated by reference to Exhibit 10.30 of our Form 8-K filed September 25, 2014)
10.33	Share Exchange Agreement for Series B Preferred Stock, dated September 10, 2014, by and between us and SCO Capital Partners LLC and Beach Capital LLC (Incorporated by reference to Exhibit 10.33 of our Form 8-K filed October 23, 2014)
20.1	Unsecured Grid Note $250,000, dated September 10, 2014, by and between us and SCO Capital Partners LLC (Incorporated by reference to Exhibit 10.33 of our Form 8-K filed October 23, 2014)
23.1	Consent of Whitley Penn LLP
23.2	Consent of Bingham McCutchen LLP (included in Exhibit 5.1)
24**	Powers of Attorney (included on signature page)

* Management contract or compensatory plan or agreement.

** Filed previously

\+ Portions of this exhibit were omitted and filed separately with the U.S. Securities and Exchange Commision pursuant to a request for confidential treatment.

EXHIBIT 1.1

UNDERWRITING AGREEMENT

between

PLASMATECH BIOPHARMACEUTICALS, INC.

and

AEGIS CAPITAL CORP.,

as Representative of the Several Underwriters

PLASMATECH BIOPHARMACEUTICALS, INC.

UNDERWRITING AGREEMENT

New York, New York
November [•], 2014

Aegis Capital Corp.
As Representative of the several Underwriters named on Schedule 1 attached hereto
810 Seventh Avenue, 18th Floor
New York, New York 10019

Ladies and Gentlemen:

The undersigned, PlasmaTech Biopharmaceuticals, Inc. a corporation formed under the laws of the State of Delaware (collectively with its subsidiaries and affiliates, including, without limitation, all entities disclosed or described in the Registration Statement (as hereinafter defined) as being subsidiaries or affiliates of PlasmaTech Biopharmaceuticals, Inc., the "**Company**"), hereby confirms its agreement (this "**Agreement**") with Aegis Capital Corp. (hereinafter referred to as "you" (including its correlatives) or the "**Representative**") and with the other underwriters named on Schedule 1 hereto for which the Representative is acting as representative (the Representative and such other underwriters being collectively called the "**Underwriters**" or, individually, an "**Underwriter**") as follows:

1. Purchase and Sale of Securities.

1.1 Firm Securities.

1.1.1. Nature and Purchase of Firm Securities.

(i) On the basis of the representations and warranties herein contained, but subject to the terms and conditions herein set forth, the Company agrees to issue and sell to the several Underwriters, an aggregate of [•] shares ("**Firm Shares**") of the Company's common stock, par value $0.01per share (the "**Common Stock**"), together with Common Stock purchase warrants (the "**Warrants**") to purchase up to an aggregate of [•] shares of Common Stock ("**Firm Warrants**" and together with the Firm Shares, the "**Firm Securities**").

(ii) The Underwriters, severally and not jointly, agree to purchase from the Company the number of Firm Shares and Firm Warrants set forth opposite their respective names on Schedule 1 attached hereto and made a part hereof at a purchase price of $[•] per share (93% of the per Firm Security offering price). The Firm Securities are to be offered initially to the public at the offering price set forth on the cover page of the Prospectus (as defined in Section 2.1.1 hereof).

1.1.2. Securities Payment and Delivery.

(i) Delivery and payment for the Firm Securities shall be made at 10:00 a.m., Eastern time, on the third (3rd) Business Day following the effective date (the "**Effective Date**") of the Registration Statement (as defined in Section 2.1.1 below) (or the fourth (4th) Business Day following the Effective Date if the Registration Statement is declared effective after 4:01 p.m., Eastern time) or at such earlier time as shall be agreed upon by the Representative and the Company, at the offices of Sichenzia Ross Friedman Ference LLP, 61 Broadway, 32nd Floor, New York, NY 10006 ("**Representative Counsel**"), or at such other place (or remotely by facsimile or other electronic transmission) as shall be agreed upon by the Representative and the Company. The hour and date of delivery and payment for the Firm Securities is called the "**Closing Date**."

(ii) Payment for the Firm Securities shall be made on the Closing Date by wire transfer in Federal (same day) funds, payable to the order of the Company upon delivery of the certificates (in form and substance satisfactory to the Underwriters) representing the Firm Shares and the Firm Warrants (or through the facilities of the Depository Trust Company ("**DTC**")) for the account of the Underwriters. The Firm Securities shall be registered in such name or names and in such authorized denominations as the Representative may request in writing at least two (2) full Business Days prior to the Closing Date. The Company shall not be obligated to sell or deliver the Firm Securities except upon tender of payment by the Representative for all of the Firm Securities. The term "**Business Day**" means any day other than a Saturday, a Sunday or a legal holiday or a day on which banking institutions are authorized or obligated by law to close in New York, New York.

1.2 Over-allotment Option.

1.2.1. Option Securities. For the purposes of covering any over-allotments in connection with the distribution and sale of the Firm Securities, the Company hereby grants to the Underwriters an option to purchase up to (a) [•] additional shares of Common Stock (the "**Option Shares**"), at a purchase price of $___ per one Option Share (the "**Share Purchase Price**"), and/or (b) Warrants to purchase up to ___ shares of Common Stock (the "**Option Warrants**") and, collectively with the Option Shares, the "**Option Securities**"), at a purchase price of $___ per one Option Warrant (the "**Warrant Purchase Price**"), which may be purchased in any combination of Option Shares and/or Option Warrants. The Firm Securities and the Option Securities are hereinafter referred to together as the "**Public Securities**." The offering and sale of the Public Securities is hereinafter referred to as the "**Offering**."

1.2.2. Option Closing Purchase Price. In connection with an exercise of the Over-Allotment Option, (a) the purchase price to be paid for the Option Shares is equal to the product of the Share Purchase Price multiplied by the number of Option Shares to be purchased and (b) the purchase price to be paid for the Option Warrants is equal to the product of the Warrant Purchase Price multiplied by the number of Option Warrants to be purchased (the aggregate purchase price to be paid on an Option Closing Date, the "**Option Closing Purchase Price**").

1.2.3. Exercise of Over-Allotment Option. The Over-allotment Option granted pursuant to Section 1.2 hereof may be exercised by the Representative as to all (at any time) or any part (from time to time) of the Option Shares within forty-five (45) days after the execution date of this Agreement. An Underwriter will not be under any obligation to purchase any Option Securities prior to the exercise of the Over-allotment Option by the Representative. The Over-allotment Option granted hereby may be exercised by the giving of oral notice to the Company from the Representative, which must be confirmed in writing by overnight mail or facsimile or other electronic transmission setting forth the number of Option Shares and/or Option Warrants to be purchased and the date and time for delivery of and payment for the Option Securities (each, an "**Option Closing Date**"), which shall not be later than five (5) full Business Days after the date of the notice or such other time as shall be agreed upon by the Company and the Representative, at the offices of Representative Counsel or at such other place (including remotely by facsimile or other electronic transmission) as shall be agreed upon by the Company and the Representative. If such delivery and payment for the Option Securities does not occur on the Closing Date, the Option Closing Date will be as set forth in the notice. Upon exercise of the Over-allotment Option with respect to all or any portion of the Option Securities, subject to the terms and conditions set forth herein, (i) the Company shall become obligated to sell to the Underwriters the number of Option Shares and/or Option Warrants specified in such notice and (ii) each of the Underwriters, acting severally and not jointly, shall purchase that portion of the total number of Option Shares and/or Option Warrants then being purchased as set forth in Schedule 1 opposite the name of such Underwriter.

1.2.4. Payment and Delivery. Payment for the Option Securities shall be made on the Option Closing Date by wire transfer in Federal (same day) funds, payable to the order of the Company upon delivery to you of certificates (in form and substance satisfactory to the Underwriters) representing the Option Securities (or through the facilities of DTC) for the account of the Underwriters. The Option Securities shall be registered in such name or names and in such authorized denominations as the Representative may request in writing at least two (2) full Business Days prior to the Option Closing Date. The Company shall not be obligated to sell or deliver the Option Securities except upon tender of payment by the Representative for applicable Option Securities. The Option Closing Date may be simultaneous with, but not earlier than, the Closing Date; and in the event that such time and date are simultaneous, the term "Closing Date" shall refer to the time and date of delivery of the Firm Securities and Option Securities.

1.3 Representative's Warrants.

1.3.1. Purchase Warrants. The Company hereby agrees to issue and sell to the Representative (and/or its designees) on the Closing Date an option (the "**Representative's Warrant**") to purchase from the Company of an aggregate of [•] shares of Common Stock, representing 2.5% of the Firm Shares (excluding the Option Shares and the Shares of Common Stock underlying the Firm Warrants and the Option Warrants), for an aggregate purchase price of $100.00. The Representative's Warrant agreement, in the form attached hereto as Exhibit A (the "**Representative's Warrant Agreement**"), shall be exercisable, in whole or in part, commencing on a date which is one (1) year after the Effective Date and expiring on the five-year anniversary of the Effective Date at an initial exercise price per shares of Common Stock of $[•], which is equal to 125% of the initial public offering price of the Firm Shares. The Representative's Warrant Agreement and the shares of Common Stock issuable upon exercise thereof are hereinafter referred to together as the "**Representative's Securities**." The Representative understands and agrees that there are significant restrictions pursuant to FINRA Rule 5110 against transferring the Representative's Warrant Agreement and the underlying shares of Common Stock during the one hundred eighty (180) days after the Effective Date and by its acceptance thereof shall agree that it will not sell, transfer, assign, pledge or hypothecate the Representative's Warrant Agreement, or any portion thereof, or be the subject of any hedging, short sale, derivative, put or call transaction that would result in the effective economic disposition of such securities for a period of one hundred eighty (180) days following the Effective Date to anyone other than (i) an Underwriter or a selected dealer in connection with the Offering, or (ii) a bona fide officer or partner of the Representative or of any such Underwriter or selected dealer; and only if any such transferee agrees to the foregoing lock-up restrictions.

1.3.2. Delivery. Delivery of the Representative's Warrant Agreement shall be made on the Closing Date and shall be issued in the name or names and in such authorized denominations as the Representative may request.

2 . Representations and Warranties of the Company . The Company represents and warrants to the Underwriters as of the ıble Time (as defined below), as of the Closing Date and as of the Option Closing Date, if any, as follows:

2.1 Filing of Registration Statement.

2.1.1. Pursuant to the Securities Act. The Company has filed with the U.S. Securities and Exchange Commission (the "**Commission**") a registration statement, and an amendment or amendments thereto, on Form S-1 (File No. 333-197220), including any related prospectus or prospectuses, for the registration of the Public Securities and the Representative's Securities under the Securities Act of 1933, as amended (the "**Securities Act**"), which registration statement and amendment or amendments have been prepared by the Company in all material respects in conformity with the requirements of the Securities Act and the rules and regulations of the Commission under the Securities Act (the "**Securities Act Regulations**") and will contain all material statements that are required to be stated therein in accordance with the Securities Act and the Securities Act Regulations. Except as the context may otherwise require, such registration statement, as amended, on file with the Commission at the time the registration statement became effective (including the Preliminary Prospectus included in the registration statement, financial statements, schedules, exhibits and all other documents filed as a part thereof or incorporated therein and all information deemed to be a part thereof as of the Effective Date pursuant to paragraph (b) of Rule 430A of the Securities Act Regulations (the "**Rule 430A Information**")), is referred to herein as the "**Registration Statement**." If the Company files any registration statement pursuant to Rule 462(b) of the Securities Act Regulations, then after such filing, the term "**Registration Statement**" shall include such registration statement filed pursuant to Rule 462(b). The Registration Statement has been declared effective by the Commission on the date hereof.

Each prospectus used prior to the effectiveness of the Registration Statement, and each prospectus that omitted the Rule 430A Information that was used after such effectiveness and prior to the execution and delivery of this Agreement, is herein called a "**Preliminary Prospectus**." The Preliminary Prospectus, subject to completion, dated [•], 2014, that was included in the Registration Statement immediately prior to the Applicable Time is hereinafter called the "**Pricing Prospectus**." The final prospectus in the form first furnished to the Underwriters for use in the Offering is hereinafter called the "**Prospectus**." Any reference to the "most recent Preliminary Prospectus" shall be deemed to refer to the latest Preliminary Prospectus included in the Registration Statement.

"**Applicable Time**" means [TIME] [a.m./p.m.], Eastern time, on the date of this Agreement.

"**Issuer Free Writing Prospectus**" means any "issuer free writing prospectus," as defined in Rule 433 of the Securities Act Regulations ("**Rule 433**"), including without limitation any "free writing prospectus" (as defined in Rule 405 of the Securities Act Regulations) relating to the Public Securities that is (i) required to be filed with the Commission by the Company, (ii) a "road show that is a written communication" within the meaning of Rule 433(d)(8)(i), whether or not required to be filed with the Commission, or (iii) exempt from filing with the Commission pursuant to Rule 433(d)(5)(i) because it contains a description of the Public Securities or of the Offering that does not reflect the final terms, in each case in the form filed or required to be filed with the Commission or, if not required to be filed, in the form retained in the Company's records pursuant to Rule 433(g).

"**Issuer General Use Free Writing Prospectus**" means any Issuer Free Writing Prospectus that is intended for general distribution to prospective investors (other than a "*bona fide* electronic road show," as defined in Rule 433 (the "**Bona Fide Electronic Road Show**"), as evidenced by its being specified in Schedule 2-B hereto.

"**Issuer Limited Use Free Writing Prospectus**" means any Issuer Free Writing Prospectus that is not an Issuer General Use Free Writing Prospectus.

"**Pricing Disclosure Package**" means any Issuer General Use Free Writing Prospectus issued at or prior to the Applicable Time, the Pricing Prospectus and the information included on Schedule 2-A hereto, all considered together.

2.1.2. Pursuant to the Exchange Act. The Company has filed with the Commission a Form 8-A (File Number 000-[•]) providing for the registration pursuant to Section 12(b) under the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), of the shares of Common Stock and Warrants. The registration of the shares of Common Stock and Warrants under the Exchange Act has been declared effective by the Commission on or prior to the date hereof. The Company has taken no action designed to, or likely to have the effect of, terminating the registration of the shares of Common Stock under the Exchange Act, nor has the Company received any notification that the Commission is contemplating terminating such registration.

2.2 Stock Exchange Listing. The shares of Common Stock and warrants have been approved for listing on The NASDAQ Capital Market (the "**Exchange**"), and the Company has taken no action designed to, or likely to have the effect of, delisting the shares of Common Stock or Warrants from the Exchange, nor has the Company received any notification that the Exchange is contemplating terminating such listing except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus.

2.3 No Stop Orders, etc. Neither the Commission nor, to the Company's knowledge, any state regulatory authority has issued any order preventing or suspending the use of the Registration Statement, any Preliminary Prospectus or the Prospectus or has instituted or, to the Company's knowledge, threatened to institute, any proceedings with respect to such an order. The Company has complied with each request (if any) from the Commission for additional information.

2.4 Disclosures in Registration Statement.

2.4.1. Compliance with Securities Act and 10b-5 Representation.

(i) Each of the Registration Statement and any post-effective amendment thereto, at the time it became effective, complied in all material respects with the requirements of the Securities Act and the Securities Act Regulations. Each Preliminary Prospectus, including the prospectus filed as part of the Registration Statement as originally filed or as part of any amendment or supplement thereto, and the Prospectus, at the time each was filed with the Commission, complied in all material respects with the requirements of the Securities Act and the Securities Act Regulations. Each Preliminary Prospectus delivered to the Underwriters for use in connection with this Offering and the Prospectus was or will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

(ii) Neither the Registration Statement nor any amendment thereto, at its effective time, as of the Applicable Time, at the Closing Date or at any Option Closing Date (if any), contained, contains or will contain an untrue statement of a material fact or omitted, omits or will omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading.

(iii) The Pricing Disclosure Package, as of the Applicable Time, at the Closing Date or at any Option Closing Date (if any), did not, does not and will not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; and each Issuer Limited Use Free Writing Prospectus hereto does not conflict with the information contained in the Registration Statement, any Preliminary Prospectus, the Pricing Prospectus or the Prospectus, and each such Issuer Limited Use Free Writing Prospectus, as supplemented by and taken together with the Pricing Prospectus as of the Applicable Time, did not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading; provided, however, that this representation and warranty shall not apply to statements made or statements omitted in reliance upon and in conformity with written information furnished to the Company with respect to the Underwriters by the Representative expressly for use in the Registration Statement, the Pricing Prospectus or the Prospectus or any amendment thereof or supplement thereto. The parties acknowledge and agree that such information provided by or on behalf of any Underwriter consists solely of the following disclosure contained in the "Underwriting" section of the Prospectus: [_____] (the "**Underwriters' Information**"); and

(iv) Neither the Prospectus nor any amendment or supplement thereto (including any prospectus wrapper), as of its issue date, at the time of any filing with the Commission pursuant to Rule 424(b), at the Closing Date or at any Option Closing Date, included, includes or will include an untrue statement of a material fact or omitted, omits or will omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; provided, however, that this representation and warranty shall not apply to the Underwriters' Information.

2.4.2. Disclosure of Agreements. The agreements and documents described in the Registration Statement, the Pricing Disclosure Package and the Prospectus conform in all material respects to the descriptions thereof contained therein and there are no agreements or other documents required by the Securities Act and the Securities Act Regulations to be described in the Registration Statement, the Pricing Disclosure Package and the Prospectus or to be filed with the Commission as exhibits to the Registration Statement, that have not been so described or filed. Each agreement or other instrument (however characterized or described) to which the Company is a party or by which it is or may be bound or affected and (i) that is referred to in the Registration Statement, the Pricing Disclosure Package and the Prospectus, or (ii) is material to the Company's business, has been duly authorized and validly executed by the Company, is in full force and effect in all material respects and is enforceable against the Company and, to the Company's knowledge, the other parties thereto, in accordance with its terms, except (x) as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting creditors' rights generally, (y) as enforceability of any indemnification or contribution provision may be limited under the federal and state securities laws, and (z) that the remedy of specific performance and injunctive and other forms of equitable relief may be subject to the equitable defenses and to the discretion of the court before which any proceeding therefor may be brought. None of such agreements or instruments has been assigned by the Company, and neither the Company nor, to the Company's knowledge, any other party is in default thereunder and, to the Company's knowledge, no event has occurred that, with the lapse of time or the giving of notice, or both, would constitute a default thereunder. To the Company's knowledge, performance by the Company of the material provisions of such agreements or instruments will not result in a violation of any existing applicable law, rule, regulation, judgment, order or decree of any governmental agency or court, domestic or foreign, having jurisdiction over the Company or any of its assets or businesses (each, a "**Governmental Entity**"), including, without limitation, those relating to environmental laws and regulations.

2.4.3. Prior Securities Transactions. No securities of the Company have been sold by the Company or by or on behalf of, or for the benefit of, any person or persons controlling, controlled by or under common control with the Company, except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Preliminary Prospectus. Neither the Company nor any of its affiliates has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under circumstances that would cause the Offering of the Public Securities to be integrated with prior offerings of the Company for purposes of the Securities Act, which would require the registration of any such securities under the Securities Act.

2.4.4. Regulations. The disclosures in the Registration Statement, the Pricing Disclosure Package and the Prospectus concerning the effects of federal, state, local and all foreign regulation on the Offering and the Company's business as currently contemplated are correct in all material respects and no other such regulations are required to be disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus which are not so disclosed.

2.5 Changes After Dates in Registration Statement.

2.5.1. No Material Adverse Change. Since the respective dates as of which information is given in the Registration Statement, the Pricing Disclosure Package and the Prospectus, except as otherwise specifically stated therein: (i) there has been no material adverse change in the financial position or results of operations of the Company, nor any change or development that, singularly or in the aggregate, would involve a material adverse change or a prospective material adverse change, in or affecting the condition (financial or otherwise), results of operations, business, assets or prospects of the Company (a "**Material Adverse Change**"); (ii) there have been no material transactions entered into by the Company, other than as contemplated pursuant to this Agreement; and (iii) no officer or director of the Company has resigned from any position with the Company.

2.5.2. Recent Securities Transactions, etc. Subsequent to the respective dates as of which information is given in the Registration Statement, the Pricing Disclosure Package and the Prospectus, and except as may otherwise be indicated or contemplated herein or disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company has not: (i) issued any securities or incurred any liability or obligation, direct or contingent, for borrowed money other than in the ordinary course of business; or (ii) declared or paid any dividend or made any other distribution on or in respect to its capital stock.

2.6 Disclosures in Commission Filings. Since January 1, 2011, (i) none of the Company's filings with the Commission at the time of such filing contained any untrue statement of a material fact or omitted to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; and (ii) the Company has made all filings with the Commission required under the Exchange Act and the Exchange Act Regulations

2.7 Independent Accountants. To the knowledge of the Company, Whitley Penn LLP (the " **Auditor**"), whose report is filed with the Commission as part of the Registration Statement, the Pricing Disclosure Package and the Prospectus, is an independent registered public accounting firm as required by the Securities Act and the Securities Act Regulations and the Public Company Accounting Oversight Board. The Auditor has not, during the periods covered by the financial statements included in the Registration Statement, the Pricing Disclosure Package and the Prospectus, provided to the Company any non-audit services, as such term is used in Section 10A(g) of the Exchange Act.

2.8 Financial Statements, etc. The financial statements, including the notes thereto and supporting schedules included in the Registration Statement, the Pricing Disclosure Package and the Prospectus, fairly present the financial position and the results of operations of the Company at the dates and for the periods to which they apply; and such financial statements have been prepared in conformity with U.S. generally accepted accounting principles ("**GAAP**"), consistently applied throughout the periods involved (provided that unaudited interim financial statements are subject to year-end audit adjustments that are not expected to be material in the aggregate and do not contain all footnotes required by GAAP); and the supporting schedules included in the Registration Statement present fairly the information required to be stated therein. Except as included therein, no historical or pro forma financial statements are required to be included in the Registration Statement, the Pricing Disclosure Package or the Prospectus under the Securities Act or the Securities Act Regulations. The pro forma and pro forma as adjusted financial information and the related notes, if any, included in the Registration Statement, the Pricing Disclosure Package and the Prospectus have been properly compiled and prepared in accordance with the applicable requirements of the Securities Act and the Securities Act Regulations and present fairly the information shown therein, and the assumptions used in the preparation thereof are reasonable and the adjustments used therein are appropriate to give effect to the transactions and circumstances referred to therein. All disclosures contained in the Registration Statement, the Pricing Disclosure Package or the Prospectus regarding "non-GAAP financial measures" (as such term is defined by the rules and regulations of the Commission), if any, comply with Regulation G of the Exchange Act and Item 10 of Regulation S-K of the Securities Act, to the extent applicable. Each of the Registration Statement, the Pricing Disclosure Package and the Prospectus discloses all material off-balance sheet transactions, arrangements, obligations (including contingent obligations), and other relationships of the Company with unconsolidated entities or other persons that may have a material current or future effect on the Company's financial condition, changes in financial condition, results of operations, liquidity, capital expenditures, capital resources, or significant components of revenues or expenses. Except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, (a) neither the Company nor any of its direct and indirect subsidiaries, including each entity disclosed or described in the Registration Statement, the Pricing Disclosure Package and the Prospectus as being a subsidiary of the Company (each, a "**Subsidiary**" and, collectively, the "**Subsidiaries**"), has incurred any material liabilities or obligations, direct or contingent, or entered into any material transactions other than in the ordinary course of business, (b) the Company has not declared or paid any dividends or made any distribution of any kind with respect to its capital stock, (c) there has not been any change in the capital stock of the Company or any of its Subsidiaries, or, other than in the course of business, any grants under any stock compensation plan, and (d) there has not been any material adverse change in the Company's long-term or short-term debt.

2.9 Authorized Capital; Options, etc. The Company had, at the date or dates indicated in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the duly authorized, issued and outstanding capitalization as set forth therein. Based on the assumptions stated in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company will have on the Closing Date the adjusted stock capitalization set forth therein. Except as set forth in, or contemplated by, the Registration Statement, the Pricing Disclosure Package and the Prospectus, on the Effective Date, as of the Applicable Time and on the Closing Date and any Option Closing Date, there will be no stock options, warrants, or other rights to purchase or otherwise acquire any authorized, but unissued shares of Common Stock of the Company or any security convertible or exercisable into shares of Common Stock of the Company, or any contracts or commitments to issue or sell shares of Common Stock or any such options, warrants, rights or convertible securities.

2.10 Valid Issuance of Securities, etc.

2.10.1. Outstanding Securities. All issued and outstanding securities of the Company issued prior to the transactions contemplated by this Agreement have been duly authorized and validly issued and are fully paid and non-assessable; the holders thereof have no rights of rescission with respect thereto, and are not subject to personal liability by reason of being such holders; and none of such securities were issued in violation of the preemptive rights of any holders of any security of the Company or similar contractual rights granted by the Company. The authorized shares of Common Stock conform in all material respects to all statements relating thereto contained in the Registration Statement, the Pricing Disclosure Package and the Prospectus. The offers and sales of the outstanding shares of Common Stock were at all relevant times either registered under the Securities Act and the applicable state securities or "blue sky" laws or, based in part on the representations and warranties of the purchasers of such Shares, exempt from such registration requirements.

2.10.2. Securities Sold Pursuant to this Agreement. The Public Securities and Representative's Securities have been duly authorized for issuance and sale and, when issued and paid for, will be validly issued, fully paid and non-assessable; the holders thereof are not and will not be subject to personal liability by reason of being such holders; the Public Securities and Representative's Securities are not and will not be subject to the preemptive rights of any holders of any security of the Company or similar contractual rights granted by the Company; and all corporate action required to be taken for the authorization, issuance and sale of the Public Securities and Representative's Securities has been duly and validly taken. The Public Securities and Representative's Securities conform in all material respects to all statements with respect thereto contained in the Registration Statement, the Pricing Disclosure Package and the Prospectus. All corporate action required to be taken for the authorization, issuance and sale of the Representative's Warrant Agreement has been duly and validly taken; the shares of Common Stock issuable upon exercise of the Representative's Warrant have been duly authorized and reserved for issuance by all necessary corporate action on the part of the Company and when paid for and issued in accordance with the Representative's Warrant and the Representative's Warrant Agreement, such shares of Common Stock will be validly issued, fully paid and non-assessable; the holders thereof are not and will not be subject to personal liability by reason of being such holders; and such shares of Common Stock are not and will not be subject to the preemptive rights of any holders of any security of the Company or similar contractual rights granted by the Company.

2.11 Registration Rights of Third Parties. Except as set forth in the Registration Statement, the Pricing Disclosure Package and the Prospectus, no holders of any securities of the Company or any rights exercisable for or convertible or exchangeable into securities of the Company have the right to require the Company to register any such securities of the Company under the Securities Act or to include any such securities in a registration statement to be filed by the Company.

2.12 Validity and Binding Effect of Agreements. This Agreement and the Representative's Warrant Agreement have been duly and validly authorized by the Company, and, when executed and delivered, will constitute, the valid and binding agreements of the Company, enforceable against the Company in accordance with their respective terms, except: (i) as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting creditors' rights generally; (ii) as enforceability of any indemnification or contribution provision may be limited under the federal and state securities laws; and (iii) that the remedy of specific performance and injunctive and other forms of equitable relief may be subject to the equitable defenses and to the discretion of the court before which any proceeding therefor may be brought.

2.13 No Conflicts, etc. The execution, delivery and performance by the Company of this Agreement, the Representative's Warrant Agreement and all ancillary documents, the consummation by the Company of the transactions herein and therein contemplated and the compliance by the Company with the terms hereof and thereof do not and will not, with or without the giving of notice or the lapse of time or both: (i) result in a material breach of, or conflict with any of the terms and provisions of, or constitute a material default under, or result in the creation, modification, termination or imposition of any lien, charge or encumbrance upon any property or assets of the Company pursuant to the terms of any agreement or instrument to which the Company is a party; (ii) result in any violation of the provisions of the Company's Certificate of Incorporation (as the same may be amended or restated from time to time, the "**Charter**") or the by-laws of the Company; or (iii) violate any existing applicable law, rule, regulation, judgment, order or decree of any Governmental Entity as of the date hereof (including, without limitation, those promulgated by the Food and Drug Administration of the U.S. Department of Health and Human Services (the "**FDA**") or by any foreign, federal, state or local regulatory authority performing functions similar to those performed by the FDA).

2.14 No Defaults; Violations. No material default exists in the due performance and observance of any term, covenant or condition of any material license, contract, indenture, mortgage, deed of trust, note, loan or credit agreement, or any other agreement or instrument evidencing an obligation for borrowed money, or any other material agreement or instrument to which the Company is a party or by which the Company may be bound or to which any of the properties or assets of the Company is subject. Except as may be disclosed in the Registration Statement, the Company is not in violation of any term or provision of its Charter or by-laws, or in violation of any franchise, license, permit, applicable law, rule, regulation, judgment or decree of any Governmental Entity.

2.15 Corporate Power; Licenses; Consents.

2.15.1. Conduct of Business. Except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company has all requisite corporate power and authority, and has all necessary authorizations, approvals, orders, licenses, certificates and permits of and from all governmental regulatory officials and bodies that it needs as of the date hereof to conduct its business purpose as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus.

2.15.2. Transactions Contemplated Herein. The Company has all corporate power and authority to enter into this Agreement and to carry out the provisions and conditions hereof, and all consents, authorizations, approvals and orders required in connection therewith have been obtained. No consent, authorization or order of, and no filing with, any court, government agency or other body is required for the valid issuance, sale and delivery of the Public Securities and the consummation of the transactions and agreements contemplated by this Agreement and the Representative's Warrant Agreement and as contemplated by the Registration Statement, the Pricing Disclosure Package and the Prospectus, except with respect to applicable federal and state securities laws and the rules and regulations of the Financial Industry Regulatory Authority, Inc. ("**FINRA**").

2.16 D&O Questionnaires. To the Company's knowledge, all information contained in the questionnaires (the "**Questionnaires**") completed by each of the Company's directors and officers immediately prior to the Offering (the "**Insiders**") as supplemented by all information concerning the Company's directors, officers and principal shareholders as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, as well as in the Lock-Up Agreement (as defined in Section 2.25 below), provided to the Underwriters, is true and correct in all material respects and the Company has not become aware of any information which would cause the information disclosed in the Questionnaires to become materially inaccurate and incorrect.

2.17 Litigation; Governmental Proceedings. There is no action, suit, proceeding, inquiry, arbitration, investigation, litigation or governmental proceeding pending or, to the Company's knowledge, threatened against, or involving the Company or, to the Company's knowledge, any executive officer or director which has not been disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus or in connection with the Company's listing application for the listing of the Public Securities on the Exchange.

2.18 Good Standing. The Company has been duly organized and is validly existing as a corporation and is in good standing under the laws of the State of Delaware as of the date hereof, and is duly qualified to do business and is in good standing in each other jurisdiction in which its ownership or lease of property or the conduct of business requires such qualification, except where the failure to qualify, singularly or in the aggregate, would not have or reasonably be expected to result in a Material Adverse Change.

2.19 Insurance. The Company carries or is entitled to the benefits of insurance, with to the Company's knowledge, reputable insurers, in such amounts and covering such risks which the Company believes are adequate, and all such insurance is in full force and effect. The Company has no reason to believe that it will not be able (i) to renew its existing insurance coverage as and when such policies expire or (ii) to obtain comparable coverage from similar institutions as may be necessary or appropriate to conduct its business as now conducted and at a cost that would not result in a Material Adverse Change.

2.20 Transactions Affecting Disclosure to FINRA.

2.20.1. Finder's Fees. Except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, there are no claims, payments, arrangements, agreements or understandings relating to the payment of a finder's, consulting or origination fee by the Company or any Insider with respect to the sale of the Public Securities hereunder or any other arrangements, agreements or understandings of the Company or, to the Company's knowledge, any of its shareholders that may affect the Underwriters' compensation, as determined by FINRA.

2.20.2. Payments Within Twelve (12) Months. Except as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company has not made any direct or indirect payments (in cash, securities or otherwise) to: (i) any person, as a finder's fee, consulting fee or otherwise, in consideration of such person raising capital for the Company or introducing to the Company persons who raised or provided capital to the Company; (ii) any FINRA member; or (iii) any person or entity that has any direct or indirect affiliation or association with any FINRA member, within the twelve (12) months prior to the Effective Date, other than the payment to the Underwriters as provided hereunder in connection with the Offering.

2.20.3. Use of Proceeds. None of the net proceeds of the Offering will be paid by the Company to any participating FINRA member or its affiliates, except as specifically authorized herein.

2.20.4. FINRA Affiliation. There is no (i) officer or director of the Company, (ii) beneficial owner of 5% or more of any class of the Company's securities or (iii) beneficial owner of the Company's unregistered equity securities which were acquired during the 180-day period immediately preceding the filing of the Registration Statement that is an affiliate or associated person of a FINRA member participating in the Offering (as determined in accordance with the rules and regulations of FINRA).

2.20.5. Information. All information provided by the Company in its FINRA questionnaire to Representative Counsel specifically for use by Representative Counsel in connection with its Public Offering System filings (and related disclosure) with FINRA is true, correct and complete in all material respects.

2.21 Foreign Corrupt Practices Act. None of the Company and its Subsidiaries or, to the Company's knowledge, any director, officer, agent, employee or affiliate of the Company and its Subsidiaries or any other person acting on behalf of the Company and its Subsidiaries, has, directly or indirectly, given or agreed to give any money, gift or similar benefit (other than legal price concessions to customers in the ordinary course of business) to any customer, supplier, employee or agent of a customer or supplier, or official or employee of any governmental agency or instrumentality of any government (domestic or foreign) or any political party or candidate for office (domestic or foreign) or other person who was, is, or may be in a position to help or hinder the business of the Company (or assist it in connection with any actual or proposed transaction) that (i) might subject the Company to any damage or penalty in any civil, criminal or governmental litigation or proceeding, (ii) if not given in the past, might have had a Material Adverse Change or (iii) if not continued in the future, might adversely affect the assets, business, operations or prospects of the Company. The Company has taken reasonable steps to ensure that its accounting controls and procedures are sufficient to cause the Company to comply in all material respects with the Foreign Corrupt Practices Act of 1977, as amended.

2.22 Compliance with OFAC. None of the Company and its Subsidiaries or, to the Company's knowledge, any director, officer, agent, employee or affiliate of the Company and its Subsidiaries or any other person acting on behalf of the Company and its Subsidiaries, is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Department of the Treasury ("**OFAC**"), and the Company will not, directly or indirectly, use the proceeds of the Offering hereunder, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity, for the purpose of financing the activities of any person currently subject to any U.S. sanctions administered by OFAC.

2.23 Money Laundering Laws. The operations of the Company and its Subsidiaries are and have been conducted at all times in compliance with applicable financial recordkeeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the money laundering statutes of all jurisdictions, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any Governmental Entity (collectively, the "**Money Laundering Laws**"); and no action, suit or proceeding by or before any Governmental Entity involving the Company with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

2.24 Regulatory. All preclinical and clinical studies conducted by or on behalf of the Company that are material to the Company and its Subsidiaries, taken as a whole, are or have been adequately described in the Registration Statement, the Pricing Disclosure Package and the Prospectus in all material respects. The clinical and preclinical studies conducted by or on behalf of the Company and its Subsidiaries that are described in the Registration Statement, the Pricing Disclosure Package and the Prospectus or the results of which are referred to in the Registration Statement, the Pricing Disclosure Package and the Prospectus were and, if still ongoing, are being conducted in material compliance with all laws and regulations applicable thereto in the jurisdictions in which they are being conducted and with all laws and regulations applicable to preclinical and clinical studies from which data will be submitted to support marketing approval. The descriptions in the Registration Statement, the Pricing Disclosure Package and the Prospectus of the results of such studies are accurate and complete in all material respects and fairly present the data derived from such studies, and the Company has no knowledge of, or reason to believe that, any large well-controlled clinical study the aggregate results of which are inconsistent with or otherwise call into question the results of any clinical study conducted by or on behalf of the Company that are described in the Registration Statement, the Pricing Disclosure Package and the Prospectus or the results of which are referred to in the Registration Statement, the Pricing Disclosure Package and the Prospectus. Except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company has not received any written notices or statements from the FDA, the European Medicines Agency ("EMA") or any other governmental agency or authority imposing, requiring, requesting or suggesting a clinical hold, termination, suspension or material modification for or of any clinical or preclinical studies that are described in the Registration Statement, the Pricing Disclosure Package and the Prospectus or the results of which are referred to in the Registration Statement, the Pricing Disclosure Package and the Prospectus. Except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company has not received any written notices or statements from the FDA, the EMA or any other governmental agency, and otherwise has no knowledge of, or reason to believe that, (i) any investigational new drug application for potential product of the Company is or has been rejected or determined to be non-approvable or conditionally approvable; and (ii) any license, approval, permit or authorization to conduct any clinical trial of any potential product of the Company has been, will be or may be suspended, revoked, modified or limited.

2.25 Officers' Certificate. Any certificate signed by any duly authorized officer of the Company and delivered to you or to Representative Counsel shall be deemed a representation and warranty by the Company to the Underwriters as to the matters covered thereby.

2.26 Lock-Up Agreements. Schedule 3 hereto contains a complete and accurate list of the Company's officers, directors and each owner of at least 5% of the Company's outstanding shares of Common Stock (or securities convertible or exercisable into shares of Common Stock) (collectively, the "**Lock-Up Parties**"). The Company has caused each of the Lock-Up Parties to deliver to the Representative an executed Lock-Up Agreement, in substantially the form attached hereto as Exhibit B **(**the "**Lock-Up Agreement**"), prior to the execution of this Agreement.

2.27 Subsidiaries. All direct and indirect Subsidiaries of the Company are duly organized and in good standing under the laws of the place of organization or incorporation, and each Subsidiary is in good standing in each jurisdiction in which its ownership or lease of property or the conduct of business requires such qualification, except where the failure to qualify would not have a material adverse effect on the assets, business or operations of the Company taken as a whole. The Company's ownership and control of each Subsidiary is as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus.

2.28 Related Party Transactions. There are no business relationships or related party transactions involving the Company or any other person required to be described in the Registration Statement, the Pricing Disclosure Package and the Prospectus that have not been described as required.

2.29 Board of Directors. The Board of Directors of the Company is comprised of the persons set forth under the heading of the Pricing Prospectus and the Prospectus captioned "Management." The qualifications of the persons serving as board members and the overall composition of the board comply with the Exchange Act, the Exchange Act Regulations, the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder (the "**Sarbanes-Oxley Act**") applicable to the Company and the listing rules of the Exchange. At least one member of the Audit Committee of the Board of Directors of the Company qualifies as an "audit committee financial expert," as such term is defined under Regulation S-K and the listing rules of the Exchange. In addition, at least a majority of the persons serving on the Board of Directors qualify as "independent," as defined under the listing rules of the Exchange.

2.30 Sarbanes-Oxley Compliance.

2.30.1. Disclosure Controls. The Company has developed and currently maintains disclosure controls and procedures that will comply with Rule 13a-15 or 15d-15 under the Exchange Act Regulations, and such controls and procedures are effective to ensure that all material information concerning the Company will be made known on a timely basis to the individuals responsible for the preparation of the Company's Exchange Act filings and other public disclosure documents.

2.30.2. Compliance. The Company is, or at the Applicable Time and on the Closing Date will be, in material compliance with the provisions of the Sarbanes-Oxley Act applicable to it, and has implemented or will implement such programs and taken reasonable steps to ensure the Company's future compliance (not later than the relevant statutory and regulatory deadlines therefor) with all of the material provisions of the Sarbanes-Oxley Act.

2.31 Accounting Controls. The Company and its Subsidiaries maintain systems of "internal control over financial reporting" (as defined under Rules 13a-15 and 15d-15 under the Exchange Act Regulations) that comply with the requirements of the Exchange Act and have been designed by, or under the supervision of, their respective principal executive and principal financial officers, or persons performing similar functions, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP, including, but not limited to, internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorizations; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. Except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company is not aware of any material weaknesses in its internal controls. The Company's auditors and the Audit Committee of the Board of Directors of the Company have been advised of: (i) all significant deficiencies and material weaknesses in the design or operation of internal controls over financial reporting which are known to the Company's management and that have adversely affected or are reasonably likely to adversely affect the Company' ability to record, process, summarize and report financial information; and (ii) any fraud known to the Company's management, whether or not material, that involves management or other employees who have a significant role in the Company's internal controls over financial reporting.

2.32 No Investment Company Status. The Company is not and, after giving effect to the Offering and the application of the proceeds thereof as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, will not be, required to register as an "investment company," as defined in the Investment Company Act of 1940, as amended.

2.33 No Labor Disputes. No labor dispute with the employees of the Company or any of its Subsidiaries exists or, to the knowledge of the Company, is imminent.

2.34 Intellectual Property Rights. The Company and each of its Subsidiaries owns or possesses or has valid rights to use all patents, patent applications, trademarks, service marks, trade names, trademark registrations, service mark registrations, copyrights, licenses, inventions, trade secrets and similar rights ("**Intellectual Property Rights**") necessary for the conduct of the business of the Company and its Subsidiaries as currently carried on and as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus. To the knowledge of the Company, no action or use by the Company or any of its Subsidiaries necessary for the conduct of its business as currently carried on and as described in the Registration Statement and the Prospectus will involve or give rise to any infringement of, or license or similar fees for, any Intellectual Property Rights of others. Neither the Company nor any of its Subsidiaries has received any notice alleging any such infringement, fee or conflict with asserted Intellectual Property Rights of others. Except as would not reasonably be expected to result, individually or in the aggregate, in a Material Adverse Change (A) to the knowledge of the Company, there is no infringement, misappropriation or violation by third parties of any of the Intellectual Property Rights owned by the Company; (B) there is no pending or, to the knowledge of the Company, threatened action, suit, proceeding or claim by others challenging the rights of the Company in or to any such Intellectual Property Rights, and the Company is unaware of any facts which would form a reasonable basis for any such claim, that would, individually or in the aggregate, together with any other claims in this Section 2.34, reasonably be expected to result in a Material Adverse Change; (C) the Intellectual Property Rights owned by the Company and, to the knowledge of the Company, the Intellectual Property Rights licensed to the Company have not been adjudged by a court of competent jurisdiction invalid or unenforceable, in whole or in part, and there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others challenging the validity or scope of any such Intellectual Property Rights, and the Company is unaware of any facts which would form a reasonable basis for any such claim that would, individually or in the aggregate, together with any other claims in this Section 2.34, reasonably be expected to result in a Material Adverse Change; (D) there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others that the Company infringes, misappropriates or otherwise violates any Intellectual Property Rights or other proprietary rights of others, the Company has not received any written notice of such claim and the Company is unaware of any other facts which would form a reasonable basis for any such claim that would, individually or in the aggregate, together with any other claims in this Section 2.34, reasonably be expected to result in a Material Adverse Change; and (E) to the Company's knowledge, no current employee of the Company is in or has ever been in violation in any material respect of any term of any employment contract, patent disclosure agreement, invention assignment agreement, non-competition agreement, non-solicitation agreement, nondisclosure agreement or any restrictive covenant to or with a former employer where the basis of such violation relates to such employee's employment with the Company, or actions undertaken by the employee while employed with the Company and could reasonably be expected to result, individually or in the aggregate, in a Material Adverse Change. To the Company's knowledge, all material technical information developed by and belonging to the Company which has not been patented has been kept confidential. The Company is not a party to or bound by any options, licenses or agreements with respect to the Intellectual Property Rights of any other person or entity that are required to be set forth in the Registration Statement, the Pricing Disclosure Package and the Prospectus and are not described therein. The Registration Statement, the Pricing Disclosure Package and the Prospectus contain in all material respects the same description of the matters set forth in the preceding sentence. None of the technology employed by the Company has been obtained or is being used by the Company in violation of any contractual obligation binding on the Company or, to the Company's knowledge, any of its officers, directors or employees, or otherwise in violation of the rights of any persons..

2.35 Taxes. Each of the Company and its Subsidiaries has filed all returns (as hereinafter defined) required to be filed with taxing authorities prior to the date hereof or has duly obtained extensions of time for the filing thereof. Each of the Company and its Subsidiaries has paid all taxes (as hereinafter defined) shown as due on such returns that were filed and has paid all taxes imposed on or assessed against the Company or such respective Subsidiary. The provisions for taxes payable, if any, shown on the financial statements filed with or as part of the Registration Statement are sufficient for all accrued and unpaid taxes, whether or not disputed, and for all periods to and including the dates of such consolidated financial statements. Except as disclosed in writing to the Underwriters, (i) no issues have been raised (and are currently pending) by any taxing authority in connection with any of the returns or taxes asserted as due from the Company or its Subsidiaries, and (ii) no waivers of statutes of limitation with respect to the returns or collection of taxes have been given by or requested from the Company or its Subsidiaries. The term "**taxes**" means all federal, state, local, foreign and other net income, gross income, gross receipts, sales, use, ad valorem, transfer, franchise, profits, license, lease, service, service use, withholding, payroll, employment, excise, severance, stamp, occupation, premium, property, windfall profits, customs, duties or other taxes, fees, assessments or charges of any kind whatever, together with any interest and any penalties, additions to tax or additional amounts with respect thereto. The term "**returns**" means all returns, declarations, reports, statements and other documents required to be filed in respect to taxes.

2.36 ERISA Compliance. The Company and any "employee benefit plan" (as defined under the Employee Retirement Income Security Act of 1974, as amended, and the regulations and published interpretations thereunder (collectively, "**ERISA**")) established or maintained by the Company or its "ERISA Affiliates" (as defined below) are in compliance in all material respects with ERISA. "**ERISA Affiliate**" means, with respect to the Company, any member of any group of organizations described in Sections 414(b), (c),(m) or (o) of the Internal Revenue Code of 1986, as amended, and the regulations and published interpretations thereunder (the "**Code**") of which the Company is a member. No "reportable event" (as defined under ERISA) has occurred or is reasonably expected to occur with respect to any "employee benefit plan" established or maintained by the Company or any of its ERISA Affiliates. No "employee benefit plan" established or maintained by the Company or any of its ERISA Affiliates, if such "employee benefit plan" were terminated, would have any "amount of unfunded benefit liabilities" (as defined under ERISA). Neither the Company nor any of its ERISA Affiliates has incurred or reasonably expects to incur any material liability under (i) Title IV of ERISA with respect to termination of, or withdrawal from, any "employee benefit plan" or (ii) Sections 412, 4971, 4975 or 4980B of the Code. Each "employee benefit plan" established or maintained by the Company or any of its ERISA Affiliates that is intended to be qualified under Section 401(a) of the Code is so qualified and, to the knowledge of the Company, nothing has occurred, whether by action or failure to act, which would cause the loss of such qualification.

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

2.38 Ineligible Issuer. At the time of filing the Registration Statement and any post-effective amendment thereto, at the time of effectiveness of the Registration Statement and any amendment thereto, at the earliest time thereafter that the Company or another offering participant made a bona fide offer (within the meaning of Rule 164(h)(2) of the Securities Act Regulations) of the Public Securities and at the date hereof, the Company was not and is not an "ineligible issuer," as defined in Rule 405, without taking account of any determination by the Commission pursuant to Rule 405 that it is not necessary that the Company be considered an ineligible issuer.

2.39 Real Property. Except as set forth in the Registration Statement, the Pricing Disclosure Package and the Prospectus, the Company and its Subsidiaries have good and marketable title in fee simple to, or have valid rights to lease or otherwise use, all items of real or personal property which are material to the business of the Company and its Subsidiaries taken as a whole, in each case free and clear of all liens, encumbrances, security interests, claims and defects that do not, singly or in the aggregate, materially affect the value of such property and do not interfere with the use made and proposed to be made of such property by the Company or its Subsidiaries; and all of the leases and subleases material to the business of the Company and its subsidiaries, considered as one enterprise, and under which the Company or any of its Subsidiaries holds properties described in the Registration Statement, the Pricing Disclosure Package and the Prospectus, are in full force and effect, and neither the Company nor any Subsidiary has received any notice of any material claim of any sort that has been asserted by anyone adverse to the rights of the Company or any Subsidiary under any of the leases or subleases mentioned above, or affecting or questioning the rights of the Company or such Subsidiary to the continued possession of the leased or subleased premises under any such lease or sublease.

2.40 Contracts Affecting Capital. There are no transactions, arrangements or other relationships between and/or among the Company, any of its affiliates (as such term is defined in Rule 405 of the Securities Act Regulations) and any unconsolidated entity, including, but not limited to, any structured finance, special purpose or limited purpose entity that could reasonably be expected to materially affect the Company's or its Subsidiaries' liquidity or the availability of or requirements for their capital resources required to be described or incorporated by reference in the Registration Statement, the Pricing Disclosure Package and the Prospectus which have not been described or incorporated by reference as required.

2.41 Loans to Directors or Officers. There are no outstanding loans, advances (except normal advances for business expenses in the ordinary course of business) or guarantees or indebtedness by the Company or its Subsidiaries to or for the benefit of any of the officers or directors of the Company, its Subsidiaries or any of their respective family members, except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Prospectus.

2.42 Smaller Reporting Company. As of the time of filing of the Registration Statement, the Company was a "smaller reporting company," as defined in Rule 12b-2 of the Exchange Act.

2.43 Industry Data. The statistical and market-related data included in each of the Registration Statement, the Pricing Disclosure Package and the Prospectus are based on or derived from sources that the Company reasonably and in good faith believes are reliable and accurate or represent the Company's good faith estimates that are made on the basis of data derived from such sources.

2.44 Reverse Stock Split. The Company has taken all necessary corporate action to effectuate a reverse stock split of its shares of Common Stock on the basis of one (1) such share for each [fifty (50)] issued and outstanding shares thereof (the "Reverse Stock Split"), such Reverse Stock Split became effective on October [23], 2014.

2.45 Margin Securities. The Company owns no "margin securities" as that term is defined in Regulation U of the Board of Governors of the Federal Reserve System (the "**Federal Reserve Board**"), and none of the proceeds of Offering will be used, directly or indirectly, for the purpose of purchasing or carrying any margin security, for the purpose of reducing or retiring any indebtedness which was originally incurred to purchase or carry any margin security or for any other purpose which might cause any of the shares of Common Stock to be considered a "purpose credit" within the meanings of Regulation T, U or X of the Federal Reserve Board.

3. Covenants of the Company. The Company covenants and agrees as follows:

3.1 Amendments to Registration Statement. The Company shall deliver to the Representative, prior to filing, any amendment or supplement to the Registration Statement or Prospectus proposed to be filed after the Effective Date and not file any such amendment or supplement to which the Representative shall reasonably object in writing.

3.2 Federal Securities Laws.

3.2.1. Compliance. The Company, subject to Section 3.2.2, shall comply with the requirements of Rule 430A of the Securities Act Regulations, and will notify the Representative promptly, and confirm the notice in writing, (i) when any post-effective amendment to the Registration Statement shall become effective or any amendment or supplement to the Prospectus shall have been filed; (ii) of the receipt of any comments from the Commission; (iii) of any request by the Commission for any amendment to the Registration Statement or any amendment or supplement to the Prospectus or for additional information; (iv) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or any post-effective amendment or of any order preventing or suspending the use of any Preliminary Prospectus or the Prospectus, or of the suspension of the qualification of the Public Securities and Representative's Securities for offering or sale in any jurisdiction, or of the initiation or threatening of any proceedings for any of such purposes or of any examination pursuant to Section 8(d) or 8(e) of the Securities Act concerning the Registration Statement and (v) if the Company becomes the subject of a proceeding under Section 8A of the Securities Act in connection with the Offering of the Public Securities and Representative's Securities. The Company shall effect all filings required under Rule 424(b) of the Securities Act Regulations, in the manner and within the time period required by Rule 424(b) (without reliance on Rule 424(b)(8)), and shall take such steps as it deems necessary to ascertain promptly whether the form of prospectus transmitted for filing under Rule 424(b) was received for filing by the Commission and, in the event that it was not, it will promptly file such prospectus. The Company shall use its best efforts to prevent the issuance of any stop order, prevention or suspension and, if any such order is issued, to obtain the lifting thereof at the earliest possible moment.

3.2.2. Continued Compliance. The Company shall comply with the Securities Act, the Securities Act Regulations, the Exchange Act and the Exchange Act Regulations so as to permit the completion of the distribution of the Public Securities as contemplated in this Agreement and in the Registration Statement, the Pricing Disclosure Package and the Prospectus. If at any time when a prospectus relating to the Public Securities is (or, but for the exception afforded by Rule 172 of the Securities Act Regulations ("**Rule 172**"), would be) required by the Securities Act to be delivered in connection with sales of the Public Securities, any event shall occur or condition shall exist as a result of which it is necessary, in the opinion of counsel for the Underwriters or for the Company, to (i) amend the Registration Statement in order that the Registration Statement will not include an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading; (ii) amend or supplement the Pricing Disclosure Package or the Prospectus in order that the Pricing Disclosure Package or the Prospectus, as the case may be, will not include any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein not misleading in the light of the circumstances existing at the time it is delivered to a purchaser or (iii) amend the Registration Statement or amend or supplement the Pricing Disclosure Package or the Prospectus, as the case may be, in order to comply with the requirements of the Securities Act or the Securities Act Regulations, the Company will promptly (A) give the Representative notice of such event; (B) prepare any amendment or supplement as may be necessary to correct such statement or omission or to make the Registration Statement, the Pricing Disclosure Package or the Prospectus comply with such requirements and, a reasonable amount of time prior to any proposed filing or use, furnish the Representative with copies of any such amendment or supplement and (C) file with the Commission any such amendment or supplement; provided that the Company shall not file or use any such amendment or supplement to which the Representative or counsel for the Underwriters shall reasonably object. The Company will furnish to the Underwriters such number of copies of such amendment or supplement as the Underwriters may reasonably request. The Company has given the Representative notice of any filings made pursuant to the Exchange Act or the Exchange Act Regulations within 48 hours prior to the Applicable Time. The Company shall give the Representative notice of its intention to make any such filing from the Applicable Time until the later of the Closing Date and the exercise in full or expiration of the Over-allotment Option specified in Section 1.2 hereof and will furnish the Representative with copies of the related document(s) a reasonable amount of time prior to such proposed filing, as the case may be, and will not file or use any such document to which the Representative or counsel for the Underwriters shall reasonably object.

3.2.3. Filing of Final Prospectus. The Company shall file the Prospectus (in form and substance satisfactory to the Representative) with the Commission pursuant to the requirements of Rule 424 of the Securities Act Regulations.

3.2.4. Exchange Act Registration. For a period of three (3) years after the date of this Agreement, the Company shall use its reasonable best efforts to maintain the registration of the shares of Common Stock under the Exchange Act. The Company shall not deregister the shares of Common Stock under the Exchange Act without the prior written consent of the Representative, which consent shall not be unreasonably withheld.

3 . 2 . 5 . Free Writing Prospectuses. The Company agrees that, unless it obtains the prior written consent of the Representative, which consent shall not be unreasonably withheld, it shall not make any offer relating to the Public Securities that would constitute an Issuer Free Writing Prospectus or that would otherwise constitute a "free writing prospectus," or a portion thereof, required to be filed by the Company with the Commission or retained by the Company under Rule 433; provided that the Representative shall be deemed to have consented to each Issuer General Use Free Writing Prospectus hereto and any "road show that is a written communication" within the meaning of Rule 433(d)(8)(i) that has been reviewed by the Representative. The Company represents that it has treated or agrees that it will treat each such free writing prospectus consented to, or deemed consented to, by the Underwriters as an "issuer free writing prospectus," as defined in Rule 433, and that it has complied and will comply with the applicable requirements of Rule 433 with respect thereto, including timely filing with the Commission where required, legending and record keeping. If at any time following issuance of an Issuer Free Writing Prospectus there occurred or occurs an event or development as a result of which such Issuer Free Writing Prospectus conflicted or would conflict with the information contained in the Registration Statement or included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances existing at that subsequent time, not misleading, the Company will promptly notify the Underwriters and will promptly amend or supplement, at its own expense, such Issuer Free Writing Prospectus to eliminate or correct such conflict, untrue statement or omission.

3.3 Delivery to the Underwriters of Registration Statements. The Company has delivered or made available or shall deliver or make available to the Representative and counsel for the Representative, without charge, signed copies of the Registration Statement as originally filed and each amendment thereto (including exhibits filed therewith) and signed copies of all consents and certificates of experts, and will also deliver to the Underwriters, without charge, a conformed copy of the Registration Statement as originally filed and each amendment thereto (without exhibits) for each of the Underwriters. The copies of the Registration Statement and each amendment thereto furnished to the Underwriters will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

3 . 4 Delivery to the Underwriters of Prospectuses. The Company has delivered or made available or will deliver or make available to each Underwriter, without charge, as many copies of each Preliminary Prospectus as such Underwriter reasonably requested, and the Company hereby consents to the use of such copies for purposes permitted by the Securities Act. The Company will furnish to each Underwriter, without charge, during the period when a prospectus relating to the Public Securities is (or, but for the exception afforded by Rule 172, would be) required to be delivered under the Securities Act, such number of copies of the Prospectus (as amended or supplemented) as such Underwriter may reasonably request. The Prospectus and any amendments or supplements thereto furnished to the Underwriters will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

3 . 5 Effectiveness and Events Requiring Notice to the Representative. The Company shall use its reasonable best efforts to cause the Registration Statement to remain effective with a current prospectus for at least nine (9) months after the Applicable Time, and shall use its commercially reasonable efforts to cause the Registration Statement to remain effective until such time as all of the Warrants have been exercised or terminated, and shall notify the Representative immediately and confirm the notice in writing: (i) of the effectiveness of the Registration Statement and any amendment thereto; (ii) of the issuance by the Commission of any stop order or of the initiation, or the threatening, of any proceeding for that purpose; (iii) of the issuance by any state securities commission of any proceedings for the suspension of the qualification of the Public Securities for offering or sale in any jurisdiction or of the initiation, or the threatening, of any proceeding for that purpose; (iv) of the mailing and delivery to the Commission for filing of any amendment or supplement to the Registration Statement or Prospectus; (v) of the receipt of any comments or request for any additional information from the Commission; and (vi) of the happening of any event during the period described in this Section 3.5 that, in the judgment of the Company, makes any statement of a material fact made in the Registration Statement, the Pricing Disclosure Package or the Prospectus untrue or that requires the making of any changes in (a) the Registration Statement in order to make the statements therein not misleading, or (b) in the Pricing Disclosure Package or the Prospectus in order to make the statements therein, in light of the circumstances under which they were made, not misleading. If the Commission or any state securities commission shall enter a stop order or suspend such qualification at any time, the Company shall make every reasonable effort to obtain promptly the lifting of such order.

3.6 Review of Financial Statements. For a period of five (5) years after the date of this Agreement, the Company, at its expense, shall cause its regularly engaged independent registered public accounting firm to review (but not audit) the Company's financial statements for each of the three fiscal quarters immediately preceding the announcement of any quarterly financial information.

3.7 Listing. The Company shall use its reasonable best efforts to maintain the listing of the shares of Common Stock (including the Public Securities) on the Exchange for at least three years from the date of this Agreement.

3.8 Financial Public Relations Firm. As of the Effective Date, the Company shall have retained a financial public relations firm reasonably acceptable to the Representative and the Company, which shall initially be [PUBLIC RELATIONS FIRM], which firm shall be experienced in assisting issuers in initial public offerings of securities and in their relations with their security holders, and shall retain such firm or another firm reasonably acceptable to the Representative for a period of not less than two (2) years after the Effective Date.

3.9 Reports to the Representative.

3.9.1. Periodic Reports, etc. For a period of three (3) years after the date of this Agreement, the Company shall furnish or make available to the Representative copies of such financial statements and other periodic and special reports as the Company from time to time furnishes generally to holders of any class of its securities and also promptly furnish to the Representative: (i) a copy of each periodic report the Company shall be required to file with the Commission under the Exchange Act and the Exchange Act Regulations; (ii) a copy of every press release and every news item and article with respect to the Company or its affairs which was released by the Company; (iii) a copy of each Form 8-K prepared and filed by the Company; (iv) five copies of each registration statement filed by the Company under the Securities Act; and (v) such additional documents and information with respect to the Company and the affairs of any future subsidiaries of the Company as the Representative may from time to time reasonably request; provided the Representative shall sign, if requested by the Company, a Regulation FD compliant confidentiality agreement which is reasonably acceptable to the Representative and Representative Counsel in connection with the Representative's receipt of such information. Documents filed with the Commission pursuant to its EDGAR system shall be deemed to have been delivered to the Representative pursuant to this Section 3.9.1.

3.9.2. Transfer Agent; Transfer Sheets. For a period of three (3) years after the date of this Agreement, the Company shall retain a transfer agent and registrar acceptable to the Representative (the "**Transfer Agent**") and shall furnish to the Representative at the Company's sole cost and expense such transfer sheets of the Company's securities as the Representative may reasonably request, including the daily and monthly consolidated transfer sheets of the Transfer Agent and DTC. American Stock Transfer & Trust Company is acceptable to the Representative to act as Transfer Agent for the shares of Common Stock.

3.9.3. Trading Reports. During such time as the Public Securities are listed on the Exchange, the Company shall provide to the Representative, at the Company's expense, such reports published by Exchange relating to price trading of the Public Securities, as the Representative shall reasonably request.

3.10 Payment of Expenses

3.10.1. General Expenses Related to the Offering. The Company hereby agrees to pay on each of the Closing Date and the Option Closing Date, if any, to the extent not paid at the Closing Date, all expenses incident to the performance of the obligations of the Company under this Agreement, including, but not limited to: (a) all filing fees and communication expenses relating to the registration of the Public Securities and the Representatives Securities with the Commission; (b) all Public Filing System filing fees associated with the review of the Offering by FINRA; (c) all fees and expenses relating to the listing of such Public Securities on the Exchange and such other stock exchanges as the Company and the Representative together determine; (d) all fees, expenses and disbursements relating to background checks of the Company's officers and directors in an amount not to exceed $5,000 per individual and $15,000 in the aggregate; (e) all fees, expenses and disbursements relating to the registration or qualification of the Public Securities under the "blue sky" securities laws of such states and other jurisdictions as the Representative may reasonably designate (including, without limitation, all filing and registration fees, and the reasonable fees and disbursements of "blue sky" counsel in an amount not to exceed $20,000); (e) all fees, expenses and disbursements relating to the registration or qualification of the Public Securities under the "blue sky" securities laws of such states and other jurisdictions as the Representative may reasonably designate (including, without limitation, all filing and registration fees, and the reasonable fees and disbursements of "blue sky" counsel in an amount not to exceed $10,000); (f) all fees, expenses and disbursements relating to the registration, qualification or exemption of the Public Securities under the securities laws of such foreign jurisdictions as the Representative may reasonably designate; (g) the costs of all mailing and printing of the underwriting documents (including, without limitation, the Underwriting Agreement, any Blue Sky Surveys and, if appropriate, any Agreement Among Underwriters, Selected Dealers' Agreement, Underwriters' Questionnaire and Power of Attorney), Registration Statements, Prospectuses and all amendments, supplements and exhibits thereto and as many preliminary and final Prospectuses as the Representative may reasonably deem necessary; (h) the costs and expenses of a public relations firm; (i) the costs of preparing, printing and delivering certificates representing the Public Securities; (j) fees and expenses of the transfer agent for the shares of Common Stock and Warrants; (k) stock transfer and/or stamp taxes, if any, payable upon the transfer of securities from the Company to the Underwriters; (l) the costs associated with post-Closing advertising the Offering in the national editions of the Wall Street Journal and New York Times; (m) the costs associated with bound volumes of the public offering materials as well as commemorative mementos and lucite tombstones, each of which the Company or its designee shall provide within a reasonable time after the Closing Date in such quantities as the Representative may reasonably request; (n) the fees and expenses of the Company's accountants; (o) the fees and expenses of the Company's legal counsel and other agents and representatives; (p) the $21,775 cost associated with the Underwriter's use of Ipreo's book-building, prospectus tracking and compliance software for the Offering; (q) the fees and expenses of the Representative's legal counsel, not to exceed $50,000, and (r) up to $20,000 of the Representative's actual accountable "road show" expenses for the Offering. The Representative may deduct from the net proceeds of the Offering payable to the Company on the Closing Date, or the Option Closing Date, if any, the expenses set forth herein to be paid by the Company to the Underwriters.

3.10.2. Non-accountable Expenses. The Company further agrees that, in addition to the expenses payable pursuant to Section 3.10.1, on the Closing Date it shall pay to the Representative, by deduction from the net proceeds of the Offering contemplated herein, a non-accountable expense allowance equal to one percent (1%) of the gross proceeds received by the Company from the sale of the Firm Securities (excluding the Option Securities), less the Advance (as such term is defined in Section 8.3 hereof), provided, however, that in the event that the Offering is terminated, the Company agrees to reimburse the Underwriters pursuant to Section 8.3 hereof.

3.11 Application of Net Proceeds. The Company shall apply the net proceeds from the Offering received by it in a manner consistent with the application thereof described under the caption "Use of Proceeds" in the Registration Statement, the Pricing Disclosure Package and the Prospectus.

3.12 Delivery of Earnings Statements to Security Holders. The Company shall make generally available to its security holders as soon as practicable, but not later than the first day of the fifteenth (15^{th}) full calendar month following the date of this Agreement, an earnings statement (which need not be certified by independent registered public accounting firm unless required by the Securities Act or the Securities Act Regulations, but which shall satisfy the provisions of Rule 158(a) under Section 11(a) of the Securities Act) covering a period of at least twelve (12) consecutive months beginning after the date of this Agreement.

3.13 Stabilization. Neither the Company nor, to its knowledge, any of its employees, directors or shareholders (without the consent of the Representative) has taken or shall take, directly or indirectly, any action designed to or that has constituted or that might reasonably be expected to cause or result in, under Regulation M of the Exchange Act, or otherwise, stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Public Securities.

3.14 Internal Controls. The Company shall maintain a system of internal accounting controls sufficient to provide reasonable assurances that: (i) transactions are executed in accordance with management's general or specific authorization; (ii) transactions are recorded as necessary in order to permit preparation of financial statements in accordance with GAAP and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences.

3.15 Accountants. As of the date of this Agreement, the Company shall retain an independent registered public accounting firm reasonably acceptable to the Representative, and the Company shall continue to retain a nationally recognized independent registered public accounting firm for a period of at least three (3) years after the date of this Agreement. The Representative acknowledges that the Auditor is acceptable to the Representative.

3.16 FINRA. The Company shall advise the Representative (who shall make an appropriate filing with FINRA) if it is or becomes aware that (i) any officer or director of the Company, (ii) any beneficial owner of 5% or more of any class of the Company's securities or (iii) any beneficial owner of the Company's unregistered equity securities which were acquired during the 180 days immediately preceding the filing of the Registration Statement is or becomes an affiliate or associated person of a FINRA member participating in the Offering (as determined in accordance with the rules and regulations of FINRA).

3.17 No Fiduciary Duties. The Company acknowledges and agrees that the Underwriters' responsibility to the Company is solely contractual in nature and that none of the Underwriters or their affiliates or any selling agent shall be deemed to be acting in a fiduciary capacity, or otherwise owes any fiduciary duty to the Company or any of its affiliates in connection with the Offering and the other transactions contemplated by this Agreement.

3.18 Company Lock-Up Agreements.

3.18.1. Restriction on Sales of Capital Stock. The Company, on behalf of itself and any successor entity, agrees that, without the prior written consent of the Representative, it will not, for a period of ninety (90) days after the date of this Agreement (the "**Lock-Up Period**"), (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of capital stock of the Company or any securities convertible into or exercisable or exchangeable for shares of capital stock of the Company; (ii) file or cause to be filed any registration statement with the Commission relating to the offering of any shares of capital stock of the Company or any securities convertible into or exercisable or exchangeable for shares of capital stock of the Company; or (iii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of capital stock of the Company, whether any such transaction described in clause (i), (ii) or (iii) above is to be settled by delivery of shares of capital stock of the Company or such other securities, in cash or otherwise.

The restrictions contained in this Section 3.18.1 shall not apply to (i) the shares of Common Stock to be sold hereunder, (ii) the issuance by the Company of shares of Common Stock upon the exercise of a stock option or warrant or the conversion of a security outstanding on the date hereof, of which the Representative has been advised in writing or (iii) the issuance by the Company of stock options or shares of capital stock of the Company under any equity compensation plan of the Company.

Notwithstanding the foregoing, if (i) during the last 17 days of the Lock-Up Period, the Company issues an earnings release or material news or a material event relating to the Company occurs, or (ii) prior to the expiration of the Lock-Up Period, the Company announces that it will release earnings results or becomes aware that material news or a material event will occur during the 16-day period beginning on the last day of the Lock-Up Period, the restrictions imposed by this Section 3.18.1 shall continue to apply until the expiration of the 18-day period beginning on the issuance of the earnings release or the occurrence of such material news or material event, as applicable, unless the Representative waives, in writing, such extension.

3.18.2. Restriction on Continuous Offerings. Notwithstanding the restrictions contained in Section 3.18.1, the Company, on behalf of itself and any successor entity, agrees that, without the prior written consent of the Representative, it will not, for a period of 12 months after the date of this Agreement, directly or indirectly in any "at-the-market" or continuous equity transaction, offer to sell, sell, contract to sell, grant any option to sell or otherwise dispose of shares of capital stock of the Company or any securities convertible into or exercisable or exchangeable for shares of capital stock of the Company.

3.19 Release of D&O Lock-up Period. If the Representative, in its sole discretion, agrees to release or waive the restrictions set forth in the Lock-Up Agreements described in Section 2.26 hereof for an officer or director of the Company and provide the Company with notice of the impending release or waiver at least three (3) Business Days before the effective date of the release or waiver, the Company agrees to announce the impending release or waiver by a press release substantially in the form of Exhibit C hereto through a major news service at least two (2) Business Days before the effective date of the release or waiver.

3.20 Blue Sky Qualifications. The Company shall use its reasonable best efforts, in cooperation with the Underwriters, if necessary, to qualify the Public Securities for offering and sale under the applicable securities laws of such states and other jurisdictions (domestic or foreign) as the Representative may designate and to maintain such qualifications in effect so long as required to complete the distribution of the Public Securities; provided, however, that the Company shall not be obligated to file any general consent to service of process or to qualify as a foreign corporation or as a dealer in securities in any jurisdiction in which it is not so qualified or to subject itself to taxation in respect of doing business in any jurisdiction in which it is not otherwise so subject.

3.21 Reporting Requirements. The Company, during the period when a prospectus relating to the Public Securities is (or, but for the exception afforded by Rule 172, would be) required to be delivered under the Securities Act, will file all documents required to be filed with the Commission pursuant to the Exchange Act within the time periods required by the Exchange Act and Exchange Act Regulations. Additionally, the Company shall report the use of proceeds from the issuance of the Public Securities as may be required under Rule 463 under the Securities Act Regulations.

4. Conditions of Underwriters' Obligations. The obligations of the Underwriters to purchase and pay for the Public Securities, as provided herein, shall be subject to (i) the continuing accuracy of the representations and warranties of the Company as of the date hereof and as of each of the Closing Date and the Option Closing Date, if any; (ii) the accuracy of the statements of officers of the Company made pursuant to the provisions hereof; (iii) the performance by the Company of its obligations hereunder; and (iv) the following conditions:

4.1 Regulatory Matters.

4.1.1. Effectiveness of Registration Statement; Rule 430A Information. The Registration Statement has become effective not later than 5:00 p.m., Eastern time, on the date of this Agreement or such later date and time as shall be consented to in writing by you, and, at each of the Closing Date and any Option Closing Date, no stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto has been issued under the Securities Act, no order preventing or suspending the use of any Preliminary Prospectus or the Prospectus has been issued and no proceedings for any of those purposes have been instituted or are pending or, to the Company's knowledge, contemplated by the Commission. The Company has complied with each request (if any) from the Commission for additional information. The Prospectus containing the Rule 430A Information shall have been filed with the Commission in the manner and within the time frame required by Rule 424(b) (without reliance on Rule 424(b)(8)) or a post-effective amendment providing such information shall have been filed with, and declared effective by, the Commission in accordance with the requirements of Rule 430A.

4.1.2. FINRA Clearance. On or before the date of this Agreement, the Representative shall have received clearance from FINRA as to the amount of compensation allowable or payable to the Underwriters as described in the Registration Statement.

4.1.3. Exchange Stock Market Clearance. On the Closing Date, the Company's shares of Common Stock, including the Firm Shares and Firm Warrants, shall have been approved for listing on the Exchange, subject only to official notice of issuance. On the first Option Closing Date (if any), the Company's shares of Common Stock, including the Option Securities, shall have been approved for listing on the Exchange, subject only to official notice of issuance.

4.2 Company Counsel Matters.

4.2.1. Closing Date Opinion of Counsel. On the Closing Date, the Representative shall have received the favorable opinion of Bingham McCutchen LLP, counsel to the Company, dated the Closing Date and addressed to the Representative, in a form reasonably acceptable to the Representative.

4.2.2. Opinion of Intellectual Property Counsel for the Company. On the Closing Date, the Representative shall have received the opinion of Foley & Lardner LLP, special intellectual property counsel for the Company, dated the Closing Date, addressed to the Representative substantially in the form of Exhibit D attached hereto.

4.2.3. Option Closing Date Opinions of Counsel. On the Option Closing Date, if any, the Representative shall have received the favorable opinions of each counsel listed in Sections 4.2.1 and 4.2.2, dated the Option Closing Date, addressed to the Representative and in form and substance reasonably satisfactory to the Representative, confirming as of the Option Closing Date, the statements made by such counsels in their respective opinions delivered on the Closing Date.

4.2.4. Reliance. In rendering such opinions, such counsel may rely: (i) as to matters involving the application of laws other than the laws of the United States and jurisdictions in which they are admitted, to the extent such counsel deems proper and to the extent specified in such opinion, if at all, upon an opinion or opinions (in form and substance reasonably satisfactory to the Representative) of other counsel reasonably acceptable to the Representative, familiar with the applicable laws; and (ii) as to matters of fact, to the extent they deem proper, on certificates or other written statements of officers of the Company and officers of departments of various jurisdictions having custody of documents respecting the corporate existence or good standing of the Company, provided that copies of any such statements or certificates shall be delivered to Representative Counsel if requested.

4.3 Comfort Letters.

4.3.1. Cold Comfort Letter. At the time this Agreement is executed you shall have received a cold comfort letter containing statements and information of the type customarily included in accountants' comfort letters with respect to the financial statements and certain financial information contained in the Registration Statement, the Pricing Disclosure Package and the Prospectus, addressed to the Representative and in form and substance satisfactory in all respects to you and to the Auditor, dated as of the date of this Agreement.

4.3.2. Bring-down Comfort Letter. At each of the Closing Date and the Option Closing Date, if any, the Representative shall have received from the Auditor a letter, dated as of the Closing Date or the Option Closing Date, as applicable, to the effect that the Auditor reaffirms the statements made in the letter furnished pursuant to Section 4.3.1, except that the specified date referred to shall be a date not more than three (3) business days prior to the Closing Date or the Option Closing Date, as applicable.

4.4 Officers' Certificates.

4.4.1. Officers' Certificate. The Company shall have furnished to the Representative a certificate, dated the Closing Date and any Option Closing Date (if such date is other than the Closing Date), of its Chief Executive Officer, and its Chief Financial Officer stating that (i) such officers have carefully examined the Registration Statement, the Pricing Disclosure Package, any Issuer Free Writing Prospectus and the Prospectus and, in their opinion, the Registration Statement and each amendment thereto, as of the Applicable Time and as of the Closing Date (or any Option Closing Date if such date is other than the Closing Date) did not include any untrue statement of a material fact and did not omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading, and the Pricing Disclosure Package, as of the Applicable Time and as of the Closing Date (or any Option Closing Date if such date is other than the Closing Date), any Issuer Free Writing Prospectus as of its date and as of the Closing Date (or any Option Closing Date if such date is other than the Closing Date), the Prospectus and each amendment or supplement thereto, as of the respective date thereof and as of the Closing Date, did not include any untrue statement of a material fact and did not omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances in which they were made, not misleading, (ii) since the effective date of the Registration Statement, no event has occurred which should have been set forth in a supplement or amendment to the Registration Statement, the Pricing Disclosure Package or the Prospectus, (iii) to the best of their knowledge after reasonable investigation, as of the Closing Date (or any Option Closing Date if such date is other than the Closing Date), the representations and warranties of the Company in this Agreement are true and correct and the Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied hereunder at or prior to the Closing Date (or any Option Closing Date if such date is other than the Closing Date), and (iv) there has not been, subsequent to the date of the most recent audited financial statements included or incorporated by reference in the Pricing Disclosure Package, any material adverse change in the financial position or results of operations of the Company, or any change or development that, singularly or in the aggregate, would involve a material adverse change or a prospective material adverse change, in or affecting the condition (financial or otherwise), results of operations, business, assets or prospects of the Company, except as set forth in the Prospectus.

4.4.2. Secretary's Certificate. At each of the Closing Date and the Option Closing Date, if any, the Representative shall have received a certificate of the Company signed by the Secretary of the Company, dated the Closing Date or the Option Date, as the case may be, respectively, certifying: (i) that each of the Charter and Bylaws is true and complete, has not been modified and is in full force and effect; (ii) that the resolutions of the Company's Board of Directors relating to the Offering are in full force and effect and have not been modified; (iii) as to the accuracy and completeness of all correspondence between the Company or its counsel and the Commission; and (iv) as to the incumbency of the officers of the Company. The documents referred to in such certificate shall be attached to such certificate.

4.5 No Material Changes. Prior to and on each of the Closing Date and each Option Closing Date, if any: (i) there shall have been no material adverse change or development involving a prospective material adverse change in the condition or prospects or the business activities, financial or otherwise, of the Company from the latest dates as of which such condition is set forth in the Registration Statement, the Pricing Disclosure Package and the Prospectus; (ii) no action, suit or proceeding, at law or in equity, shall have been pending or threatened against the Company or any Insider before or by any court or federal or state commission, board or other administrative agency wherein an unfavorable decision, ruling or finding may materially adversely affect the business, operations, prospects or financial condition or income of the Company, except as set forth in the Registration Statement, the Pricing Disclosure Package and the Prospectus; (iii) no stop order shall have been issued under the Securities Act and no proceedings therefor shall have been initiated or threatened by the Commission; and (iv) the Registration Statement, the Pricing Disclosure Package and the Prospectus and any amendments or supplements thereto shall contain all material statements which are required to be stated therein in accordance with the Securities Act and the Securities Act Regulations and shall conform in all material respects to the requirements of the Securities Act and the Securities Act Regulations, and neither the Registration Statement, the Pricing Disclosure Package nor the Prospectus nor any amendment or supplement thereto shall contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading.

4.6 Delivery of Agreements.

4.6.1. Lock-Up Agreements. On or before the date of this Agreement, the Company shall have delivered to the Representative executed copies of the Lock-Up Agreements from each of the persons listed in Schedule 3 hereto.

4.6.2. Representative's Warrant Agreement. On the Closing Date, the Company shall have delivered to the Representative executed copies of the Representative's Warrant Agreement.

4.7 Additional Documents. At the Closing Date and at each Option Closing Date (if any) Representative Counsel shall have been furnished with such documents and opinions as they may require for the purpose of enabling Representative Counsel to deliver an opinion to the Underwriters, or in order to evidence the accuracy of any of the representations or warranties, or the fulfillment of any of the conditions, herein contained; and all proceedings taken by the Company in connection with the issuance and sale of the Public Securities and the Representative's Securities as herein contemplated shall be satisfactory in form and substance to the Representative and Representative Counsel.

5. Indemnification.

5.1 Indemnification of the Underwriters.

5.1.1. General. Subject to the conditions set forth below, the Company agrees to indemnify and hold harmless each Underwriter, its affiliates and each of its and their respective directors, officers, members, employees, representatives and agents and each person, if any, who controls any such Underwriter within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act (collectively the "**Underwriter Indemnified Parties,**" and each an "**Underwriter Indemnified Party**"), against any and all loss, liability, claim, damage and expense whatsoever (including but not limited to any and all legal or other expenses reasonably incurred in investigating, preparing or defending against any litigation, commenced or threatened, or any claim whatsoever, whether arising out of any action between any of the Underwriter Indemnified Parties and the Company or between any of the Underwriter Indemnified Parties and any third party, or otherwise) to which they or any of them may become subject under the Securities Act, the Exchange Act or any other statute or at common law or otherwise or under the laws of foreign countries, arising out of or based upon any untrue statement or alleged untrue statement of a material fact contained in (i) the Registration Statement, the Pricing Disclosure Package, the Preliminary Prospectus, the Prospectus, in any Issuer Free Writing Prospectus (as from time to time each may be amended and supplemented); (ii) any materials or information provided to investors by, or with the approval of, the Company in connection with the marketing of the Offering, including any "road show" or investor presentations made to investors by the Company (whether in person or electronically); or (iii) any application or other document or written communication (in this Section 5, collectively called "**application**") executed by the Company or based upon written information furnished by the Company in any jurisdiction in order to qualify the Public Securities and Representative's Securities under the securities laws thereof or filed with the Commission, any state securities commission or agency, the Exchange or any other national securities exchange; or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, unless such statement or omission was made in reliance upon, and in conformity with, the Underwriters' Information,. With respect to any untrue statement or omission or alleged untrue statement or omission made in the Pricing Disclosure Package, the indemnity agreement contained in this Section 5.1.1 shall not inure to the benefit of any Underwriter Indemnified Party to the extent that any loss, liability, claim, damage or expense of such Underwriter Indemnified Party results from the fact that a copy of the Prospectus was not given or sent to the person asserting any such loss, liability, claim or damage at or prior to the written confirmation of sale of the Public Securities to such person as required by the Securities Act and the Securities Act Regulations, and if the untrue statement or omission has been corrected in the Prospectus, unless such failure to deliver the Prospectus was a result of non-compliance by the Company with its obligations under Section 3.3 hereof.

5.1.2. Procedure. If any action is brought against an Underwriter Indemnified Party in respect of which indemnity may be sought against the Company pursuant to Section 5.1.1, such Underwriter Indemnified Party shall promptly notify the Company in writing of the institution of such action and the Company shall assume the defense of such action, including the employment and fees of counsel (subject to the reasonable approval of such Underwriter Indemnified Party) and payment of actual expenses. Such Underwriter Indemnified Party shall have the right to employ its or their own counsel in any such case, but the fees and expenses of such counsel shall be at the expense of such Underwriter Indemnified Party unless (i) the employment of such counsel at the expense of the Company shall have been authorized in writing by the Company in connection with the defense of such action, or (ii) the Company shall not have employed counsel to have charge of the defense of such action, or (iii) such indemnified party or parties shall have reasonably concluded that there may be defenses available to it or them which are different from or additional to those available to the Company (in which case the Company shall not have the right to direct the defense of such action on behalf of the indemnified party or parties), in any of which events the reasonable fees and expenses of not more than one additional firm of attorneys selected by the Underwriter Indemnified Party (in addition to local counsel) shall be borne by the Company. Notwithstanding anything to the contrary contained herein, if any Underwriter Indemnified Party shall assume the defense of such action as provided above, the Company shall have the right to approve the terms of any settlement of such action, which approval shall not be unreasonably withheld.

5.2 Indemnification of the Company. Each Underwriter, severally and not jointly, agrees to indemnify and hold harmless the Company, its directors, its officers who signed the Registration Statement and persons who control the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act against any and all loss, liability, claim, damage and expense described in the foregoing indemnity from the Company to the several Underwriters, as incurred, but only with respect to untrue statements or omissions, or alleged untrue statements or omissions made in the Registration Statement, any Preliminary Prospectus, the Pricing Disclosure Package or Prospectus or any amendment or supplement thereto or in any application, in reliance upon, and in strict conformity with, the Underwriters' Information. In case any action shall be brought against the Company or any other person so indemnified based on any Preliminary Prospectus, the Registration Statement, the Pricing Disclosure Package or Prospectus or any amendment or supplement thereto or any application, and in respect of which indemnity may be sought against any Underwriter, such Underwriter shall have the rights and duties given to the Company, and the Company and each other person so indemnified shall have the rights and duties given to the several Underwriters by the provisions of Section 5.1.2. The Company agrees promptly to notify the Representative of the commencement of any litigation or proceedings against the Company or any of its officers, directors or any person, if any, who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, in connection with the issuance and sale of the Public Securities or in connection with the Registration Statement, the Pricing Disclosure Package, the Prospectus, any Issuer Free Writing Prospectus.

5.3 Contribution.

5.3.1. Contribution Rights. If the indemnification provided for in this Section 5 shall for any reason be unavailable to or insufficient to hold harmless an indemnified party under Section 5.1 or 5.2 in respect of any loss, claim, damage or liability, or any action in respect thereof, referred to therein, then each indemnifying party shall, in lieu of indemnifying such indemnified party, contribute to the amount paid or payable by such indemnified party as a result of such loss, claim, damage or liability, or action in respect thereof, (i) in such proportion as shall be appropriate to reflect the relative benefits received by the Company, on the one hand, and the Underwriters, on the other, from the Offering of the Public Securities, or (ii) if the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company, on the one hand, and the Underwriters, on the other, with respect to the statements or omissions that resulted in such loss, claim, damage or liability, or action in respect thereof, as well as any other relevant equitable considerations. The relative benefits received by the Company, on the one hand, and the Underwriters, on the other, with respect to such Offering shall be deemed to be in the same proportion as the total net proceeds from the Offering of the Public Securities purchased under this Agreement (before deducting expenses) received by the Company, as set forth in the table on the cover page of the Prospectus, on the one hand, and the total underwriting discounts and commissions received by the Underwriters with respect to the shares of the Common Stock purchased under this Agreement, as set forth in the table on the cover page of the Prospectus, on the other hand. The relative fault shall be determined by reference to whether the untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company or the Underwriters, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and the Underwriters agree that it would not be just and equitable if contributions pursuant to this Section 5.3.1 were to be determined by pro rata allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation that does not take into account the equitable considerations referred to herein. The amount paid or payable by an indemnified party as a result of the loss, claim, damage or liability, or action in respect thereof, referred to above in this Section 5.3.1 shall be deemed to include, for purposes of this Section 5.3.1, any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. Notwithstanding the provisions of this Section 5.3.1 in no event shall an Underwriter be required to contribute any amount in excess of the amount by which the total underwriting discounts and commissions received by such Underwriter with respect to the Offering of the Public Securities exceeds the amount of any damages that such Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation.

5.3.2. Contribution Procedure. Within fifteen (15) days after receipt by any party to this Agreement (or its representative) of notice of the commencement of any action, suit or proceeding, such party will, if a claim for contribution in respect thereof is to be made against another party ("contributing party"), notify the contributing party of the commencement thereof, but the failure to so notify the contributing party will not relieve it from any liability which it may have to any other party other than for contribution hereunder. In case any such action, suit or proceeding is brought against any party, and such party notifies a contributing party or its representative of the commencement thereof within the aforesaid 15 days, the contributing party will be entitled to participate therein with the notifying party and any other contributing party similarly notified. Any such contributing party shall not be liable to any party seeking contribution on account of any settlement of any claim, action or proceeding affected by such party seeking contribution on account of any settlement of any claim, action or proceeding affected by such party seeking contribution without the written consent of such contributing party. The contribution provisions contained in this Section 5.3.2 are intended to supersede, to the extent permitted by law, any right to contribution under the Securities Act, the Exchange Act or otherwise available. Each Underwriter's obligations to contribute pursuant to this Section 5.3 are several and not joint.

6. Default by an Underwriter.

6.1 Default Not Exceeding 10% of Firm Securities or Option Securities. If any Underwriter or Underwriters shall default in its or their obligations to purchase the Firm Securities or the Option Securities, if the Over-allotment Option is exercised hereunder, and if the number of the Firm Securities or Option Securities with respect to which such default relates does not exceed in the aggregate 10% of the number of Firm Securities or Option Securities that all Underwriters have agreed to purchase hereunder, then such Firm Securities or Option Securities to which the default relates shall be purchased by the non-defaulting Underwriters in proportion to their respective commitments hereunder.

6.2 Default Exceeding 10% of Firm Securities or Option Securities. In the event that the default addressed in Section 6.1 relates to more than 10% of the Firm Securities or Option Securities, you may in your discretion arrange for yourself or for another party or parties to purchase such Firm Securities or Option Securities to which such default relates on the terms contained herein. If, within one (1) Business Day after such default relating to more than 10% of the Firm Securities or Option Securities, you do not arrange for the purchase of such Firm Securities or Option Securities, then the Company shall be entitled to a further period of one (1) Business Day within which to procure another party or parties satisfactory to you to purchase said Firm Securities or Option Securities on such terms. In the event that neither you nor the Company arrange for the purchase of the Firm Securities or Option Securities to which a default relates as provided in this Section 6, this Agreement will automatically be terminated by you or the Company without liability on the part of the Company (except as provided in Sections 3.9 and 5 hereof) or the several Underwriters (except as provided in Section 5 hereof); provided, however, that if such default occurs with respect to the Option Securities, this Agreement will not terminate as to the Firm Securities; and provided, further, that nothing herein shall relieve a defaulting Underwriter of its liability, if any, to the other Underwriters and to the Company for damages occasioned by its default hereunder.

6.3 Postponement of Closing Date. In the event that the Firm Securities or Option Securities to which the default relates are to be purchased by the non-defaulting Underwriters, or are to be purchased by another party or parties as aforesaid, you or the Company shall have the right to postpone the Closing Date or Option Closing Date for a reasonable period, but not in any event exceeding five (5) Business Days, in order to effect whatever changes may thereby be made necessary in the Registration Statement, the Pricing Disclosure Package or the Prospectus or in any other documents and arrangements, and the Company agrees to file promptly any amendment to the Registration Statement, the Pricing Disclosure Package or the Prospectus that in the opinion of counsel for the Underwriter may thereby be made necessary. The term "**Underwriter**" as used in this Agreement shall include any party substituted under this Section 6 with like effect as if it had originally been a party to this Agreement with respect to such shares of Common Stock.

7. Additional Covenants.

7.1 Board Composition and Board Designations. The Company shall ensure that: (i) the qualifications of the persons serving as members of the Board of Directors and the overall composition of the Board comply with the Sarbanes-Oxley Act, with the Exchange Act and with the listing rules of the Exchange or any other national securities exchange, as the case may be, in the event the Company seeks to have its Public Securities listed on another exchange or quoted on an automated quotation system, and (ii) if applicable, at least one member of the Audit Committee of the Board of Directors qualifies as an "audit committee financial expert," as such term is defined under Regulation S-K and the listing rules of the Exchange.

7.2 Prohibition on Press Releases and Public Announcements. The Company shall not issue press releases or engage in any other publicity, without the Representative's prior written consent, for a period ending at 5:00 p.m., Eastern time, on the first (1st) Business Day following the forty-fifth (45th) day after the Closing Date, other than normal and customary releases issued in the ordinary course of the Company's business.

7.3 Right of First Refusal. Provided that the Firm Securities are sold in accordance with the terms of this Agreement, the Representative shall have an irrevocable right of first refusal (the "**Right of First Refusal**"), for a period of twelve (12) months after the date of effectiveness of the Registration Statement, to act as lead managing underwriter and/or book runner, exclusive placement agent, exclusive financial advisor and investment banker or in any other similar capacity, on the Representative's customary terms and conditions, in the event the Company or any Subsidiary retains or otherwise uses (or seeks to retain or use) the services of an investment bank or similar financial advisor to pursue a registered, underwritten public offering of securities (in addition to the Offering), a private placement of securities, a merger, acquisition of another company or business, change of control, sale of substantially all assets or other similar transaction (regardless of whether the Company would be considered an acquiring party, a selling party or neither in such transaction) (each, a "**Subject Transaction**"). The Company shall notify the Representative of its intention to pursue a Subject Transaction, including the material terms thereof, by providing written notice thereof by registered mail or overnight courier service addressed to the Representative. If the Representative fails to exercise its Right of First Refusal with respect to any Subject Transaction within ten (10) Business Days after the mailing of such written notice, then the Representative shall have no further claim or right with respect to the Subject Transaction. The Representative may elect, in its sole and absolute discretion, not to exercise its Right of First Refusal with respect to any Subject Transaction; *provided* that any such election by the Representative shall not adversely affect the Representative's Right of First Refusal with respect to any other Subject Transaction. The terms and conditions of any such engagements shall be set forth in separate agreements and may be subject to, among other things, satisfactory completion of due diligence by the Representative, market conditions, the absence of a material adverse change to the Company's business, financial condition and prospects, approval of the Representative's internal committee and any other conditions that the Representative may deem appropriate for transactions of such nature.

8. Effective Date of this Agreement and Termination Thereof.

8.1 Effective Date. This Agreement shall become effective when both the Company and the Representative have executed the same and delivered counterparts of such signatures to the other party.

8.2 Termination. The Representative shall have the right to terminate this Agreement at any time prior to any Closing Date, (i) if any domestic or international event or act or occurrence has materially disrupted, or in your opinion will in the immediate future materially disrupt, general securities markets in the United States; or (ii) if trading on the New York Stock Exchange or the Nasdaq Stock Market LLC shall have been suspended or materially limited, or minimum or maximum prices for trading shall have been fixed, or maximum ranges for prices for securities shall have been required by FINRA or by order of the Commission or any other government authority having jurisdiction; or (iii) if the United States shall have become involved in a new war or an increase in major hostilities; or (iv) if a banking moratorium has been declared by a New York State or federal authority; or (v) if a moratorium on foreign exchange trading has been declared which materially adversely impacts the United States securities markets; or (vi) if the Company shall have sustained a material loss by fire, flood, accident, hurricane, earthquake, theft, sabotage or other calamity or malicious act which, whether or not such loss shall have been insured, will, in your opinion, make it inadvisable to proceed with the delivery of the Firm Securities or Option Securities; or (vii) if the Company is in material breach of any of its representations, warranties or covenants hereunder; or (viii) if the Representative shall have become aware after the date hereof of such a material adverse change in the conditions or prospects of the Company, or such adverse material change in general market conditions as in the Representative's judgment would make it impracticable to proceed with the offering, sale and/or delivery of the Public Securities or to enforce contracts made by the Underwriters for the sale of the Public Securities.

8.3 Expenses. Notwithstanding anything to the contrary in this Agreement, except in the case of a default by the Underwriters, pursuant to Section 6.2 above, in the event that this Agreement shall not be carried out for any reason whatsoever, within the time specified herein or any extensions thereof pursuant to the terms herein, the Company shall be obligated to pay to the Underwriters their actual and accountable out-of-pocket expenses related to the transactions contemplated herein then due and payable (including the fees and disbursements of Representation Counsel) up to $100,000, inclusive of the $25,000 advance for non-accountable expenses previously paid by the Company to the Representative (the "**Advance**") and upon demand the Company shall pay the full amount thereof to the Representative on behalf of the Underwriters; provided, however, that such expense cap in no way limits or impairs the indemnification and contribution provisions of this Agreement. Notwithstanding the foregoing, any advance received by the Representative will be reimbursed to the Company to the extent not actually incurred in compliance with FINRA Rule 5110(f)(2)(C).

8.4 Indemnification. Notwithstanding any contrary provision contained in this Agreement, any election hereunder or any termination of this Agreement, and whether or not this Agreement is otherwise carried out, the provisions of Section 5 shall remain in full force and effect and shall not be in any way affected by, such election or termination or failure to carry out the terms of this Agreement or any part hereof.

8 . 5 Representations, Warranties, Agreements to Survive . All representations, warranties and agreements contained in this Agreement or in certificates of officers of the Company submitted pursuant hereto, shall remain operative and in full force and effect regardless of (i) any investigation made by or on behalf of any Underwriter or its Affiliates or selling agents, any person controlling any Underwriter, its officers or directors or any person controlling the Company or (ii) delivery of and payment for the Public Securities.

9. Miscellaneous.

9.1 Notices. All communications hereunder, except as herein otherwise specifically provided, shall be in writing and shall be mailed (registered or certified mail, return receipt requested), personally delivered or sent by facsimile transmission and confirmed and shall be deemed given when so delivered or faxed and confirmed or if mailed, two (2) days after such mailing.

If to the Representative:

Aegis Capital Corp.
810 Seventh Avenue, 18th Floor
New York, New York 10019
Attn: Mr. David Bocchi, Managing Director of Investment Banking
Fax No.: (212) 813-1047

with a copy (which shall not constitute notice) to:

Sichenzia Ross Friedman Ference LLP
61 Broadway, 32nd Floor
New York, NY 10006
Attn: Jeffrey Fessler, Esq.
Fax No.: 212-930-9725

If to the Company:

PlasmaTech Biopharmaceuticals, Inc.
4848 Lemmon Avenue, Suite 517
Dallas, TX 75219
Attention: Scott Schorer, Chief Executive Officer
Fax No: [•]

with a copy (which shall not constitute notice) to:

Bingham McCutchen LLP
One Federal Street
Boston, MA 02110
Attention: John J. Concannon III, Esq.
Fax No: 617-428-6330

9.2 Headings. The headings contained herein are for the sole purpose of convenience of reference, and shall not in any way limit or affect the meaning or interpretation of any of the terms or provisions of this Agreement.

9.3 Amendment. This Agreement may only be amended by a written instrument executed by each of the parties hereto.

9.4 Entire Agreement. This Agreement (together with the other agreements and documents being delivered pursuant to or in connection with this Agreement) constitutes the entire agreement of the parties hereto with respect to the subject matter hereof and thereof, and supersedes all prior agreements and understandings of the parties, oral and written, with respect to the subject matter hereof. Notwithstanding anything to the contrary set forth herein, it is understood and agreed by the parties hereto that all other terms and conditions of that certain engagement letter between the Company and Aegis Capital Corp., dated May 21, 2014, as amended, shall remain in full force and effect.

9.5 Binding Effect. This Agreement shall inure solely to the benefit of and shall be binding upon the Representative, the Underwriters, the Company and the controlling persons, directors and officers referred to in Section 5 hereof, and their respective successors, legal representatives, heirs and assigns, and no other person shall have or be construed to have any legal or equitable right, remedy or claim under or in respect of or by virtue of this Agreement or any provisions herein contained. The term "successors and assigns" shall not include a purchaser, in its capacity as such, of securities from any of the Underwriters.

9.6 Governing Law; Consent to Jurisdiction; Trial by Jury. This Agreement shall be governed by and construed and enforced in accordance with the laws of the State of New York, without giving effect to conflict of laws principles thereof. The Company hereby agrees that any action, proceeding or claim against it arising out of, or relating in any way to this Agreement shall be brought and enforced in the New York Supreme Court, County of New York, or in the United States District Court for the Southern District of New York, and irrevocably submits to such jurisdiction, which jurisdiction shall be exclusive. The Company hereby waives any objection to such exclusive jurisdiction and that such courts represent an inconvenient forum. Any such process or summons to be served upon the Company may be served by transmitting a copy thereof by registered or certified mail, return receipt requested, postage prepaid, addressed to it at the address set forth in Section 9.1 hereof. Such mailing shall be deemed personal service and shall be legal and binding upon the Company in any action, proceeding or claim. The Company agrees that the prevailing party(ies) in any such action shall be entitled to recover from the other party(ies) all of its reasonable attorneys' fees and expenses relating to such action or proceeding and/or incurred in connection with the preparation therefor. The Company (on its behalf and, to the extent permitted by applicable law, on behalf of its stockholders and affiliates) and each of the Underwriters hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby.

9.7 Execution in Counterparts. This Agreement may be executed in one or more counterparts, and by the different parties hereto in separate counterparts, each of which shall be deemed to be an original, but all of which taken together shall constitute one and the same agreement, and shall become effective when one or more counterparts has been signed by each of the parties hereto and delivered to each of the other parties hereto. Delivery of a signed counterpart of this Agreement by facsimile or email/pdf transmission shall constitute valid and sufficient delivery thereof.

9.8 Waiver, etc. The failure of any of the parties hereto to at any time enforce any of the provisions of this Agreement shall not be deemed or construed to be a waiver of any such provision, nor to in any way effect the validity of this Agreement or any provision hereof or the right of any of the parties hereto to thereafter enforce each and every provision of this Agreement. No waiver of any breach, non-compliance or non-fulfillment of any of the provisions of this Agreement shall be effective unless set forth in a written instrument executed by the party or parties against whom or which enforcement of such waiver is sought; and no waiver of any such breach, non-compliance or non-fulfillment shall be construed or deemed to be a waiver of any other or subsequent breach, non-compliance or non-fulfillment.

[*Signature Page Follows*]

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

Very truly yours,

PLASMATECH BIOPHARMACEUTICALS, INC.

By: _____
Name:
Title:

Confirmed as of the date first written above mentioned, on behalf of itself and as Representative of the several Underwriters named on Schedule 1 hereto:

AEGIS CAPITAL CORP.

By: _____
Name:
Title:

SCHEDULE 1

Underwriter	Total Number of Firm Securities to be Purchased	Number of Option Securities to be Purchased if the Over-Allotment Option is Fully Exercised
Aegis Capital Corp.		
TOTAL		

SCHEDULE 2-A

Pricing Information

Number of Firm Securities: [•]

Number of shares of Common Stock underlying the Firm Securities: [•]

Number of Warrants underlying the Firm Securities: [•]

Number of Option Securities: [•]

Number of shares of Common Stock underlying the Option Securities: [•]

Number of Warrants underlying the Option Securities: [•]

Warrant exercise price: [•]

Public Offering Price per Security: $[•]

Underwriting Discount per Security: $[•]

Underwriting Non-accountable expense allowance per Security: $[•]

Proceeds to Company per Security (before expenses): $[•]

SCHEDULE 2-B

Issuer General Use Free Writing Prospectuses

[None.]

SCHEDULE 3

List of Lock-Up Parties

EXHIBIT A

Form of Representative's Warrant Agreement

THE REGISTERED HOLDER OF THIS PURCHASE WARRANT BY ITS ACCEPTANCE HEREOF, AGREES THAT IT WILL NOT SELL, TRANSFER OR ASSIGN THIS PURCHASE WARRANT EXCEPT AS HEREIN PROVIDED AND THE REGISTERED HOLDER OF THIS PURCHASE WARRANT AGREES THAT IT WILL NOT SELL, TRANSFER, ASSIGN, PLEDGE OR HYPOTHECATE THIS PURCHASE WARRANT FOR A PERIOD OF ONE HUNDRED EIGHTY DAYS FOLLOWING THE EFFECTIVE DATE (DEFINED BELOW) TO ANYONE OTHER THAN (I) AEGIS CAPITAL CORP. OR AN UNDERWRITER OR A SELECTED DEALER IN CONNECTION WITH THE OFFERING, OR (II) A BONA FIDE OFFICER OR PARTNER OF AEGIS CAPITAL CORP. OR OF ANY SUCH UNDERWRITER OR SELECTED DEALER.

THIS PURCHASE WARRANT IS NOT EXERCISABLE PRIOR TO [_____] [**DATE THAT IS ONE YEAR FROM THE EFFECTIVE DATE OF THE OFFERING**]. VOID AFTER 5:00 P.M., EASTERN TIME, [_____] [**DATE THAT IS FIVE YEARS FROM THE EFFECTIVE DATE OF THE OFFERING**].

COMMON STOCK PURCHASE WARRANT

For the Purchase of [_____] Shares of Common Stock
of
PLASMATECH BIOPHARMACEUTICALS, INC.

1 . Purchase Warrant. THIS CERTIFIES THAT, in consideration of funds duly paid by or on behalf of Aegis Capital Corp. ("**Holder**"), as registered owner of this Purchase Warrant, to PLASMATECH BIO PHARMACEUTICALS, Inc., a Delaware corporation (the "**Company**"), Holder is entitled, at any time or from time to time from [_____] [**DATE THAT IS ONE YEAR FROM THE EFFECTIVE DATE OF THE OFFERING**] (the "**Commencement Date**"), and at or before 5:00 p.m., Eastern time, [_____] [**DATE THAT IS FIVE YEARS FROM THE EFFECTIVE DATE OF THE OFFERING**] (the "**Expiration Date**"), but not thereafter, to subscribe for, purchase and receive, in whole or in part, up to [____] shares of common stock of the Company, par value $0.01 per share (the "**Shares**"), subject to adjustment as provided in Section 6 hereof. If the Expiration Date is a day on which banking institutions are authorized by law to close, then this Purchase Warrant may be exercised on the next succeeding day which is not such a day in accordance with the terms herein. During the period ending on the Expiration Date, the Company agrees not to take any action that would terminate this Purchase Warrant. This Purchase Warrant is initially exercisable at $[___] per Share [**125% of the price of the Shares sold in the Offering**]; provided, however, that upon the occurrence of any of the events specified in Section 6 hereof, the rights granted by this Purchase Warrant, including the exercise price per Share and the number of Shares to be received upon such exercise, shall be adjusted as therein specified. The term "**Exercise Price**" shall mean the initial exercise price or the adjusted exercise price, depending on the context.

2. Exercise.

2.1 Exercise Form. In order to exercise this Purchase Warrant, the exercise form attached hereto must be duly executed and completed and delivered to the Company, together with this Purchase Warrant and payment of the Exercise Price for the Shares being purchased payable in cash by wire transfer of immediately available funds to an account designated by the Company or by certified check or official bank check. If the subscription rights represented hereby shall not be exercised at or before 5:00 p.m., Eastern time, on the Expiration Date, this Purchase Warrant shall become and be void without further force or effect, and all rights represented hereby shall cease and expire.

2.2 Cashless Exercise. If at any time after the Commencement Date there is no effective registration statement registering, or no current prospectus available for, the resale of the Shares by the Holder, then in lieu of exercising this Purchase Warrant by payment of cash or check payable to the order of the Company pursuant to Section 2.1 above, Holder may elect to receive the number of Shares equal to the value of this Purchase Warrant (or the portion thereof being exercised), by surrender of this Purchase Warrant to the Company, together with the exercise form attached hereto, in which event the issue to Holder, Shares in accordance with the following formula:

$$X = \frac{Y(A-B)}{A}$$

Where,

X = The number of Shares to be issued to Holder;
Y = The number of Shares for which the Purchase Warrant is being exercised;
A = The fair market value of one Share; and
B = The Exercise Price.

For purposes of this Section 2.2, the fair market value of a Share is defined as follows:

(i) if the Company's common stock is traded on a securities exchange, the value shall be deemed to be the closing price on such exchange prior to the exercise form being submitted in connection with the exercise of the Purchase Warrant; or

(ii) if the Company's common stock is actively traded over-the-counter, the value shall be deemed to be the closing bid prior to the exercise form being submitted in connection with the exercise of the Purchase Warrant; if there is no active public market, the value shall be the fair market value thereof, as determined in good faith by the Company's Board of Directors.

2.3 Legend. Each certificate for the securities purchased under this Purchase Warrant shall bear a legend as follows unless such securities have been registered under the Securities Act of 1933, as amended (the "**Act**"):

"The securities represented by this certificate have not been registered under the Securities Act of 1933, as amended (the "**Act**"), or applicable state law. Neither the securities nor any interest therein may be offered for sale, sold or otherwise transferred except pursuant to an effective registration statement under the Securities Act, or pursuant to an exemption from registration under the Securities Act and applicable state law which, in the opinion of counsel to the Company, is available."

3. Transfer.

3.1 General Restrictions. The registered Holder of this Purchase Warrant agrees by his, her or its acceptance hereof, that such Holder will not: (a) sell, transfer, assign, pledge or hypothecate this Purchase Warrant for a period of one hundred eighty (180) days following the Effective Date to anyone other than: (i) Aegis Capital Corp. ("**Aegis**") or an underwriter or a selected dealer participating in the Offering, or (ii) a bona fide officer or partner of Aegis or of any such underwriter or selected dealer, in each case in accordance with FINRA Conduct Rule 5110(g)(1), or (b) cause this Purchase Warrant or the securities issuable hereunder to be the subject of any hedging, short sale, derivative, put or call transaction that would result in the effective economic disposition of this Purchase Warrant or the securities hereunder, except as provided for in FINRA Rule 5110(g)(2). On and after 180 days after the Effective Date, transfers to others may be made subject to compliance with or exemptions from applicable securities laws. In order to make any permitted assignment, the Holder must deliver to the Company the assignment form attached hereto duly executed and completed, together with the Purchase Warrant and payment of all transfer taxes, if any, payable in connection therewith. The Company shall within five (5) Business Days after receipt of the assignment form transfer this Purchase Warrant on the books of the Company and shall execute and deliver a new Purchase Warrant or Purchase Warrants of like tenor to the appropriate assignee(s) expressly evidencing the right to purchase the aggregate number of Shares purchasable hereunder or such portion of such number as shall be contemplated by any such assignment.

3.2 Restrictions Imposed by the Securities Act. The securities evidenced by this Purchase Warrant shall not be transferred unless and until: (i) the Company has received the opinion of counsel for the Holder that the securities may be transferred pursuant to an exemption from registration under the Securities Act and applicable state securities laws, the availability of which is established to the reasonable satisfaction of the Company (the Company hereby agreeing that the opinion of Sichenzia Ross Friedman Ference LLP shall be deemed satisfactory evidence of the availability of an exemption), or (ii) a registration statement or a post-effective amendment to the Registration Statement relating to the offer and sale of such securities has been filed by the Company and declared effective by the U.S. Securities and Exchange Commission (the "**Commission**") and compliance with applicable state securities law has been established.

4. Registration Rights.

4.1 Demand Registration.

4.1.1 Grant of Right. The Company, upon written demand (a "**Demand Notice**") of the Holder(s) of at least 51% of the Purchase Warrants and/or the underlying Shares ("Majority Holders"), agrees to register, on one occasion, all or any portion of the Shares underlying the Purchase Warrants (collectively, the "**Registrable Securities**"). On such occasion, the Company will file a registration statement with the Commission covering the Registrable Securities within sixty (60) days after receipt of a Demand Notice and use its reasonable best efforts to have the registration statement declared effective promptly thereafter, subject to compliance with review by the Commission; provided, however, that the Company shall not be required to comply with a Demand Notice if the Company has filed a registration statement with respect to which the Holder is entitled to piggyback registration rights pursuant to Section 4.2 hereof and either: (i) the Holder has elected to participate in the offering covered by such registration statement or (ii) if such registration statement relates to an underwritten primary offering of securities of the Company, until the offering covered by such registration statement has been withdrawn or until thirty (30) days after such offering is consummated. The demand for registration may be made at any time during a period of four (4) years beginning on the Commencement Date. The Company covenants and agrees to give written notice of its receipt of any Demand Notice by any Holder(s) to all other registered Holders of the Purchase Warrants and/or the Registrable Securities within ten (10) days after the date of the receipt of any such Demand Notice.

4.1.2 Terms. The Company shall bear all fees and expenses attendant to the registration of the Registrable Securities pursuant to Section 4.1.1, but the Holders shall pay any and all underwriting commissions and the expenses of any legal counsel selected by the Holders to represent them in connection with the sale of the Registrable Securities. The Company agrees to use its reasonable best efforts to cause the filing required herein to become effective promptly and to qualify or register the Registrable Securities in such States as are reasonably requested by the Holder(s); provided, however, that in no event shall the Company be required to register the Registrable Securities in a State in which such registration would cause: (i) the Company to be obligated to register or license to do business in such State or submit to general service of process in such State, or (ii) the principal shareholders of the Company to be obligated to escrow their shares of capital stock of the Company. The Company shall cause any registration statement filed pursuant to the demand right granted under Section 4.1.1 to remain effective for a period of at least twelve (12) consecutive months after the date that the Holders of the Registrable Securities covered by such registration statement are first given the opportunity to sell all of such securities. The Holders shall only use the prospectuses provided by the Company to sell the shares covered by such registration statement, and will immediately cease to use any prospectus furnished by the Company if the Company advises the Holder that such prospectus may no longer be used due to a material misstatement or omission. Notwithstanding the provisions of this Section 4.1.2, the Holder shall be entitled to a demand registration under this Section 4.1.2 on only one (1) occasion and such demand registration right shall terminate on the fifth anniversary of the effectiveness of the registration statement in accordance with FINRA Rule 5110(f)(2)(H)(iv).

4.2 "Piggy-Back" Registration.

4.2.1 Grant of Right. In addition to the demand right of registration described in Section 4.1 hereof, the Holder shall have the right, for a period of no more than seven (7) years from the date of effectiveness of the registration statement in accordance with FINRA Rule 5110(f)(2)(H)(v), to include the Registrable Securities as part of any other registration of securities filed by the Company (other than in connection with a transaction contemplated by Rule 145(a) promulgated under the Securities Act or pursuant to Form S-8 or any equivalent form); provided, however, that if, solely in connection with any primary underwritten public offering for the account of the Company, the managing underwriter(s) thereof shall, in its reasonable discretion, impose a limitation on the number of shares of Common Stock which may be included in the Registration Statement because, in such underwriter(s)' judgment, marketing or other factors dictate such limitation is necessary to facilitate public distribution, then the Company shall be obligated to include in such Registration Statement only such limited portion of the Registrable Securities with respect to which the Holder requested inclusion hereunder as the underwriter shall reasonably permit. Any exclusion of Registrable Securities shall be made pro rata among the Holders seeking to include Registrable Securities in proportion to the number of Registrable Securities sought to be included by such Holders; provided, however, that the Company shall not exclude any Registrable Securities unless the Company has first excluded all outstanding securities, the holders of which are not entitled to inclusion of such securities in such Registration Statement or are not entitled to pro rata inclusion with the Registrable Securities.

4.2.2 Terms. The Company shall bear all fees and expenses attendant to registering the Registrable Securities pursuant to Section 4.2.1 hereof, but the Holders shall pay any and all underwriting commissions and the expenses of any legal counsel selected by the Holders to represent them in connection with the sale of the Registrable Securities. In the event of such a proposed registration, the Company shall furnish the then Holders of outstanding Registrable Securities with not less than thirty (30) days written notice prior to the proposed date of filing of such registration statement. Such notice to the Holders shall continue to be given for each registration statement filed by the Company until such time as all of the Registrable Securities have been sold by the Holder. The holders of the Registrable Securities shall exercise the "piggy-back" rights provided for herein by giving written notice within ten (10) days of the receipt of the Company's notice of its intention to file a registration statement. Except as otherwise provided in this Purchase Warrant, there shall be no limit on the number of times the Holder may request registration under this Section 4.2.2; provided, however, that such registration rights shall terminate on the sixth anniversary of the Commencement Date.

4.3 General Terms.

4.3.1 Indemnification. The Company shall indemnify the Holder(s) of the Registrable Securities to be sold pursuant to any registration statement hereunder and each person, if any, who controls such Holders within the meaning of Section 15 of the Securities Act or Section 20 (a) of the Securities Exchange Act of 1934, as amended (" **Exchange Act**"), against all loss, claim, damage, expense or liability (including all reasonable attorneys' fees and other expenses reasonably incurred in investigating, preparing or defending against any claim whatsoever) to which any of them may become subject under the Securities Act, the Exchange Act or otherwise, arising from such registration statement but only to the same extent and with the same effect as the provisions pursuant to which the Company has agreed to indemnify the Underwriters contained in Section 5.1 of the Underwriting Agreement between the Underwriters and the Company, dated as of [_____], 2014. The Holder(s) of the Registrable Securities to be sold pursuant to such registration statement, and their successors and assigns, shall severally, and not jointly, indemnify the Company, against all loss, claim, damage, expense or liability (including all reasonable attorneys' fees and other expenses reasonably incurred in investigating, preparing or defending against any claim whatsoever) to which they may become subject under the Securities Act, the Exchange Act or otherwise, arising from information furnished by or on behalf of such Holders, or their successors or assigns, in writing, for specific inclusion in such registration statement to the same extent and with the same effect as the provisions contained in Section 5.2 of the Underwriting Agreement pursuant to which the Underwriters have agreed to indemnify the Company.

4.3.2 Exercise of Purchase Warrants. Nothing contained in this Purchase Warrant shall be construed as requiring the Holder(s) to exercise their Purchase Warrants prior to or after the initial filing of any registration statement or the effectiveness thereof.

4.3.3 Documents Delivered to Holders. The Company shall furnish to each Holder participating in any of the foregoing offerings and to each underwriter of any such offering, if any, a signed counterpart, addressed to such Holder or underwriter, of: (i) an opinion of counsel to the Company, dated the effective date of such registration statement (and, if such registration includes an underwritten public offering, an opinion dated the date of the closing under any underwriting agreement related thereto), and (ii) a "cold comfort" letter dated the effective date of such registration statement (and, if such registration includes an underwritten public offering, a letter dated the date of the closing under the underwriting agreement) signed by the independent registered public accounting firm which has issued a report on the Company's financial statements included in such registration statement, in each case covering substantially the same matters with respect to such registration statement (and the prospectus included therein) and, in the case of such accountants' letter, with respect to events subsequent to the date of such financial statements, as are customarily covered in opinions of issuer's counsel and in accountants' letters delivered to underwriters in underwritten public offerings of securities. The Company shall also deliver promptly to each Holder participating in the offering requesting the correspondence and memoranda described below and to the managing underwriter, if any, copies of all correspondence between the Commission and the Company, its counsel or auditors and all memoranda relating to discussions with the Commission or its staff with respect to the registration statement and permit each Holder and underwriter to do such investigation, upon reasonable advance notice, with respect to information contained in or omitted from the registration statement as it deems reasonably necessary to comply with applicable securities laws or rules of FINRA. Such investigation shall include access to books, records and properties and opportunities to discuss the business of the Company with its officers and independent auditors, all to such reasonable extent and at such reasonable times as any such Holder shall reasonably request.

4 . 3 . 4 Underwriting Agreement. The Company shall enter into an underwriting agreement with the managing underwriter(s), if any, selected by any Holders whose Registrable Securities are being registered pursuant to this Section 4, which managing underwriter shall be reasonably satisfactory to the Company. Such agreement shall be reasonably satisfactory in form and substance to the Company, each Holder and such managing underwriters, and shall contain such representations, warranties and covenants by the Company and such other terms as are customarily contained in agreements of that type used by the managing underwriter. The Holders shall be parties to any underwriting agreement relating to an underwritten sale of their Registrable Securities and may, at their option, require that any or all the representations, warranties and covenants of the Company to or for the benefit of such underwriters shall also be made to and for the benefit of such Holders. Such Holders shall not be required to make any representations or warranties to or agreements with the Company or the underwriters except as they may relate to such Holders, their Shares and their intended methods of distribution.

4.3.5 Documents to be Delivered by Holder(s). Each of the Holder(s) participating in any of the foregoing offerings shall furnish to the Company a completed and executed questionnaire provided by the Company requesting information customarily sought of selling security holders.

4 . 3 . 6 Damages. Should the registration or the effectiveness thereof required by Sections 4.1 and 4.2 hereof be delayed by the Company or the Company otherwise fails to comply with such provisions, the Holder(s) shall, in addition to any other legal or other relief available to the Holder(s), be entitled to obtain specific performance or other equitable (including injunctive) relief against the threatened breach of such provisions or the continuation of any such breach, without the necessity of proving actual damages and without the necessity of posting bond or other security.

5. New Purchase Warrants to be Issued.

5 . 1 Partial Exercise or Transfer. Subject to the restrictions in Section 3 hereof, this Purchase Warrant may be exercised or assigned in whole or in part. In the event of the exercise or assignment hereof in part only, upon surrender of this Purchase Warrant for cancellation, together with the duly executed exercise or assignment form and funds sufficient to pay any Exercise Price and/or transfer tax if exercised pursuant to Section 2.1 hereto, the Company shall cause to be delivered to the Holder without charge a new Purchase Warrant of like tenor to this Purchase Warrant in the name of the Holder evidencing the right of the Holder to purchase the number of Shares purchasable hereunder as to which this Purchase Warrant has not been exercised or assigned.

5 . 2 Lost Certificate. Upon receipt by the Company of evidence satisfactory to it of the loss, theft, destruction or mutilation of this Purchase Warrant and of reasonably satisfactory indemnification or the posting of a bond, the Company shall execute and deliver a new Purchase Warrant of like tenor and date. Any such new Purchase Warrant executed and delivered as a result of such loss, theft, mutilation or destruction shall constitute a substitute contractual obligation on the part of the Company.

6. Adjustments.

6 . 1 Adjustments to Exercise Price and Number of Securities. The Exercise Price and the number of Shares underlying the Purchase Warrant shall be subject to adjustment from time to time as hereinafter set forth:

6.1.1 Share Dividends; Split Ups. If, after the date hereof, and subject to the provisions of Section 6.3 below, the number of outstanding Shares is increased by a stock dividend payable in Shares or by a split up of Shares or other similar event, then, on the effective day thereof, the number of Shares purchasable hereunder shall be increased in proportion to such increase in outstanding Shares, and the Exercise Price shall be proportionately decreased.

6.1.2 Aggregation of Shares. If, after the date hereof, and subject to the provisions of Section 6.3 below, the number of outstanding Shares is decreased by a consolidation, combination or reclassification of Shares or other similar event, then, on the effective date thereof, the number of Shares purchasable hereunder shall be decreased in proportion to such decrease in outstanding Shares, and the Exercise Price shall be proportionately increased.

6.1.3 Replacement of Securities upon Reorganization, etc. In case of any reclassification or reorganization of the outstanding Shares other than a change covered by Section 6.1.1 or 6.1.2 hereof or that solely affects the par value of such Shares, or in the case of any share reconstruction or amalgamation or consolidation of the Company with or into another corporation (other than a consolidation or share reconstruction or amalgamation in which the Company is the continuing corporation and that does not result in any reclassification or reorganization of the outstanding Shares), or in the case of any sale or conveyance to another corporation or entity of the property of the Company as an entirety or substantially as an entirety in connection with which the Company is dissolved, the Holder of this Purchase Warrant shall have the right thereafter (until the expiration of the right of exercise of this Purchase Warrant) to receive upon the exercise hereof, for the same aggregate Exercise Price payable hereunder immediately prior to such event, the kind and amount of shares of stock or other securities or property (including cash) receivable upon such reclassification, reorganization, share reconstruction or amalgamation, or consolidation, or upon a dissolution following any such sale or transfer, by a Holder of the number of Shares of the Company obtainable upon exercise of this Purchase Warrant immediately prior to such event; and if any reclassification also results in a change in Shares covered by Section 6.1.1 or 6.1.2, then such adjustment shall be made pursuant to Sections 6.1.1, 6.1.2 and this Section 6.1.3. The provisions of this Section 6.1.3 shall similarly apply to successive reclassifications, reorganizations, share reconstructions or amalgamations, or consolidations, sales or other transfers.

6.1.4 Changes in Form of Purchase Warrant. This form of Purchase Warrant need not be changed because of any change pursuant to this Section 6.1, and Purchase Warrants issued after such change may state the same Exercise Price and the same number of Shares as are stated in the Purchase Warrants initially issued pursuant to this Agreement. The acceptance by any Holder of the issuance of new Purchase Warrants reflecting a required or permissive change shall not be deemed to waive any rights to an adjustment occurring after the Commencement Date or the computation thereof.

6 . 2 Substitute Purchase Warrant. In case of any consolidation of the Company with, or share reconstruction or amalgamation of the Company with or into, another corporation (other than a consolidation or share reconstruction or amalgamation which does not result in any reclassification or change of the outstanding Shares), the corporation formed by such consolidation or share reconstruction or amalgamation shall execute and deliver to the Holder a supplemental Purchase Warrant providing that the holder of each Purchase Warrant then outstanding or to be outstanding shall have the right thereafter (until the stated expiration of such Purchase Warrant) to receive, upon exercise of such Purchase Warrant, the kind and amount of shares of stock and other securities and property receivable upon such consolidation or share reconstruction or amalgamation, by a holder of the number of Shares of the Company for which such Purchase Warrant might have been exercised immediately prior to such consolidation, share reconstruction or amalgamation, sale or transfer. Such supplemental Purchase Warrant shall provide for adjustments which shall be identical to the adjustments provided for in this Section 6. The above provision of this Section shall similarly apply to successive consolidations or share reconstructions or amalgamations.

6 . 3 Elimination of Fractional Interests. The Company shall not be required to issue certificates representing fractions of Shares upon the exercise of the Purchase Warrant, nor shall it be required to issue scrip or pay cash in lieu of any fractional interests, it being the intent of the parties that all fractional interests shall be eliminated by rounding any fraction up or down, as the case may be, to the nearest whole number of Shares or other securities, properties or rights.

7 . Reservation and Listing. The Company shall at all times reserve and keep available out of its authorized Shares, solely for the purpose of issuance upon exercise of the Purchase Warrants, such number of Shares or other securities, properties or rights as shall be issuable upon the exercise thereof. The Company covenants and agrees that, upon exercise of the Purchase Warrants and payment of the Exercise Price therefor, in accordance with the terms hereby, all Shares and other securities issuable upon such exercise shall be duly and validly issued, fully paid and non-assessable and not subject to preemptive rights of any shareholder. The Company further covenants and agrees that upon exercise of the Purchase Warrants and payment of the exercise price therefor, all Shares and other securities issuable upon such exercise shall be duly and validly issued, fully paid and non-assessable and not subject to preemptive rights of any shareholder. As long as the Purchase Warrants shall be outstanding, the Company shall use its commercially reasonable efforts to cause all Shares issuable upon exercise of the Purchase Warrants to be listed (subject to official notice of issuance) on all national securities exchanges (or, if applicable, on the OTC Bulletin Board or any successor trading market) on which the Shares issued to the public in the Offering may then be listed and/or quoted.

8. Certain Notice Requirements.

8 . 1 Holder's Right to Receive Notice. Nothing herein shall be construed as conferring upon the Holders the right to vote or consent or to receive notice as a shareholder for the election of directors or any other matter, or as having any rights whatsoever as a shareholder of the Company. If, however, at any time prior to the expiration of the Purchase Warrants and their exercise, any of the events described in Section 8.2 shall occur, then, in one or more of said events, the Company shall give written notice of such event at least fifteen days prior to the date fixed as a record date or the date of closing the transfer books for the determination of the shareholders entitled to such dividend, distribution, conversion or exchange of securities or subscription rights, or entitled to vote on such proposed dissolution, liquidation, winding up or sale. Such notice shall specify such record date or the date of the closing of the transfer books, as the case may be. Notwithstanding the foregoing, the Company shall deliver to each Holder a copy of each notice given to the other shareholders of the Company at the same time and in the same manner that such notice is given to the shareholders.

8.2 Events Requiring Notice. The Company shall be required to give the notice described in this Section 8 upon one or more of the following events: (i) if the Company shall take a record of the holders of its Shares for the purpose of entitling them to receive a dividend or distribution payable otherwise than in cash, or a cash dividend or distribution payable otherwise than out of retained earnings, as indicated by the accounting treatment of such dividend or distribution on the books of the Company, (ii) the Company shall offer to all the holders of its Shares any additional shares of capital stock of the Company or securities convertible into or exchangeable for shares of capital stock of the Company, or any option, right or warrant to subscribe therefor, or (iii) a dissolution, liquidation or winding up of the Company (other than in connection with a consolidation or share reconstruction or amalgamation) or a sale of all or substantially all of its property, assets and business shall be proposed.

8 . 3 Notice of Change in Exercise Price. The Company shall, promptly after an event requiring a change in the Exercise Price pursuant to Section 6 hereof, send notice to the Holders of such event and change ("**Price Notice**"). The Price Notice shall describe the event causing the change and the method of calculating same and shall be certified as being true and accurate by the Company's Chief Financial Officer.

8.4 Transmittal of Notices. All notices, requests, consents and other communications under this Purchase Warrant shall be in writing and shall be deemed to have been duly made when hand delivered, or mailed by express mail or private courier service: (i) if to the registered Holder of the Purchase Warrant, to the address of such Holder as shown on the books of the Company, or (ii) if to the Company, to following address or to such other address as the Company may designate by notice to the Holders:

If to the Holder:

Aegis Capital Corp.
810 Seventh Avenue, 18th Floor
New York, New York 10019
Attn: Mr. David Bocchi, Managing Director of Investment Banking
Fax No.: (212) 813-1047

with a copy (which shall not constitute notice) to:

Sichenzia Ross Friedman Ference LLP
61 Broadway, 32nd Floor
New York, NY 10006
Attn: Jeffrey Fessler, Esq.
Fax No.: 212-930-9725

If to the Company:

PlasmaTech Biopharmaceuticals, Inc.
4848 Lemmon Avenue, Suite 517
Dallas, TX 75219
Attention: Scott Schorer, Chief Executive Officer
Fax No: [•]

with a copy (which shall not constitute notice) to:

Bingham McCutchen LLP
One Federal Street
Boston, MA 02110
Attention: John J. Concannon III, Esq.
Fax No: 617-428-6330

9. Miscellaneous.

9.1 Amendments. The Company and Aegis may from time to time supplement or amend this Purchase Warrant without the approval of any of the Holders in order to cure any ambiguity, to correct or supplement any provision contained herein that may be defective or inconsistent with any other provisions herein, or to make any other provisions in regard to matters or questions arising hereunder that the Company and Aegis may deem necessary or desirable and that the Company and Aegis deem shall not adversely affect the interest of the Holders. All other modifications or amendments shall require the written consent of and be signed by the party against whom enforcement of the modification or amendment is sought.

9.2 Headings. The headings contained herein are for the sole purpose of convenience of reference, and shall not in any way limit or affect the meaning or interpretation of any of the terms or provisions of this Purchase Warrant.

9.3. Entire Agreement. This Purchase Warrant (together with the other agreements and documents being delivered pursuant to or in connection with this Purchase Warrant) constitutes the entire agreement of the parties hereto with respect to the subject matter hereof, and supersedes all prior agreements and understandings of the parties, oral and written, with respect to the subject matter hereof.

9.4 Binding Effect. This Purchase Warrant shall inure solely to the benefit of and shall be binding upon, the Holder and the Company and their permitted assignees, respective successors, legal representative and assigns, and no other person shall have or be construed to have any legal or equitable right, remedy or claim under or in respect of or by virtue of this Purchase Warrant or any provisions herein contained.

9.5 Governing Law; Submission to Jurisdiction; Trial by Jury. This Purchase Warrant shall be governed by and construed and enforced in accordance with the laws of the State of New York, without giving effect to conflict of laws principles thereof. The Company hereby agrees that any action, proceeding or claim against it arising out of, or relating in any way to this Purchase Warrant shall be brought and enforced in the New York Supreme Court, County of New York, or in the United States District Court for the Southern District of New York, and irrevocably submits to such jurisdiction, which jurisdiction shall be exclusive. The Company hereby waives any objection to such exclusive jurisdiction and that such courts represent an inconvenient forum. Any process or summons to be served upon the Company may be served by transmitting a copy thereof by registered or certified mail, return receipt requested, postage prepaid, addressed to it at the address set forth in Section 8 hereof. Such mailing shall be deemed personal service and shall be legal and binding upon the Company in any action, proceeding or claim. The Company and the Holder agree that the prevailing party(ies) in any such action shall be entitled to recover from the other party(ies) all of its reasonable attorneys' fees and expenses relating to such action or proceeding and/or incurred in connection with the preparation therefor. The Company (on its behalf and, to the extent permitted by applicable law, on behalf of its stockholders and affiliates) and the Holder hereby irrevocably waive, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby.

9.6 Waiver, etc. The failure of the Company or the Holder to at any time enforce any of the provisions of this Purchase Warrant shall not be deemed or construed to be a waiver of any such provision, nor to in any way affect the validity of this Purchase Warrant or any provision hereof or the right of the Company or any Holder to thereafter enforce each and every provision of this Purchase Warrant. No waiver of any breach, non-compliance or non-fulfillment of any of the provisions of this Purchase Warrant shall be effective unless set forth in a written instrument executed by the party or parties against whom or which enforcement of such waiver is sought; and no waiver of any such breach, non-compliance or non-fulfillment shall be construed or deemed to be a waiver of any other or subsequent breach, non-compliance or non-fulfillment.

9.7 Execution in Counterparts. This Purchase Warrant may be executed in one or more counterparts, and by the different parties hereto in separate counterparts, each of which shall be deemed to be an original, but all of which taken together shall constitute one and the same agreement, and shall become effective when one or more counterparts has been signed by each of the parties hereto and delivered to each of the other parties hereto. Such counterparts may be delivered by facsimile transmission or other electronic transmission.

9.8 Exchange Agreement. As a condition of the Holder's receipt and acceptance of this Purchase Warrant, Holder agrees that, at any time prior to the complete exercise of this Purchase Warrant by Holder, if the Company and Aegis enter into an agreement ("**Exchange Agreement**") pursuant to which they agree that all outstanding Purchase Warrants will be exchanged for securities or cash or a combination of both, then Holder shall agree to such exchange and become a party to the Exchange Agreement.

[*Signature Page Follows*]

IN WITNESS WHEREOF, the Company has caused this Purchase Warrant to be signed by its duly authorized officer as of the ____ day of _____, 2014.

PLASMATECH BIOPHARMACEUTICALS, INC.

By: _____

Name:
Title:

[*Form to be used to exercise Purchase Warrant*]

Date: _____, 20___

The undersigned hereby elects irrevocably to exercise the Purchase Warrant for _____ shares of common stock, par value $0.01 per share (the "**Shares**"), of PlasmaTech Biopharmaceuticals, Inc., a Delaware corporation (the "**Company**"), and hereby makes payment of $____ (at the rate of $____ per Share) in payment of the Exercise Price pursuant thereto. Please issue the Shares as to which this Purchase Warrant is exercised in accordance with the instructions given below and, if applicable, a new Purchase Warrant representing the number of Shares for which this Purchase Warrant has not been exercised.

or

The undersigned hereby elects irrevocably to convert its right to purchase ___ Shares of the Company under the Purchase Warrant for _____ Shares, as determined in accordance with the following formula:

$$X = \frac{Y(A-B)}{A}$$

Where,

X = The number of Shares to be issued to Holder;
Y = The number of Shares for which the Purchase Warrant is being exercised;
A = The fair market value of one Share which is equal to $_____; and
B = The Exercise Price which is equal to $_____ per share

The undersigned agrees and acknowledges that the calculation set forth above is subject to confirmation by the Company and any disagreement with respect to the calculation shall be resolved by the Company in its sole discretion.

Please issue the Shares as to which this Purchase Warrant is exercised in accordance with the instructions given below and, if applicable, a new Purchase Warrant representing the number of Shares for which this Purchase Warrant has not been converted.

Signature _____

Signature Guaranteed _____

INSTRUCTIONS FOR REGISTRATION OF SECURITIES

Name: _____
(Print in Block Letters)

Address: _____

_____

_____

NOTICE: The signature to this form must correspond with the name as written upon the face of the Purchase Warrant without alteration or enlargement or any change whatsoever, and must be guaranteed by a bank, other than a savings bank, or by a trust company or by a firm having membership on a registered national securities exchange.

[*Form to be used to assign Purchase Warrant*]

ASSIGNMENT

(To be executed by the registered Holder to effect a transfer of the within Purchase Warrant):

FOR VALUE RECEIVED, _____ does hereby sell, assign and transfer unto the right to purchase shares of common stock, par value $0.01 per share, of PlasmaTech Biopharmaceuticals, Inc., a Delaware corporation (the "**Company**"), evidenced by the Purchase Warrant and does hereby authorize the Company to transfer such right on the books of the Company.

Dated: _____, 20__

Signature _____

Signature Guaranteed _____

NOTICE: The signature to this form must correspond with the name as written upon the face of the within Purchase Warrant without alteration or enlargement or any change whatsoever, and must be guaranteed by a bank, other than a savings bank, or by a trust company or by a firm having membership on a registered national securities exchange.

EXHIBIT B

Form of Lock-Up Agreement

[•], 2014

Aegis Capital Corp.
810 Seventh Avenue, 18th Floor
New York, New York 10019

Ladies and Gentlemen:

The undersigned understands that Aegis Capital Corp. (the "**Representative**") proposes to enter into an Underwriting Agreement (the "**Underwriting Agreement**") with PlasmaTech Biopharmaceuticals, Inc., a Delaware corporation (the "**Company**"), providing for the public offering (the "**Public Offering**") of shares of common stock, par value $0.01 per share, of the Company (the "**Shares**").

To induce the Representative to continue its efforts in connection with the Public Offering, the undersigned hereby agrees that, without the prior written consent of the Representative, the undersigned will not, during the period commencing on the date hereof and ending 90 days after the date of the final prospectus (the "**Lock-Up Period**") relating to the Public Offering (the "**Prospectus**"), (1) offer, pledge, sell, contract to sell, grant, lend, or otherwise transfer or dispose of, directly or indirectly, any Shares or any securities convertible into or exercisable or exchangeable for Shares, whether now owned or hereafter acquired by the undersigned or with respect to which the undersigned has or hereafter acquires the power of disposition (collectively, the "**Lock-Up Securities**"); (2) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the Lock-Up Securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Lock-Up Securities, in cash or otherwise; (3) make any demand for or exercise any right with respect to the registration of any Lock-Up Securities; or (4) publicly disclose the intention to make any offer, sale, pledge or disposition, or to enter into any transaction, swap, hedge or other arrangement relating to any Lock-Up Securities. Notwithstanding the foregoing, and subject to the conditions below, the undersigned may transfer Lock-Up Securities without the prior written consent of the Representative in connection with (a) transactions relating to Lock-Up Securities acquired in open market transactions after the completion of the Public Offering; provided that no filing under Section 16(a) of the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), shall be required or shall be voluntarily made in connection with subsequent sales of Lock-Up Securities acquired in such open market transactions; (b) transfers of Lock-Up Securities as a *bona fide* gift, by will or intestacy or to a family member or trust for the benefit of a family member (for purposes of this lock-up agreement, "family member" means any relationship by blood, marriage or adoption, not more remote than first cousin); (c) transfers of Lock-Up Securities to a charity or educational institution; or (d) if the undersigned, directly or indirectly, controls a corporation, partnership, limited liability company or other business entity, any transfers of Lock-Up Securities to any shareholder, partner or member of, or owner of similar equity interests in, the undersigned, as the case may be; provided that in the case of any transfer pursuant to the foregoing clauses (b), (c) or (d), (i) any such transfer shall not involve a disposition for value, (ii) each transferee shall sign and deliver to the Representative a lock-up agreement substantially in the form of this lock-up agreement and (iii) no filing under Section 16(a) of the Exchange Act shall be required or shall be voluntarily made. The undersigned also agrees and consents to the entry of stop transfer instructions with the Company's transfer agent and registrar against the transfer of the undersigned's Lock-Up Securities except in compliance with this lock-up agreement.

If (i) during the last 17 days of the Lock-Up Period, the Company issues an earnings release or material news or a material event relating to the Company occurs, or (ii) prior to the expiration of the Lock-Up Period, the Company announces that it will release earnings results or becomes aware that material news or a material event will occur during the 16-day period beginning on the last day of the Lock-Up Period, the restrictions imposed by this lock-up agreement shall continue to apply until the expiration of the 18-day period beginning on the issuance of the earnings release or the occurrence of such material news or material event, as applicable, unless the Representative waives, in writing, such extension.

The undersigned agrees that, prior to engaging in any transaction or taking any other action that is subject to the terms of this lock-up agreement during the period from the date hereof to and including the 34th day following the expiration of the initial Lock-Up Period, the undersigned will give notice thereof to the Company and will not consummate any such transaction or take any such action unless it has received written confirmation from the Company that the Lock-Up Period (as may have been extended pursuant to the previous paragraph) has expired.

If the undersigned is an officer or director of the Company, (i) the undersigned agrees that the foregoing restrictions shall be equally applicable to any issuer-directed or "friends and family" Shares that the undersigned may purchase in the Public Offering; (ii) the Representative agrees that, at least three (3) business days before the effective date of any release or waiver of the foregoing restrictions in connection with a transfer of Lock-Up Securities, the Representative will notify the Company of the impending release or waiver; and (iii) the Company has agreed in the Underwriting Agreement to announce the impending release or waiver by press release through a major news service at least two (2) business days before the effective date of the release or waiver. Any release or waiver granted by the Representative hereunder to any such officer or director shall only be effective two (2) business days after the publication date of such press release. The provisions of this paragraph will not apply if (a) the release or waiver is effected solely to permit a transfer of Lock-Up Securities not for consideration and (b) the transferee has agreed in writing to be bound by the same terms described in this lock-up agreement to the extent and for the duration that such terms remain in effect at the time of such transfer.

No provision in this lock-up agreement shall be deemed to restrict or prohibit the exercise, exchange or conversion by the undersigned of any securities exercisable or exchangeable for or convertible into Shares, as applicable; provided that the undersigned does not transfer the Shares acquired on such exercise, exchange or conversion during the Lock-Up Period, unless otherwise permitted pursuant to the terms of this lock-up agreement. In addition, no provision herein shall be deemed to restrict or prohibit the entry into or modification of a so-called "10b5-1" plan at any time (other than the entry into or modification of such a plan in such a manner as to cause the sale of any Lock-Up Securities within the Lock-Up Period).

In the event that the Lock-Up Period is extended beyond the date that is 90 days after the date of the Underwriting Agreement (the "Extension of the Lock-Up Period"), the Representative shall provide written notice promptly, and in no event later than five (5) business days prior to the effective date of such Extension of the Lock-Up Period, to the Company, and the Company will, in turn, notify the undersigned.

The undersigned understands that the Company and the Representative are relying upon this lock-up agreement in proceeding toward consummation of the Public Offering. The undersigned further understands that this lock-up agreement is irrevocable and shall be binding upon the undersigned's heirs, legal representatives, successors and assigns.

The undersigned understands that, if the Underwriting Agreement is not executed by September 30, 2014, or if the Underwriting Agreement (other than the provisions thereof which survive termination) shall terminate or be terminated prior to the initial closing date of the Shares to be sold thereunder, then this lock-up agreement shall be void and of no further force or effect.

Whether or not the Public Offering actually occurs depends on a number of factors, including market conditions. Any Public Offering will only be made pursuant to an Underwriting Agreement, the terms of which are subject to negotiation between the Company and the Representative.

Very truly yours,

_____

(Name - Please Print)

_____

(Signature)

_____

(Name of Signatory, in the case of entities - Please Print)

_____

(Title of Signatory, in the case of entities - Please Print)

Address: _____

_____

_____

EXHIBIT C

Form of Press Release

[COMPANY]

[Date]

[COMPANY] (the "Company") announced today that Aegis Capital Corp., acting as representative for the underwriters in the Company's recent public offering of _____ shares of the Company's common stock, is [waiving] [releasing] a lock-up restriction with respect to _____ shares of the Company's common stock held by [certain officers or directors] [an officer or director] of the Company. The [waiver] [release] will take effect on _____, 20___, and the shares may be sold on or after such date.

This press release is not an offer or sale of the securities in the United States or in any other jurisdiction where such offer or sale is prohibited, and such securities may not be offered or sold in the United States absent registration or an exemption from registration under the Securities Act of 1933, as amended.

EXHIBIT D

Form of Opinion of IP Counsel

EXHIBIT 5.1

November 6, 2014

PlasmaTech Biopharmaceuticals, Inc.
4848 Lemmon Avenue, Suite 517
Dallas, TX 75210
Re: Registration Statement on Form S-1

Ladies and Gentlemen:

We have acted as counsel to PlasmaTech Biopharmaceuticals, Inc., f/k/a Access Pharmaceuticals, Inc., a Delaware corporation (the "Company"), in connection with the Company's registration statement on Form S-1 (Registration No. 333-197220) initially filed with the Securities and Exchange Commission on July 7, 2014, as amended to date (the "Registration Statement"), under the Securities Act of 1933, as amended (the "Act"). The Registration Statement relates to the registration of the offer and sale of (a) shares of the Company's Common Stock, par value $0.01 per share (the "Common Stock"), and warrants to purchase shares of Common Stock (the "Warrants"), and (b) additional shares of Common Stock and/or Warrants to purchase additional shares of Common Stock that may be offered and sold by the Company to cover over-allotments, in each case as set forth in the Registration Statement (collectively, the "Public Securities").

We have reviewed the corporate proceedings of the Company with respect to the authorization of the issuance of the Public Securities. As such counsel, we have also examined originals or copies of the Registration Statement and the exhibits thereto and such other documents, corporate records and other instruments as we have deemed necessary or appropriate for the purpose of this opinion. As to questions of fact material to this opinion, we have relied on certificates or comparable documents of public officials and of officers and representatives of the Company. In rendering the opinion expressed below, we have assumed the genuineness of all signatures, the conformity to the originals of all documents reviewed by us as copies, the authenticity and completeness of all original documents reviewed by us in original or copy form and the legal competence of each individual executing any document. We have also assumed that an Underwriting Agreement substantially in the form of Exhibit 1.1 to the Registration Statement, by and among the Company and the underwriters named therein (the "Underwriting Agreement"), will have been duly executed and delivered pursuant to the authorizing resolutions of the Board of Directors of the Company and the pricing committee thereof.

We have also assumed that, at or prior to the time of the issuance and delivery of any Public Securities, the Registration Statement will have been declared effective under the Act, that the Public Securities will have been registered under the Act pursuant to the Registration Statement and that such Registration Statement will not have been modified or rescinded, and that there will not have occurred any change in law affecting the validity of the issuance of the Public Securities.

This opinion is limited solely to the Delaware General Corporation Law.

Based upon and subject to the foregoing, we are of the opinion that the Public Securities to be issued and sold by the Company under the Underwriting Agreement will have been duly authorized, and when delivered and paid for by the Underwriters (as such term is defined in the Underwriting Agreement) in accordance with the terms of the Underwriting Agreement, will be validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and to the reference to this firm under the heading "Legal Matters" in the Prospectus included in the Registration Statement. In giving this consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Act, or the rules and regulations promulgated thereunder. In rendering the opinions set forth above, we are opining only as to the specific legal issues expressly set forth therein, and no opinion shall be inferred as to any other matter or matters.

This opinion is intended solely for use in connection with the issuance and sale of the Public Securities subject to the Registration Statement and is not to be relied upon for any other purpose.

Very truly yours,

/s/ Bingham McCutchen LLP

BINGHAM MCCUTCHEN LLP

EXHIBIT 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the inclusion in this Registration Statement on Form S-1 of PlasmaTech Biopharmaceuticals, Inc. (formerly known as Access Pharmaceuticals, Inc.) of our report dated March 26, 2014, except for Note 1 as it relates to Reverse Stock Split and Note 13, Subsequent Events, as to which the date is October 24, 2014, relating to our audits of the consolidated financial statements of PlasmaTech Biopharmaceuticals, Inc. as of and for the years ended December 31, 2013 and 2012. We also consent to the reference to our firm under the heading "Experts" in such Registration Statement.

/s/ Whitley Penn, LLP
Dallas, Texas
November 6, 2014