

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

Amendment No 1. to
FORM S-1

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

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

Delaware
(State or other jurisdiction
of incorporation or organization)

2834
(Primary Standard Industrial
Classification Code Number)

04-3321804
(I.R.S. Employer
Identification Number)

**3301 Agriculture Drive
Madison, WI 53716
(608) 441-8120**
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

**Simon Pedder, Ph.D.
President and Chief Executive Officer
3301 Agriculture Drive
Madison, WI 53716
(608) 441-8120**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

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Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement is declared effective.

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

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

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

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

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

(Check one):

Large accelerated filer ☐

Accelerated filer ☐

Non-accelerated filer ☐

Smaller reporting company ☒

(Do not check if a smaller reporting company)

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount being Registered (1)	Proposed Maximum Offering Price Per Security	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, par value \$0.00001 per share (2)(3)	3,599,374	\$ 6.39	\$ 23,000,000	\$ 2,962.40
Warrants to purchase Common Stock	3,599,374	\$ -	\$ -	\$ -
Common Stock issuable upon exercise of Warrants (2)(3)	3,599,374	\$ 6.39	\$ 23,000,000	\$ 2,962.40
Total			\$ 46,000,000	\$ 5,924.80*

* Previously paid.

- (1) Pursuant to Rule 416, the securities being registered hereunder include such indeterminate number of additional shares of common stock as may be issued after the date hereof as a result of stock splits, stock dividends or similar transactions.
- (2) Proposed maximum aggregate offering price is estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended, using the closing price as reported on the OTC Markets on June 30, 2014 which was \$6.39.
- (3) Includes securities the underwriters have the option to purchase to cover over-allotments, if any.

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 said Section 8(a), may determine.

The information in this preliminary 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 preliminary prospectus is not an offer to sell these securities and it is not soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS

SUBJECT TO COMPLETION

DATED JULY 7, 2014

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



We are offering up to _____ shares of common stock, together with warrants to purchase an equal number of shares of common stock at a purchase price of _____ (and the shares issuable from time to time upon exercise of the warrants) pursuant to this prospectus. The shares and warrants will be separately issued, but the shares and warrants will be issued and sold to purchasers in equal proportion. 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 quoted on the OTCQX® marketplace under the symbol CLRB. Prior to February 12, 2014 our common stock was quoted under the symbol NVLT. On June 13, 2014, we effected a 1:20 reverse split of our common stock (the "Listing Reverse Split"). We have applied for listing of our common stock and warrants on The NASDAQ Capital Market under the symbol "CLRB" and "CLRBW", respectively. No assurance can be given that our application will be approved. On July 3, 2014, the last reported sale price of our common stock on the OTCQX was \$6.75 per share.

Investing in the offered securities involves a high degree of risk. See "Risk Factors" beginning on page 7 of this prospectus for a discussion of information that you should consider before investing in our securities.

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.

	<u>Per Share and Warrant</u>	<u>Total</u>
Public offering price	\$	\$
Underwriting discount (1)	\$	\$
Proceeds, before expenses, to us	\$	\$

- (1) See "Underwriting" for a description of compensation payable to the underwriter. We have agreed to reimburse the underwriter for certain accountable expenses as well as a 1% nonaccountable expense allowance. We have also agreed to issue the underwriter warrants to purchase a number of shares of common stock equal to 5% of the number of shares sold in this offering, subject to certain exceptions.

We have granted a 45-day option to the underwriter, to purchase up to an 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 identical 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 to purchasers in the offering on or about _____, 2014.

Aegis Capital Corp.

The date of this prospectus is _____, 2014.

Cancer-Targeted, Broad Spectrum, Multi-Product Technology Platform

Proprietary Phospholipid Ether (PLE) Analog Platform:

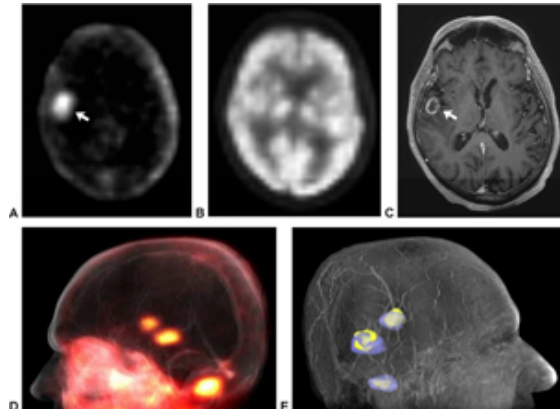


Products in Development:



I-124-CLR1404: Cancer PET Imaging

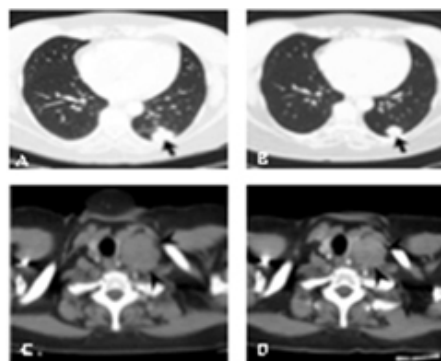
Unsuspected brain metastases in 70-year-old man with primary bronchogenic carcinoma.



Transverse PET image (A) obtained 6 days after injection of 5 mCi I-124-CLR1404 shows a right hemispheric focus of activity (arrow) that was not detectable on ¹⁸F-FDG PET (B), but confirmed on subsequent contrast-enhanced MR (C, arrow). Fused volume-rendered I-124-CLR1404 PET-MR image (D) shows a total of three unsuspected brain metastases (2 cerebral and 1 cerebellar) that were identified on I-124-CLR1404 PET and confirmed on MR, which altered the treatment strategy for this patient. Additional fused volume-rendered I-124-CLR1404 PET-MR image (E) with segmentation of the brain metastases shows the regions of I-124-CLR1404 uptake (purple), which exceed the regions of abnormal MR contrast enhancement (yellow). The clinical significance of this uptake-enhancement discordance within the tumor is uncertain at this time but serves as the aim of the Phase 2 glioblastoma imaging trial. (Provided by Dr. Perry Pickhardt, University of Wisconsin Carbone Cancer Center)

I-131-CLR1404: Molecular Radiotherapy

Tumor response after injection of single 85 mCi dose of I-131-CLR1404 in 58-year-old woman with metastatic triple-negative breast cancer

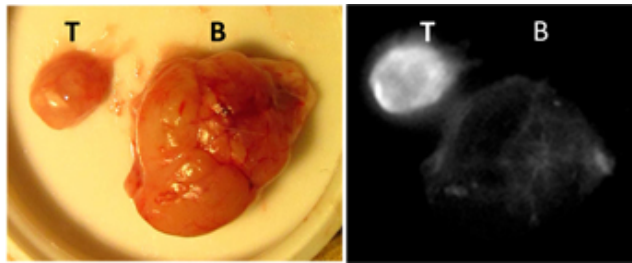


Transverse CT images through the lungs before (A) and 78 days after (B) I-131-CLR1404 administration shows a left lower lobe metastatic lesion (arrows) that decrease over 30% by volume.

A similar response was seen with the patient's left cervical lymphadenopathy (C and D, arrowheads). (Provided by Dr. Perry Pickhardt, University of Wisconsin Carbone Cancer Center)

CLR1502: Optical Imaging (800nm)

Non-Invasive Tumor Imaging and Intraoperative Margin Illumination



Photograph (left) and near infrared image (right) of an excised mouse brain (B) and human glioma stem cell derived tumor (T) that was surgically separated from the brain under optical guidance 96 h after injection of CLR1502. Note much more optical signal emanating from the tumor relative to normal brain. (Provided by Dr. John Kuo, University of Wisconsin Carbone Cancer Center)

*The images provided above are for illustrative purposes only and may not be indicative of all results.
The above illustrations do not refer to products approved by the FDA.
Collectar has not received any revenue from the sale of its products*

CELLECTAR BIOSCIENCES, INC.

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No dealer, salesperson or other person has been authorized to give any information or to make any representations other than those contained in this prospectus in connection with the offer contained in this prospectus and, if given or made, such information or representations must not be relied upon as having been authorized by us.

Neither the delivery of this prospectus nor any sale made hereunder shall under any circumstances create an implication that there has been no change in our affairs since the date hereof. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy securities other than those specifically offered hereby or of any securities offered hereby in any jurisdiction where, or to any person to whom, it is unlawful to make such offer or solicitation. The information contained in this prospectus speaks only as of the date of this prospectus unless the information specifically indicates that another date applies. In this prospectus, references to “Collectar Biosciences, Inc.,” “Collectar Bio”, “the Company,” “we,” “us,” and “our,” refer to Collectar Biosciences, Inc.

This prospectus has been prepared based on information provided by us and by other sources that we believe are reliable. This prospectus summarizes certain documents and other information in a manner we believe to be accurate, but we refer you to the actual documents, if any, for a more complete understanding of what we discuss in this prospectus. All of such documents are filed as exhibits to the registration statement of which this prospectus is a part. In making a decision to invest in the securities offered in this prospectus, you must rely on your own examination of us and the terms of the offering and securities offered in this prospectus, including the merits and risks involved.

We are not making any representation to you regarding the legality of an investment in the securities offered in this prospectus under any legal investment or similar laws or regulations. You should not consider any information in this prospectus to be legal, business, tax or other advice. You should consult your own attorney, business advisor and tax advisor for legal, business and tax advice regarding an investment in our securities. You may only rely on the information contained in or incorporated by reference into this prospectus or that we have referred you to.

We have not authorized anyone to provide you with different information. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities other than the securities offered by this prospectus. No offers will be made to, nor accepted from, any person that does not meet the definition of an “institutional investor” under the blue sky laws of its state of domicile unless otherwise specified in the “Underwriting” section below. Neither the delivery of this prospectus nor any sale made in connection with this prospectus shall, under any circumstances, create any implication that there has been no change in our affairs since the date of this prospectus or that the information contained by reference to this prospectus is correct as of any time after its date.

You should also read and consider the information in the documents to which we have referred you under the captions “Where You Can Find More Information” and “Incorporation of Documents by Reference” in this prospectus.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before investing in our securities, you should carefully read this entire prospectus, including the documents to which we have referred you under the headings “Where You Can Find More Information” and “Incorporation of Documents by Reference” and the information set forth under the headings “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in each case included elsewhere in this prospectus.

Prior to February 11, 2014, the name of the Company was Novelos Therapeutics, Inc. (Novelos). On April 8, 2011, Novelos entered into a business combination (the Acquisition) with Cellectar, Inc., a privately held Wisconsin corporation that designed and developed products to detect, treat and monitor a wide variety of human cancers. References to “Cellectar, Inc.” relate to the activities and financial information of Cellectar, Inc. prior to the Acquisition, references to “Novelos” relate to the activities and financial information of Novelos prior to the Acquisition and references to “Cellectar Bio” or “the Company” or “we” or “us” or “our” relate to the activities and obligations of the combined Company following the Acquisition.

Please refer to the Glossary of Certain Scientific Terms on page 47 of this prospectus for definitions of certain technical and scientific terms used throughout this prospectus.

Overview

Our Business

Our cancer-targeting technology permits selective delivery of a wide range of agents to cancer cells, including cancer stem cells. By attaching different agents to our proprietary phospholipid ether (PLE) cancer-targeting delivery platform, we believe we can engineer product candidates with the potential to both image and treat a wide range of cancers. This offers the potential for a paradigm shift in the detection and treatment of cancer by using the same delivery platform for both detecting malignancy and providing efficacy versus all three major drivers of morbidity and mortality in cancer: primary tumors, metastases and stem cell-based relapse.

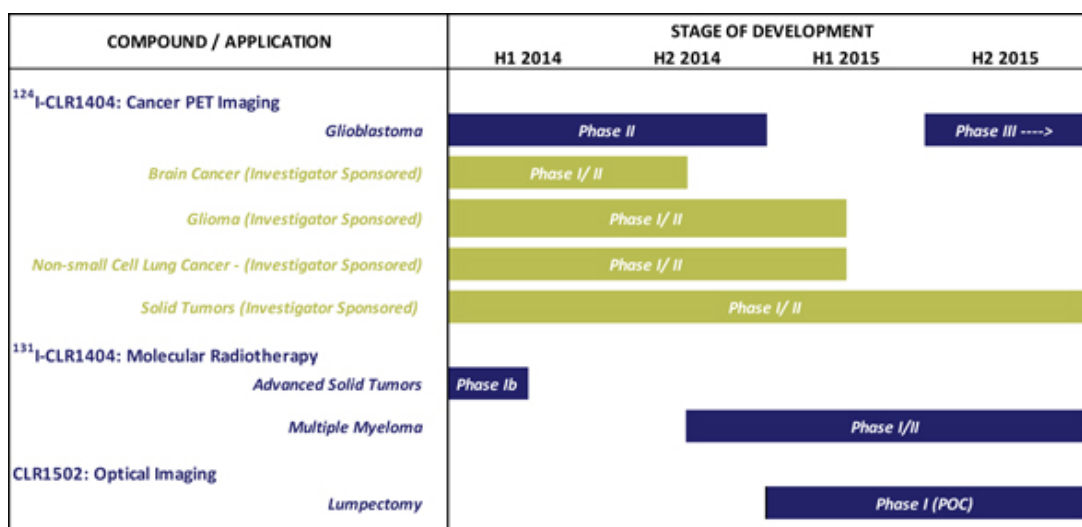
The Company is currently developing three proprietary product candidates:

- I-124-CLR1404 is a small-molecule, broad-spectrum, cancer-targeting positron emission tomography (PET) imaging agent that we believe has the potential to be the first of its kind for the selective detection of tumors and metastases in a broad range of cancers. Investigator-sponsored Phase 1/2 clinical trials of I-124-CLR1404 are ongoing across 11 solid tumor indications. In March 2014, we commenced enrollment in a Phase 2 clinical trial studying I-124-CLR1404 in the imaging of glioblastoma, a type of glioma. We expect to complete this trial by the end of 2014, subject to additional funding. In April 2014, the U.S. Food and Drug Administration (FDA) granted I-124-CLR1404 orphan status as a diagnostic for the management of glioma.
- I-131-CLR1404 is a small-molecule, broad-spectrum, cancer-targeting molecular radiotherapeutic that delivers cytotoxic (cell-killing) radiation directly and selectively to cancer cells and cancer stem cells. We believe I-131-CLR1404 also has the potential to be the first therapeutic agent to use PLE analogs to target cancer cells. In November 2013, we completed enrollment in a Phase 1b dose-escalation trial evaluating I-131-CLR1404 in the treatment of patients with advanced solid tumors and the results of the trial were presented at the American Society of Clinical Oncology (ASCO) June 2014 Annual Meeting. Because of the highly radiosensitive nature, clear unmet medical need in the relapse/refractory setting and the potential to receive orphan drug designation, the Company is targeting multiple myeloma as an initial indication for future I-131-CLR1404 development and plans to submit an Investigational New Drug Application (IND) with the FDA in 2014.
- CLR1502 is a preclinical, small-molecule, cancer-targeting, non-radioactive optical imaging agent for intraoperative tumor margin illumination and non-invasive tumor imaging. We anticipate filing an IND with the FDA for CLR1502 in 2014.

Together, we believe our compounds have the potential to improve upon current standard of care (SOC) for the detection, treatment and monitoring of a wide variety of human cancers.

Technology Overview

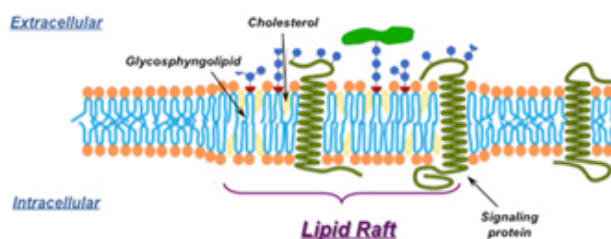
The following chart depicts the pipeline of our development programs:



Our product candidates are based on a cancer-targeting delivery platform of optimized PLE analogs that interact with lipid rafts. Lipid rafts are specialized regions of the membrane phospholipid bilayer that contain high concentrations of cholesterol and sphingolipids and serve to organize cell surface and intracellular signaling molecules (e.g., growth factor and cytokine receptors, the phosphatidylinositol 3-kinase (PI3K)/Akt survival pathway). Importantly, the core chemical structure shared across all three products provides selective targeting of cancer cells, including cancer stem cells, in preference to normal cells, due to enrichment of lipid rafts in the former. The cancer-targeting PLE carrier molecule was deliberately designed to be coupled to imaging or therapeutic molecules. For example, iodine can be attached via a very stable covalent bond resulting in two distinct products differing only with respect to the isotope of iodine they contain – I-131-CLR1404 contains radioactive I-131 and I-124-CLR1404 contains the shorter-lived radioactive I-124. Because of their chemical identity, I-124-CLR1404 also represents an ideal biomarker that may be used to predict tumor sensitivity of I-131-CLR1404 and, potentially, establish an efficacious dose in individual patients. Other, non-radioactive molecules can also be attached to the PLE carrier. In the case of CLR1502, this is a near-infrared (NIR) emitting fluorophore (800 nm) whose signal can penetrate through up to approximately 1 cm of tissue. This may enable the use of CLR1502 to visualize tumor margins during cancer surgery, effectively acting as an adjunct to a therapeutic agent, and to non-invasively detect relatively superficial tumors. Thus, to date, three cancer-targeting product profiles have been generated from a single chemical core structure that is the foundation of our technology platform: – a diagnostic PET imaging agent, I-124-CLR1404; a molecular radiotherapeutic agent, I-131-CLR1404; and a non-radioactive optical imaging agent, CLR1502, to increase the success of cancer surgery and non-invasively image certain tumors.

Malignant tumor targeting, including targeting of cancer stem cells, has been demonstrated *in vivo*. Mice without intact immune systems, and inoculated with Panc-1 (pancreatic carcinoma) cells, were injected with CLR1502 24 or 96 hours prior to imaging. *In vivo* optical imaging showed pronounced accumulation of CLR1502 in tumors versus non-target organs and tissues. Similarly, PET imaging of tumor-bearing animals (colon, glioma, triple negative breast and pancreatic tumor xenograft models) administered the imaging agent I-124-CLR1404 clearly shows selective uptake and retention by both primary tumors and metastases, including cancer stem cells. PET/CT analysis following co-injection of I-131-CLR1404 (for therapy) and I-124-CLR1404 (for imaging) revealed time-dependent tumor responses and disappearance over 9 days in a cancer xenograft model. We believe that the capability of our technology to target and be selectively retained by cancer stem cells *in vivo* was demonstrated by treating glioma stem cell derived orthotopic tumor-bearing mice with another fluorescent-labeled PLE (CLR1501), and then removing the tumor and isolating cancer stem cells, which continued to display CLR1501 labeling even after three weeks in cell culture.

The basis for selective tumor targeting of our compounds lies in differences between the plasma membranes of cancer cells as compared to those of most normal cells. Specifically, cancer cell membranes are highly enriched in lipid rafts. Data suggests that lipid rafts serve as portals of entry for PLEs such as I-124-CLR1404, I-131-CLR1404 and CLR1502. The marked selectivity of our compounds for cancer cells versus non-cancer cells is due to the fact that cancer cells have far more lipid rafts. Following cell entry via lipid rafts, I-124-CLR1404, I-131-CLR1404 and CLR1502 are transported into the cytoplasm, where they distribute to organelle membranes (mitochondria, ER, lysosomes) but not the nucleus. The pivotal role played by lipid rafts is underscored by the fact that disruption of lipid raft architecture suppresses uptake of PLEs into cancer cells.



Our core technology platform is based on research conducted by Cellectar, Inc.'s founder and our Chief Scientific Officer, Dr. Jamey Weichert, beginning in 1994 at the University of Michigan (U. Mich.), where phospholipid ether analogs were initially designed, synthesized, radiolabeled, and evaluated in the laboratory of Raymond Counsell. Since 1998, Dr. Weichert has continued his research at the University of Wisconsin (U. Wisc.) and subsequently founded Cellectar, Inc. in 2002 to further develop and commercialize the technology. Cellectar, Inc. obtained exclusive rights to the related technology patents owned by U. Mich. in 2003 and continued development of the platform while obtaining ownership of numerous additional patents and patent applications (lasting until 2025, 2028 and 2030 without extensions).

Key Risks and Uncertainties

We are subject to numerous risks and uncertainties, including the following:

- We will require additional capital in order to continue our operations, and may have difficulty raising additional capital;
- We are a development stage company with a going concern qualification to our financial statements and a history of losses, and we can provide no assurance as to our future operating results;
- We have had significant management turnover in the last year, we continue to depend on key personnel who may terminate their employment with us at any time, and our success will depend on our ability to hire additional qualified personnel;
- Our convertible debentures prohibit us from taking certain actions without the consent of the holders, are senior to our common stock in liquidation or a sale of the company, and may result in additional dilution;
- At present, our success depends solely on the successful commercialization of some or all of our three compounds in development, which cannot be assured;
- The failure to complete development of our technology, to obtain government approvals, including required FDA approvals, or to comply with ongoing governmental regulations could prevent, delay or limit the introduction or sale of proposed products and result in failure to achieve revenues or maintain our ongoing business;
- Clinical trials involve a lengthy and expensive process with an uncertain outcome, and results of earlier studies and trials may not be predictive of future trial results;
- We may be required to suspend or discontinue clinical trials due to unexpected side effects or other safety risks that could preclude approval of our product candidates;
- We have limited in-house research and manufacturing capacity and will continue to rely, to some extent, on research and manufacturing facilities at various universities, hospitals, contract research organizations and contract manufacturers for a portion of our research, development, and manufacturing. In the event we exceed our in-house capacity or lose access to those facilities, our ability to gain FDA approval and commercialization of our drug delivery technology and products could be delayed or impaired;
- We expect to rely heavily on orphan drug status to develop and commercialize our product candidates, but our orphan drug designations may not confer marketing exclusivity or other expected benefits;
- We are exposed to product, clinical and preclinical liability risks that could create a substantial financial burden should we be sued;
- We could suffer monetary damages or incur substantial costs in the event of future legal proceedings;
- There may be a limited public market for our securities; we presently fail to qualify on any national securities exchange;
- On June 13, 2014, we effected a 1-for-20 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;
- 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 other continued listing standards of the NASDAQ Capital Market;
- The reverse stock split may decrease the liquidity of the shares of our common stock; and
- 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.

For a more detailed description of the material risks and uncertainties we face, please see "Risk Factors" beginning on page 7 of this prospectus.

Reverse Stock Split and Recapitalization

At our annual meeting of stockholders held on May 22, 2014, our stockholders approved an amendment to our certificate of incorporation to effect a reverse split of our common stock at a ratio between 1:10 to 1:20 in order to satisfy requirements for the listing of our common stock on the NASDAQ Capital Market. In addition, the proposal approved by the stockholders provided that if the reverse split was effected, the number of shares of common stock that we are authorized to issue would be reduced from 150,000,000 to the greater of (A) 20,000,000 and (B) the number of shares equal to three (3) times the sum of the number of all shares of our common stock outstanding and the number of shares of common stock issuable upon exercise or conversion of all outstanding options, warrants and convertible debt. Our stockholders further authorized the board of directors to determine the ratio at which the reverse split would be effected and the corresponding reduction in authorized shares of common stock by filing an appropriate amendment to our certificate of incorporation. Our

board of directors authorized the ratio of the reverse split and corresponding reduction in authorized shares on June 6, 2014 and effective at the close of business on June 13, 2014, we amended our second amended and restated certificate of incorporation to effect a 1-for-20 reverse split of our common stock (the “Listing Reverse Split”) and reduce the number of authorized shares of our common stock to 20,000,000 from 150,000,000. All share and per share numbers included in this prospectus give effect to the Listing Reverse Split.

Redemption of Convertible Debentures

On February 6, 2014, we completed a private placement of convertible debentures with an aggregate principal amount of \$4,000,000 convertible debentures and warrants to purchase 400,000 shares of our common stock, giving effect to the Listing Reverse Split, for proceeds of \$4,000,000. The convertible debentures mature on February 6, 2016 and are convertible at any time at a conversion price of \$10.00 per share into an aggregate of 400,000 shares of common stock, giving effect to the Listing Reverse Split. The convertible debentures accrue interest at an annual rate of 8%, payable upon redemption or conversion in cash or shares of our common stock. We may elect to redeem the convertible debentures prior to the maturity date upon 30-day notice to the holder. In the event of any sale of securities by us resulting in aggregate gross proceeds of at least \$2,000,000 (a "Subsequent Financing"), the holder shall have the right to require us to redeem some or all of the then outstanding principal amount of the debenture, plus all accrued but unpaid interest and other amounts due in respect of the debenture, in an amount equal to the amount of the holder's investment in the Subsequent Financing by delivering notice to us on or before the consummation date of the Subsequent Financing. If, prior to November 6, 2015, we raise gross proceeds of at least \$8,000,000, in the aggregate, in one or more subsequent financings (the "Minimum Proceeds"), the Company may, by notice given within three trading days after the receipt of the Minimum Proceeds, compel holders to convert all or part of the then outstanding principal amount of the debentures and accrued but unpaid interest and other amounts, at the conversion price of \$10.00 per share.

This Offering constitutes a Subsequent Financing. Accordingly some or all of the holders of the convertible debentures may participate in the Offering for an aggregate of up to \$4,000,000, plus any accrued but unpaid interest and other amounts due in respect of the debentures held by the participating holders. In addition, to the extent any holders elect not to redeem their notes in connection with the Offering, if we raise gross proceeds of at least \$8,000,000, we will, upon completion of the Offering, have the right to force the conversion of any remaining debentures at the \$10.00 per share conversion price.

In the event we redeem all or any part of the convertible debentures in connection with the Offering, the related warrants would be terminated in their entirety or in proportion to the portion of the convertible debentures that are redeemed, as more fully described in this prospectus.

Company Information

Our headquarters and manufacturing operation, which is compliant with current Good Manufacturing Practices (cGMP), is located at 3301 Agriculture Drive, Madison, Wisconsin 53716. The information included or referred to on, or accessible through, our website does not constitute part of, and is not incorporated by reference into, this prospectus.

The Offering

<i>Securities offered by us:</i>	Up to _____ shares of our common stock and _____ warrants to purchase an equal number of shares of common stock.
<i>Description of Warrants:</i>	The shares and warrants will be separately transferable immediately upon issuance, but the shares and warrants will be issued and sold to purchases in equal proportion. 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.
<i>Common Stock to be outstanding after this offering:</i>	shares. (1)
<i>Use of Proceeds:</i>	We expect to use the net proceeds received from this offering to fund our research and development activities, including furthering the development of I-124-CLR1404, I-131-CLR1404 and CLR1502 and for general corporate purposes. We also intend to use a portion of the proceeds to redeem the Bridge Notes. For a more complete description of our anticipated use of proceeds from this offering, see “Use of Proceeds.”
<i>Risk Factors:</i>	See “Risk Factors” beginning on page 7 and the other information included in this prospectus for a discussion of factors you should carefully consider before deciding whether to purchase our securities.
<i>OTCQX symbol for our Common Stock:</i>	CLRB
<i>Listing</i>	We have applied for a listing of our common stock and warrants on the NASDAQ Capital Market under the symbol “CLRB” and “CLRBW”, respectively. No assurance can be given that our application will be accepted.
(1)	The number of shares of our common stock to be outstanding after this offering is based on 2,869,739 shares of common stock outstanding as of July 3, 2014 and excludes, as of that date: · shares issuable upon the exercise of warrants sold in this offering; · an aggregate of 619,664 shares of common stock issuable upon the exercise of outstanding stock options issued to employees, directors and consultants, including options issued under our 2006 Stock Incentive Plan; · an aggregate of 162,455 additional shares of common stock reserved for future issuance under our 2006 Stock Incentive Plan; · an aggregate of 1,552,898 additional shares of common stock reserved for issuance under outstanding warrant agreements entered into in connection with financing transactions completed during 2013, 2012 and 2011, having expiration dates between March 31, 2016 and February 20, 2018, and exercise prices ranging from \$10.00 per share to \$25.00 per share; · an aggregate of 11,187 additional shares of common stock reserved for issuance under various outstanding warrant agreements, having expiration dates between July 27, 2015 and December 31, 2015, and exercise prices ranging from \$10.00 per share to \$2,019.60 per share; · an aggregate of 400,000 additional shares of common stock reserved for issuance upon the conversion of debt with a conversion price of \$10.00 per share and a maturity date of February 6, 2016; and · an aggregate of 400,000 additional shares of common stock reserved for issuance under warrant agreements, expiring on February 6, 2019, at an exercise price of \$20.00 per share, which are exercisable only following the conversion of associated debt.

Unless we specifically state otherwise, the share information in this prospectus is as of May 15, 2014 and reflects or assumes no exercise of outstanding options or warrants to purchase shares of our common stock and no conversion of debt.

Summary Historical Financial Information

The following table summarizes our financial data. We have derived the following summary of our statements of operations data for the three months ended March 31, 2014 and 2013 and the summary of our balance sheet data as of March 31, 2014 from our unaudited consolidated financial statements which have been incorporated by reference in this prospectus. We have derived the following summary of our statements of operations data for the years ended December 31, 2013 and 2012 and the summary of our balance sheet data as of December 31, 2013 and 2012 from our audited consolidated financial statements, for the applicable periods, which have been incorporated by reference in this prospectus. The following summary of our financial data set forth below should be read together with our financial statements and the related notes to those statements referred to under the heading “Documents Incorporated by Reference”.

	Three Months Ended March 31,		Year Ended December 31,	
	2014	2013	2013	2012
Statement of Operations Data:				
Research and development costs	\$ 1,715,307	\$ 1,590,613	\$ 6,860,163	\$ 5,122,686
General and administrative costs	1,087,035	1,121,703	4,444,767	3,632,099
Restructuring costs	16,882	-	1,096,874	-
Total costs and expenses	2,819,224	2,712,316	12,401,804	8,754,785
Gain/(loss) on derivative warrants	(54,945)	(738,914)	1,628,984	(33,854)
Other expense	(69,244)	(2,649)	(9,348)	(8,335)
Net loss	(2,943,413)	(3,453,879)	(10,782,168)	(8,796,974)
Deemed dividend on warrants	-	-	-	(543,359)
Net loss attributable to common stockholders	(2,943,413)	(3,453,879)	(10,782,168)	(9,340,333)
Basic and diluted net loss per common share attributable to common stockholders (1)	(1.03)	(1.35)	(3.86)	(4.54)
Shares used in computing basic and diluted net loss attributable to common stockholders per common share (1)	2,869,739	2,564,344	2,794,557	2,056,056

	March 31,	December 31,	
	2014	2013	2012
Balance Sheet Data:			
Current assets	\$ 4,075,310	\$ 2,768,071	\$ 5,130,477
Working capital (2)	(332,413)	(1,755,084)	4,397,786
Total assets	8,040,052	6,815,939	11,478,164
Long term debt, including current portion	4,215,028	450,000	450,000
Total stockholders' equity	(727,313)	1,699,550	10,158,375

- (1) Net loss per share amounts and shares used in the computations have been adjusted retroactively to reflect the Listing Reverse Split.
- (2) Working capital at March 31, 2014 and December 31, 2013 has been reduced by \$3,414,308 and \$3,359,363, respectively, which represents the fair value, at those dates, of warrants issued principally in February 2013 which are recorded as a derivative liability due to their anti-dilution provisions.

RISK FACTORS

Investing in our securities involves a high degree of risk. Before you invest in our securities, you should be aware that our business faces numerous financial and market risks, including those described below, as well as general economic and business risks. The following discussion provides information concerning the material risks and uncertainties that we have identified and believe may adversely affect our business, financial condition and results of operations. Before you decide whether to invest in our securities, you should carefully consider these risks and uncertainties, together with all of the other information included in this prospectus.

Risks Related to Our Business and Industry

We will require additional capital in order to continue our operations, and may have difficulty raising additional capital.

We expect that we will continue to generate significant operating losses for the foreseeable future. At March 31, 2014, our consolidated cash balance was approximately \$3,808,000. We believe that our cash on hand at March 31, 2014, plus the net proceeds from this offering (assuming \$20,000,000 of securities are sold in this offering and no exercise of the warrants being issued pursuant to the offering) would be adequate to fund operations through the end of 2015. We estimate that our costs during that time will be approximately \$17,600,000. This amount consists of approximately \$3,800,000 for I-124-CLR1404 development, approximately \$1,400,000 for I-131-CLR1404 development, approximately \$1,300,000 for CLR1502 development, approximately \$6,000,000 for general, fixed and overhead research and development expenses that are not allocated to specific projects and approximately \$5,100,000 in general and administrative costs. In addition to operating costs we anticipate using \$4,200,000 in proceeds for the repayment of debt, including \$4,000,000 for the repayment of the Bridge Notes. We will require additional funds to conduct research and development, establish and conduct clinical and preclinical trials, establish commercial-scale manufacturing arrangements and provide for the marketing and distribution of our products. Our ability to execute our operating plan depends on our ability to obtain additional funding via the sale of equity and/or debt securities, a strategic transaction or otherwise. We plan to actively pursue financing alternatives. However, there can be no assurance that we will obtain the necessary funding in the amounts we seek or that it will be available on a timely basis or upon terms acceptable to us. If we obtain capital by issuing additional debt or preferred stock, the holders of such securities would likely obtain rights that are superior to those of holders of our common stock, such as with the convertible debentures issued in the February 2014 private placement.

Our capital requirements and our ability to meet them depend on many factors, including:

- the number of potential products and technologies in development;
- continued progress and cost of our research and development programs;
- progress with preclinical studies and clinical trials;
- the time and costs involved in obtaining regulatory clearance;
- costs involved in preparing, filing, prosecuting, maintaining and enforcing patent claims;
- costs of developing sales, marketing and distribution channels and our ability to sell our products;
- costs involved in establishing manufacturing capabilities for clinical trials and commercial quantities of our products;
- competing technological and market developments;
- market acceptance of our products;
- costs for recruiting and retaining management, employees and consultants;
- costs for educating physicians regarding the application and use of our products;
- whether or not we obtain listing on a national exchange and, our prospects for continuing such listing;
- uncertainty and economic instability resulting from terrorist acts and other acts of violence or war; and
- the condition of capital markets and the economy generally, both in the U.S. and globally.

We may consume available resources more rapidly than currently anticipated, resulting in the need for additional funding sooner than expected. We may seek to raise any necessary additional funds through the issuance of warrants, equity or debt financings or executing collaborative arrangements with corporate partners or other sources, which may be dilutive to existing stockholders or have a material effect on our current or future business prospects. If we cannot secure adequate financing when needed, we may be required to delay, scale back or eliminate one or more of our research and development programs. In addition, in the event that additional funds are obtained through arrangements with collaborative partners or other sources, we may have to relinquish economic, commercialization and/or proprietary rights to some of our technologies or products under development that we would otherwise seek to develop or commercialize ourselves. In such event, our business, prospects, financial condition, and results of operations may be adversely affected.

We will require additional funds to conduct research and development, establish and conduct clinical and preclinical trials, establish commercial-scale manufacturing arrangements and provide for the marketing and distribution of our products. Our ability to execute our operating plan depends on our ability to obtain additional funding via the sale of equity or debt securities, a strategic transaction or otherwise.

We are a development-stage company with a going-concern qualification to our financial statements and a history of losses, and we can provide no assurance as to our future operating results.

We are a development-stage company and have incurred net losses and negative cash flows since inception. We currently have no product revenues, and may not succeed in developing or commercializing any products that will generate product or licensing revenues. We do not expect to have any products on the market for several years. Our primary activity to date has been research and development. In addition, development of our product candidates requires a process of preclinical and clinical testing, during which our product candidates could fail. We may not be able to enter into agreements with one or more companies experienced in the manufacturing and marketing of therapeutic drugs and, to the extent that we are unable to do so, we may not be able to market our product candidates. Whether we achieve profitability or not will depend on our success in developing, manufacturing, and marketing our product candidates. We have experienced net losses and negative cash flows from operating activities since inception and we expect such losses and negative cash flows to continue for the foreseeable future. As of March 31, 2014, we had negative working capital of \$(332,413) and a stockholders' deficit of \$(727,313). For the period from Collectar, Inc.'s inception in November 2002 until the business combination with Novelos on April 8, 2011, and thereafter through March 31, 2014, the Company incurred aggregated net losses of \$54,002,981. The net loss for the three months ended March 31, 2014 was \$2,943,413. We may never achieve profitability. Our financial statements as of December 31, 2013 were prepared under the assumption that we will continue as a going concern. The independent registered public accounting firm that audited our 2013 financial statements included in their report an explanatory paragraph referring to our recurring losses since inception and expressing substantial doubt about our ability to continue as a going concern. Our financial statements do not include any adjustments that might result from the outcome of this uncertainty. Our ability to continue as a going concern depends on our ability to obtain additional equity or debt financing, attain further operating efficiencies, reduce expenditures, and, ultimately, to generate revenue.

We have had significant management turnover in the past year, we continue to depend on key personnel who may terminate their employment with us at any time, and our success will depend on our ability to hire additional qualified personnel.

Our success will depend to a significant degree on the continued services of our executive officers. There can be no assurance that these individuals will continue to provide services to us. In October 2013, we appointed Dr. Simon Pedder Acting Chief Executive Officer and elected Dr. Pedder as a Class III director, succeeding Harry Palmin, our chief executive officer since 2005 and a Class III director. In April 2014, Dr. Pedder became President and Chief Executive Officer and maintained his position as a director of the Company. In November 2013, the board of directors was restructured with the resignation of 5 directors and the appointment of one new director. The restructured board of directors voted to relocate our principal executive offices from Newton, Massachusetts to Madison, Wisconsin and to transition the roles and responsibilities of Chris Pazoles, our Vice President of Research and Development since 2005 and Joanne Protano, our Vice President of Finance, Chief Financial Officer and Treasurer since 2007, to Madison, Wisconsin. The board also voted to appoint Kathryn McNeil as our Vice President Investor Relations, Public Relations and Corporate Communications and appointed J. Patrick Genn as our Vice President of Business Development. Mr. Genn previously held the position of Vice President of Investor Relations. In addition, Kimberly Hawkins, our Vice President of Clinical Development since 2010, resigned from her position in August 2013. We have appointed Dr. Kevin Kozak, a consultant, as our Chief Medical Officer. As Dr. Pedder and the restructured board of directors continue to develop and implement a revised strategic focus, there could be additional executive and director changes. The successful transitions, individually and collectively, of these leadership roles will be critical to the continued progress of the Company. In addition, our success may depend on our ability to attract and retain other highly skilled personnel. We may be unable to recruit such personnel on a timely basis, if at all. Our management and other employees may voluntarily terminate their employment with us at any time. Dr. Pedder's employment contract with the company provides for certain compensation and termination payments. The loss of services of key personnel, or the inability to attract and retain additional qualified personnel, could result in delays in development or approval of our products, loss of sales and diversion of management resources. To date, we have not experienced difficulties in attracting and retaining highly qualified personnel, but there can be no assurance we will be successful in doing so in the future.

Our convertible debentures prohibit us from taking certain actions without the consent of the holders, are senior to our common stock in liquidation or a sale of the company, and may result in additional dilution.

The convertible debentures we issued in February 2014 contain restrictions on our ability to take actions without the consent of the holders representing a majority of the outstanding principal amount of the debentures. Other than as specifically permitted under the debentures, as long as any of the debentures remain outstanding, without this consent we are prohibited from incurring any indebtedness for borrowed money, granting any liens on our property or assets, repurchasing shares of our common stock or common stock equivalents, repurchasing or otherwise acquiring any indebtedness, paying cash dividends or distributions on any equity securities, entering into any transactions with any of our affiliates that would be required to be disclosed in any public filing with the Securities and Exchange Commission (SEC) unless the transaction is made on an arm's-length basis and expressly approved by a majority of our disinterested directors, or entering into any agreements obligating us to undertake any of those actions.

Even though our board of directors may determine any of the prohibited actions are in the best interests of the Company or our shareholders, we may be unable to complete them if we do not get the required approval, and the interests of the holders of our convertible debentures may differ from those of our stockholders. If we are unable to obtain the required consent, we may be unable to complete actions or transactions that our board of directors has determined are otherwise in the best interest of the Company and its shareholders.

In addition, in the event of our liquidation, dissolution or winding-up, or if we are acquired or sell all or substantially all of our assets, the right of the holders of debentures to be repaid will be senior to any rights of holders of our common stock to receive proceeds or assets of the Company. If our proceeds or assets after any such transaction are insufficient to satisfy the debentures in full, holders of our common stock may receive nothing.

The warrants we issued in connection with the issuance and sale of the debentures are not yet exercisable, but will become exercisable in the event the associated debentures are converted, in whole or in part. The extent to which the warrants would become exercisable in that case would be proportionate to the portion of the debenture converted. In the event the warrants become exercisable, in whole or in part, it may be dilutive to the holders of our common stock.

At present, our success depends solely on the successful development and commercialization of some or all of our three compounds in development, which cannot be assured.

We are focused on the development of compounds for the treatment and imaging of cancer based on the cancer-targeting technologies of Cellectar, Inc.: I-124-CLR1404 (labeled with a short-lived radioisotope, iodine-124), I-131-CLR1404 (a radiolabeled compound) and CLR1502 (a preclinical, cancer-targeting, non-radioactive optical imaging agent). The successful commercialization of these product candidates, either by us or by strategic partners, is crucial for our success. Our proposed products and their potential applications are in an early stage of clinical and manufacturing/process development and face a variety of risks and uncertainties. Principally, these risks include the following:

- clinical trial results may show that our cancer-targeting technologies are not well tolerated by recipients at its effective doses or are not efficacious;
- future clinical trial results may be inconsistent with testing results obtained to-date;
- even if our cancer-targeting technologies are shown to be safe and effective for their intended purposes, we may face significant or unforeseen difficulties in obtaining or manufacturing sufficient quantities at reasonable prices or at all;
- our ability to complete the development and commercialization of our cancer-targeting technologies for their intended use is substantially dependent upon our ability to raise sufficient capital or to obtain and maintain experienced and committed partners to assist us with obtaining clinical and regulatory approvals for, and the manufacturing, marketing and distribution of, our products;
- even if our cancer-targeting technologies are successfully developed, commercially produced and receive all necessary regulatory approvals, there is no guarantee that there will be market acceptance of our products; and
- our competitors may develop therapeutics or other treatments which are superior or less costly than our own with the result that our product candidates, even if they are successfully developed, manufactured and approved, may not generate sufficient revenues to offset the development and manufacturing costs of our product candidates.

If we are unsuccessful in dealing with any of these risks, or if we are unable to successfully commercialize our cancer-targeting technologies for some other reason, our business, prospects, financial condition, and results of operations may be adversely affected.

The failure to complete development of our technology, to obtain government approvals, including required FDA approvals, or to comply with ongoing governmental regulations could prevent, delay or limit introduction or sale of proposed products and result in failure to achieve revenues or maintain our ongoing business.

Our research and development activities and the manufacture and marketing of our intended products are subject to extensive regulation for safety, efficacy and quality by numerous government authorities in the U.S. and abroad. Before receiving clearance to market our proposed products by the FDA, we will have to demonstrate that our products are safe and effective for the patient population for the diseases that are to be treated. Clinical trials, manufacturing and marketing of drugs are subject to the rigorous testing and approval process of the FDA and equivalent foreign regulatory authorities. The Federal Food, Drug and Cosmetic Act and other federal, state and foreign statutes and regulations govern and influence the testing, manufacturing, labeling, advertising, distribution and promotion of drugs and medical devices. As a result, clinical trials and regulatory approval can take many years to accomplish and require the expenditure of substantial financial, managerial and other resources.

In order to be commercially viable, we must successfully research, develop, obtain regulatory approval for, manufacture, introduce, market and distribute our technologies. This includes meeting a number of critical developmental milestones including:

- demonstrating benefit from delivery of each specific drug for specific medical indications;
- demonstrating through preclinical and clinical trials that each drug is safe and effective; and
- demonstrating that we have established viable Good Manufacturing Practices capable of potential scale-up.

The timeframe necessary to achieve these developmental milestones may be long and uncertain, and we may not successfully complete these milestones for any of our intended products in development.

In addition to the risks previously discussed, our technology is subject to developmental risks that include the following:

- uncertainties arising from the rapidly growing scientific aspects of drug therapies and potential treatments;
- uncertainties arising as a result of the broad array of alternative potential treatments related to cancer and other diseases; and

· expense and time associated with the development and regulatory approval of treatments for cancer and other diseases.

In order to conduct the clinical trials that are necessary to obtain approval by the FDA to market a product, it is necessary to receive clearance from the FDA to conduct such clinical trials. The FDA can halt clinical trials at any time for safety reasons or because we or our clinical investigators do not follow the FDA's requirements for conducting clinical trials. If any of our trials are halted, we will not be able to obtain FDA approval until and unless we can address the FDA's concerns. If we are unable to receive clearance to conduct clinical trials for a product, we will not be able to achieve any commercial revenue from such product in the U.S. as it is illegal to sell any drug for use in humans in the U.S. without FDA approval.

Even if we do ultimately receive FDA approval for any of our products, these products will be subject to extensive ongoing regulation, including regulations governing manufacturing, labeling, packaging, testing, dispensing, prescription and procurement quotas, record keeping, reporting, handling, shipment and disposal of any such drug. Failure to obtain and maintain required registrations or to comply with any applicable regulations could further delay or preclude development and commercialization of our drugs and subject us to enforcement action.

Clinical trials involve a lengthy and expensive process with an uncertain outcome, and results of earlier studies and trials may not be predictive of future trial results.

In order to receive regulatory approval for the commercialization of our product candidates, we must conduct, at our own expense, extensive clinical trials to demonstrate safety and efficacy of these product candidates. Clinical testing is expensive, it can take many years to complete and its outcome is uncertain. Failure can occur at any time during the clinical trial process. For example, Novelos incurred costs of over \$35 million in clinical trial expenses from 2006 through 2009 in connection with the Phase 3 trial of NOV-002 for non-small cell lung cancer, and NOV-002 did not ultimately demonstrate efficacy for that indication.

We may experience delays in clinical testing of our product candidates. We do not know whether planned clinical trials will begin on time, will need to be redesigned or will be completed on schedule, if at all. Clinical trials can be delayed for a variety of reasons, including delays in obtaining regulatory approval to commence a trial, in reaching agreement on acceptable clinical trial terms with prospective sites, in obtaining institutional review board approval to conduct a trial at a prospective site, in recruiting patients to participate in a trial or in obtaining sufficient supplies of clinical trial materials. Many factors affect patient enrollment, including the size of the patient population, the proximity of patients to clinical sites, the eligibility criteria for the trial, competing clinical trials and new drugs approved for the conditions we are investigating. Prescribing physicians will also have to decide to use our product candidates over existing drugs that have established safety and efficacy profiles. Any delays in completing our clinical trials will increase our costs, slow down our product development and approval process and delay our ability to generate revenue.

In addition, the results of preclinical studies and early clinical trials of our product candidates do not necessarily predict the results of later-stage clinical trials. Product candidates in later stages of clinical trials may fail to show the desired safety and efficacy traits despite having progressed through initial clinical testing. The data collected from clinical trials of our product candidates may not be sufficient to support the submission of a new drug application or to obtain regulatory approval in the United States or elsewhere. Because of the uncertainties associated with drug development and regulatory approval, we cannot determine if or when we will have an approved product for commercialization or achieve sales or profits.

Our clinical trials may not demonstrate sufficient levels of efficacy necessary to obtain the requisite regulatory approvals for our drugs, and our proposed drugs may not be approved for marketing. Novelos suffered significant setbacks in the development of NOV-002 and NOV-205, as some of the promising results of earlier trials were not demonstrated in later stage trials. As a result, following the Acquisition, development of these compounds was suspended.

We may be required to suspend or discontinue clinical trials due to unexpected side effects or other safety risks that could preclude approval of our product candidates.

Our clinical trials may be suspended at any time for a number of reasons. For example, we may voluntarily suspend or terminate our clinical trials if at any time we believe that they present an unacceptable risk to the clinical trial patients. In addition, regulatory agencies may order the temporary or permanent discontinuation of our clinical trials at any time if they believe that the clinical trials are not being conducted in accordance with applicable regulatory requirements or that they present an unacceptable safety risk to the clinical trial patients.

Administering any product candidates to humans may produce undesirable side effects. These side effects could interrupt, delay or halt clinical trials of our product candidates and could result in the FDA or other regulatory authorities denying further development or approval of our product candidates for any or all targeted indications. Ultimately, some or all of our product candidates may prove to be unsafe for human use. Moreover, we could be subject to significant liability if any volunteer or patient suffers, or appears to suffer, adverse health effects as a result of participating in our clinical trials.

We have limited in-house research and manufacturing capacity and will continue to rely, to some extent, on research and manufacturing facilities at various universities, hospitals, contract research organizations and contract manufacturers for a portion of our research, development, and manufacturing. In the event we exceed our in-house capacity or lose access to those facilities, our ability to gain FDA approval and commercialization of our drug delivery technology and products could be delayed or impaired.

We remain in the research and development and clinical and preclinical trial phase of product commercialization and have limited experience in establishing, supervising and conducting commercial manufacturing. Accordingly, if our products are approved for commercial sale, we will need to establish the capability, work with our existing contract manufacturer to expand their capability, or engage a contract manufacturer that has the capability, to commercially manufacture our products in accordance with FDA and other regulatory requirements. There can be no assurance that we would be able to successfully establish any such capability, or identify a suitable manufacturing partner on acceptable terms.

At the present time, we have limited research, development or manufacturing capabilities within our facilities. Our manufacturing facility in Madison, Wisconsin has adequate capacity to supply drug product for Phase 2 studies of I-131-CLR1404, but we will need to expand for larger Phase 3 studies. Manufacturing of I-124-CLR1404 is conducted by our collaborator, the University of Wisconsin in Madison, cGMP, using drug substance produced in our Madison manufacturing facility. We have completed the transfer of I-124-CLR1404 manufacturing to a U.S. based contract manufacturer, also using drug substance produced in our Madison manufacturing facility. CLR1502 is synthesized at our facility in Madison, WI. We rely and expect to continue to rely, to some extent, on contracting with third parties to use their facilities to conduct research, development and manufacturing. The limited facilities we have to conduct research, development and manufacturing may delay or impair our ability to gain FDA approval and commercialization of our drug delivery technology and products.

We may rely on third-party contract research organizations, service providers and suppliers to support development and clinical testing of our products. This may expose us to the risks of not being able to directly oversee the production and quality of the manufacturing process. Furthermore, these contractors, whether foreign or domestic, may experience regulatory compliance difficulties, mechanical shutdowns, employee strikes or other unforeseeable acts that may delay production. Failure of any of these contractors to provide the required services in a timely manner or on commercially reasonable terms could materially delay the development and approval of our products, increase our expenses and materially harm our business, prospects, financial condition and results of operations.

We believe that we have a good working relationship with our contractors. However, should the situation change, we may be required to relocate these activities on short notice, and we do not currently have access to alternate facilities to which we could relocate our research, development and/or manufacturing activities. The cost and time to establish or locate an alternate research, development and/or manufacturing facility to develop our technology would be substantial and would delay obtaining FDA approval and commercializing our products.

We expect to rely heavily on orphan drug status to develop and commercialize our product candidates, but our orphan drug designations may not confer marketing exclusivity or other expected commercial benefits.

We expect to rely heavily on orphan drug exclusivity for our product candidates. Orphan drug status confers seven years of marketing exclusivity under the Federal Food, Drug, and Cosmetic Act, and up to ten years of marketing exclusivity in Europe for a particular product in a specified indication. We have been granted orphan drug designation in the United States for I-124-CLR1404 as a diagnostic for the management of glioma. While we have been granted this orphan designation, we will not be able to rely on this designation to exclude other companies from manufacturing or selling products using the same principal molecular structural features for the same indication beyond these timeframes. For any product candidate for which we have been or will be granted orphan drug designation in a particular indication, it is possible that another company also holding orphan drug designation for the same product candidate will receive marketing approval for the same indication before we do. If that were to happen, our applications for that indication may not be approved until the competing company's period of exclusivity expires. Even if we are the first to obtain marketing authorization for an orphan drug indication, there are circumstances under which a competing product may be approved for the same indication during the seven-year period of marketing exclusivity, such as if the later product is shown to be clinically superior to the orphan product, or if the later product is deemed a different product than ours. Further, the seven-year marketing exclusivity would not prevent competitors from obtaining approval of the same product candidate as ours for indications other than those in which we have been granted orphan drug designation, or for the use of other types of products in the same indications as our orphan product, or during such seven-year period for other indications.

We are exposed to product, clinical and preclinical liability risks that could create a substantial financial burden should we be sued.

Our business exposes us to potential product liability and other liability risks that are inherent in the testing, manufacturing and marketing of pharmaceutical products. In addition, the use, in our clinical trials, of pharmaceutical products that we or our current or potential collaborators may develop and then subsequently sell may cause us to bear a portion of or all product liability risks. While we carry an insurance policy covering up to \$5,000,000 per occurrence and \$5,000,000 in the aggregate of liability incurred in connection with such claims should they arise, there can be no assurance that our insurance will be adequate to cover all situations. Moreover, there can be no assurance that such insurance, or additional insurance, if required, will be available in the future or, if available, will be available on commercially reasonable terms. Furthermore, our current and potential partners with whom we have collaborative agreements or our future licensees may not be willing to indemnify us against these types of liabilities and may not themselves be sufficiently insured or have a net worth sufficient to satisfy any product liability claims. A successful product liability claim or series of claims brought against us could have a material adverse effect on our business, prospects, financial condition and results of operations.

Acceptance of our products in the marketplace is uncertain and failure to achieve market acceptance will prevent or delay our ability to generate revenues.

Our future financial performance will depend, at least in part, on the introduction and customer acceptance of our proposed products. Even if approved for marketing by the necessary regulatory authorities, our products may not achieve market acceptance. The degree of market acceptance will depend on a number of factors including:

- receiving regulatory clearance of marketing claims for the uses that we are developing;
- establishing and demonstrating the advantages, safety and efficacy of our technologies;
- pricing and reimbursement policies of government and third-party payers such as insurance companies, health maintenance organizations and other health plan administrators;
- our ability to attract corporate partners, including pharmaceutical companies, to assist in commercializing our intended products; and
- our ability to market our products.

Physicians, patients, payers or the medical community in general may be unwilling to accept, use or recommend any of our products. If we are unable to obtain regulatory approval or commercialize and market our proposed products as planned, we may not achieve any market acceptance or generate revenue.

We may face litigation from third parties who claim that our products infringe on their intellectual property rights, particularly because there is often substantial uncertainty about the validity and breadth of medical patents.

We may be exposed to future litigation by third parties based on claims that our technologies, products or activities infringe on the intellectual property rights of others or that we have misappropriated the trade secrets of others. This risk is exacerbated by the fact that the validity and breadth of claims covered in medical technology patents and the breadth and scope of trade-secret protection involve complex legal and factual questions for which important legal principles are unresolved. Any litigation or claims against us, whether or not valid, could result in substantial costs, could place a significant strain on our financial and managerial resources and could harm our reputation. Our license agreement with U. Mich. (the U. Mich. License) does require, and license agreements that we may enter into in the future would likely require, that we pay the costs associated with defending this type of litigation. In addition, intellectual property litigation or claims could force us to do one or more of the following:

- cease selling, incorporating or using any of our technologies and/or products that incorporate the challenged intellectual property, which would adversely affect our ability to generate revenue;
- obtain a license from the holder of the infringed intellectual property right, which license may be costly or may not be available on reasonable terms, if at all; or
- redesign our products, which would be costly and time-consuming.

If we are unable to protect or enforce our rights to intellectual property adequately or to secure rights to third-party patents, we may lose valuable rights, experience reduced market share, assuming any, or incur costly litigation to protect our intellectual property rights.

Our ability to obtain licenses to patents, maintain trade-secret protection and operate without infringing the proprietary rights of others will be important to commercializing any products under development. Therefore, any disruption in access to the technology could substantially delay the development of our technology.

The patent positions of biotechnology and pharmaceutical companies, such as ours, that involve licensing agreements are frequently uncertain and involve complex legal and factual questions. In addition, the coverage claimed in a patent application can be significantly reduced before the patent is issued or in subsequent legal proceedings. Consequently, our patent applications and any issued and licensed patents may not provide protection against competitive technologies or may be held invalid if challenged or circumvented. To the extent we license patents from third parties, as in the case of the U. Mich. License, the early termination of any such license agreement would result in the loss of our rights to use the covered patents, which could severely delay, inhibit or eliminate our ability to develop and commercialize compounds based on the licensed patents. Our competitors may also independently develop products similar to ours or design around or otherwise circumvent patents issued or licensed to us. In addition, the laws of some foreign countries may not protect our proprietary rights to the same extent as U.S. law.

We also rely on trade secrets, technical know-how and continuing technological innovation to develop and maintain our competitive position. Although we generally require our employees, consultants, advisors and collaborators to execute appropriate confidentiality and assignment-of-inventions agreements, our competitors may independently develop substantially equivalent proprietary information and techniques, reverse engineer our information and techniques, or otherwise gain access to our proprietary technology. We may be unable to meaningfully protect our rights in trade secrets, technical know-how and other non-patented technology.

We may have to resort to litigation to protect our rights for certain intellectual property or to determine their scope, validity or enforceability of our intellectual property rights. Enforcing or defending our rights is expensive, could cause diversion of our resources and may not prove successful. Any failure to enforce or protect our rights could cause us to lose the ability to exclude others from using our technology to develop or sell competing products.

Confidentiality agreements with employees and others may not adequately prevent disclosure of our trade secrets and other proprietary information and may not adequately protect our intellectual property, which could limit our ability to compete.

We operate in the highly technical field of research and development of small molecule drugs, and rely in part on trade-secret protection in order to protect our proprietary trade secrets and unpatented know-how. However, trade secrets are difficult to protect, and we cannot be certain that our competitors will not develop the same or similar technologies on their own. We have taken steps, including entering into confidentiality agreements with our employees, consultants, outside scientific collaborators, sponsored researchers and other advisors, to protect our trade secrets and unpatented know-how. These agreements generally require that the other party keep confidential and not disclose to third parties all confidential information developed by the party or made known to the party by us during the course of the party's relationship with us. We also typically obtain agreements from these parties that provide that inventions conceived by the party in the course of rendering services to us will be our exclusive property. However, these agreements may not be honored and may not effectively assign intellectual property rights to us. Enforcing a claim that a party has illegally obtained and is using our trade secrets or know-how is difficult, expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the United States may be less willing to protect trade secrets or know-how. The failure to obtain or maintain trade-secret protection could adversely affect our competitive position.

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

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

The use of hazardous materials, including radioactive materials, in our research and development imposes certain compliance costs on us and may subject us to liability for claims arising from the use or misuse of these materials.

Our research and development, manufacturing and administration of our drugs involve the controlled use of hazardous materials, including chemicals and radioactive materials, such as radioactive isotopes. We are subject to federal, state and local laws and regulations governing the storage, use and disposal of these materials and some waste products and are required to maintain both a manufacturer's license and a radioactive materials license with State of Wisconsin agencies. We believe that our safety procedures for the storage, use and disposal of these materials comply with the standards prescribed by federal, state and local regulations. However, we cannot completely eliminate the risk of accidental contamination or injury from these materials. If there were to be an accident, we could be held liable for any damages that result, which could exceed our financial resources. We currently maintain insurance coverage, with limits of up to \$2,500,000 depending on the nature of the claim, for damages resulting from the hazardous materials we use; however, future claims may exceed the amount of our coverage. Also, we do not have insurance coverage for pollution cleanup and removal. Currently the costs of complying with federal, state and local regulations are not significant, and consist primarily of waste disposal expenses and permitting fees. However, they could become expensive, and current or future environmental regulations may impair our research, development, production and commercialization efforts. If we are unable to maintain the required licenses and permits for any reason, it will negatively impact our research and development activities.

Due to our limited marketing, sales and distribution experience, we may be unsuccessful in our efforts to sell our proposed products, enter into relationships with third parties or develop a direct sales organization.

We have not established marketing, sales or distribution capabilities for our proposed products. Until such time as our proposed products are further along in the development process, we will not devote any meaningful time and resources to this effort. At the appropriate time, we will determine whether we will develop our own sales and marketing capabilities or enter into agreements with third parties to sell our products.

We have limited experience in developing, training or managing a sales force. If we choose to establish a direct sales force, we may incur substantial additional expenses in developing, training and managing such an organization. We may be unable to build a sales force on a cost-effective basis or at all. Any such direct marketing and sales efforts may prove to be unsuccessful. In addition, we will compete with many other companies that currently have extensive marketing and sales operations. Our marketing and sales efforts may be unable to compete against these other companies. We may be unable to establish a sufficient sales and marketing organization on a timely basis, if at all.

If we choose to enter into agreements with third parties to sell our proposed products, we may be unable to establish or maintain third-party relationships on a commercially reasonable basis, if at all. In addition, these third parties may have similar or more established relationships with our competitors.

We may be unable to engage qualified distributors. Even if engaged, these distributors may:

- fail to adequately market our products;
- fail to satisfy financial or contractual obligations to us;
- offer, design, manufacture or promote competing products; or
- cease operations with little or no notice.

If we fail to develop sales, marketing and distribution channels, we would experience delays in product sales and incur increased costs, which would have a material adverse effect on our business, prospects, financial condition, and results of operation.

If we are unable to convince physicians of the benefits of our intended products, we may incur delays or additional expense in our attempt to establish market acceptance.

Achieving use of our products in the target market of cancer diagnosis and treatment may require physicians to be informed regarding these products and their intended benefits. The time and cost of such an educational process may be substantial. Inability to successfully carry out this physician education process may adversely affect market acceptance of our proposed products. We may be unable to timely educate physicians regarding our intended proposed products in sufficient numbers to achieve our marketing plans or to achieve product acceptance. Any delay in physician education may materially delay or reduce demand for our proposed products. In addition, we may expend significant funds towards physician education before any acceptance or demand for our proposed products is created, if at all.

The market for our proposed products is rapidly changing and competitive, and new therapeutics, new drugs and new treatments that may be developed by others could impair our ability to maintain and grow our business and remain competitive.

The pharmaceutical and biotechnology industries are subject to rapid and substantial technological change. Developments by others may render our technologies and intended products noncompetitive or obsolete, or we may be unable to keep pace with technological developments or other market factors. Technological competition from pharmaceutical and biotechnology companies, universities, governmental entities and others diversifying into the field is intense and is expected to increase. Most of these entities have significantly greater research and development capabilities and budgets than we do, as well as substantially more marketing, manufacturing, financial and managerial resources. These entities represent significant competition for us. Acquisitions of, or investments in, competing pharmaceutical or biotechnology companies by large corporations could increase our competitors' financial, marketing, manufacturing and other resources.

Our resources are limited and we may experience management, operational or technical challenges inherent in such activities and novel technologies. Competitors have developed or are in the process of developing technologies that are, or in the future may be, the basis for competition. Some of these technologies may accomplish therapeutic effects similar to those of our technology, but through different means. Our competitors may develop drugs and drug delivery technologies that are more effective than our intended products and, therefore, present a serious competitive threat to us.

We do not know of any current or potential direct competitors for I-131-CLR1404 and I-124-CLR1404. Marketed drugs Zevalin® (Spectrum Pharmaceuticals) and Bexxar® (Glaxo Smith Kline) provide examples of targeted radiotherapeutics specifically for lymphoma indication only. FDG is the current standard for PET imaging for cancer and may be an alternative diagnostic imaging agent to I-124-CLR1404. Blaze Bioscience is developing Tumor Paint™ technology designed to provide real-time, high-resolution intraoperative visualization of cancer cells for use in surgical removal of cancer. The first product candidate is under development for cancer surgery in multiple solid tumor types and may be an alternative to CLR1502. At present, the only known FDA approved technology for tumor margin assessment is believed to be MarginProbe™, marketed by Dune Medical Devices. MarginProbe™ received FDA approval in January, 2013, as an intraoperative tissue assessment tool for early-stage breast cancer surgery. MarginProbe™ claims to use electromagnetic "signatures" to identify healthy and cancerous tissue.

The potential widespread acceptance of therapies that are alternatives to ours may limit market acceptance of our products even if they are commercialized. Many of our targeted diseases and conditions can also be treated by other medication or drug delivery technologies. These treatments may be widely accepted in medical communities and have a longer history of use. The established use of these competitive drugs may limit the potential for our technologies and products to receive widespread acceptance if commercialized.

If users of our products are unable to obtain adequate reimbursement from third-party payers, or if additional healthcare reform measures are adopted, it could hinder or prevent our product candidates' commercial success.

The continuing efforts of government and insurance companies, health maintenance organizations and other payers of healthcare costs to contain or reduce costs of healthcare may adversely affect our ability to generate future revenues and achieve profitability, including by limiting the future revenues and profitability of our potential customers, suppliers and collaborative partners. For example, in certain foreign markets, pricing or profitability of prescription pharmaceuticals is subject to government control. The U.S. government is implementing, and other governments have shown significant interest in pursuing, healthcare reform. Any government-adopted reform measures could adversely affect 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 payers. The continuing efforts of the U.S. and foreign governments, insurance companies, managed care organizations and other payers of healthcare services to contain or reduce healthcare costs may adversely affect our ability to set prices for our products, should we be successful in commercializing them, and this would negatively affect 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 healthcare products and services, or sales, marketing or pricing of healthcare products and services, also may limit our potential revenue and may require us to revise our research and development programs. The pricing and reimbursement environment may change in the future and become more challenging for several reasons, including policies advanced by the current or future executive administrations 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 healthcare system in ways that could affect our ability to sell our products profitably. In the U.S., changes in federal healthcare policy were enacted in 2010 and are being implemented. Some reforms could result in reduced reimbursement rates for our product candidates, which would adversely affect our business strategy, operations and financial results. Our ability to commercialize our products will depend in part on the extent to which appropriate reimbursement levels for the cost of our products and related treatment are obtained by governmental authorities, private health insurers and other organizations, such as health maintenance organizations (HMOs). Third-party payers are increasingly challenging the prices charged for medical drugs and services. Also, the trend toward managed healthcare in the U.S. and the concurrent growth of organizations such as HMOs that could control or significantly influence the purchase of healthcare services and drugs, as well as legislative proposals to reform healthcare or change government insurance programs, may all result in lower prices for or rejection of our drugs. The cost containment measures that healthcare payers and providers are instituting and the effect of any healthcare reform could materially harm our ability to operate profitably.

Risks Related to our Common Stock

Our stock price has experienced price fluctuations.

There can be no assurance that the market price for our common stock will remain at its current level and a decrease in the market price could result in substantial losses for investors. The market price of our common stock may be significantly affected by one or more of the following factors:

- announcements or press releases relating to the biopharmaceutical sector or to our own business or prospects;
- regulatory, legislative, or other developments affecting us or the healthcare industry generally;
- sales by holders of restricted securities pursuant to effective registration statements, or exemptions from registration;
- market conditions specific to biopharmaceutical companies, the healthcare industry and the stock market generally; and
- our ability to obtain and then maintain a listing on the Nasdaq Capital Market or maintain our current status on the OTCQX or obtain a listing on a national securities exchange.

Nine of our stockholders beneficially own approximately 73% of our outstanding common stock, which limits the influence of other stockholders.

As of July 3, 2014, 73% of our outstanding common stock is beneficially owned by nine stockholders. The interests of these stockholders may differ from those of other stockholders. Four of these stockholders hold approximately 87% of the principal amount of the convertible debentures issued in February 2014. These stockholders will likely continue to have the ability to significantly affect the outcome of all corporate actions requiring stockholder approval, including the following actions:

- the election of directors;
- the amendment of charter documents; and
- the approval of certain mergers and other significant corporate transactions, including a sale of substantially all of our assets.

There may be a limited public market for our securities; we presently fail to qualify for listing on any national securities exchanges.

Our common stock currently does not meet all of the requirements for initial listing on a registered stock exchange. Assuming application of the proceeds of this offering, we will seek to commence trading on the Nasdaq Capital Market upon closing of this offering. If we are listed and then subsequently de-listed from the Nasdaq Capital Market (unless we are moving to another national securities exchange), trading in our common stock will continue to be conducted in the over-the-counter market (currently the OTCQX). In such case, an investor may find it difficult to dispose of or to obtain accurate quotations as to the market value of our common stock, and our common stock may be less attractive for margin loans, or for investment by financial institutions, as consideration in future capital raising transactions or other contexts.

Our common stock has in the past been a “penny stock” under SEC rules. It may be more difficult to resell shares of common stock classified as “penny stock”.

Our common stock has, in the past, been a “penny stock” under applicable SEC rules (generally defined as non-exchange traded stock with a per-share price below \$5.00). Unless we successfully list our common stock on the Nasdaq Capital Market, or maintain a per-share price above \$5.00, these rules impose additional sales practice requirements on broker-dealers that recommend the purchase or sale of penny stocks to persons other than those who qualify as “established customers” or “accredited investors.” For example, broker-dealers must determine the appropriateness for non-qualifying persons of investments in penny stocks. Broker-dealers must also provide, prior to a transaction in a penny stock not otherwise exempt from the rules, a standardized risk disclosure document that provides information about penny stocks and the risks in the penny stock market. The broker-dealer also must provide the customer with current bid and offer quotations for the penny stock, disclose the compensation of the broker-dealer and its salesperson in the transaction, furnish monthly account statements showing the market value of each penny stock held in the customer’s account, provide a special written determination that the penny stock is a suitable investment for the purchaser, and receive the purchaser’s written agreement to the transaction.

Legal remedies available to an investor in "penny stocks" may include the following:

- if a "penny stock" is sold to the investor in violation of the requirements listed above, or other federal or states securities laws, the investor may be able to cancel the purchase and receive a refund of the investment.
- if a "penny stock" is sold to the investor in a fraudulent manner, the investor may be able to sue the persons and firms that committed the fraud for damages.

However, investors who have signed arbitration agreements may have to pursue their claims through arbitration.

These requirements may have the effect of reducing the level of trading activity, if any, in the secondary market for a security that becomes subject to the penny stock rules. The additional burdens imposed upon broker-dealers by such requirements may discourage broker-dealers from effecting transactions in our securities, which could severely limit the market price and liquidity of our securities. These requirements may restrict the ability of broker-dealers to sell our common stock and may affect your ability to resell our common stock.

Many brokerage firms will discourage or refrain from recommending investments in penny stocks. Most institutional investors will not invest in penny stocks. In addition, many individual investors will not invest in penny stocks due, among other reasons, to the increased financial risk generally associated with these investments.

For these reasons, penny stocks may have a limited market and, consequently, limited liquidity. We can give no assurance at what time, if ever, our common stock will not be classified as a "penny stock" in the future.

If we fail to maintain effective internal controls over financial reporting, the price of our common stock may be adversely affected.

Our internal control over financial reporting may have weaknesses and conditions that could require correction or remediation, the disclosure of which may have an adverse impact on the price of our common stock. We are required to establish and maintain appropriate internal controls over financial reporting. Failure to establish those controls, or any failure of those controls once established, could adversely affect our public disclosures regarding our business, prospects, financial condition or results of operations. In addition, management's assessment of internal controls over financial reporting may identify weaknesses and conditions that need to be addressed in our internal controls over financial reporting or other matters that may raise concerns for investors. Any actual or perceived weaknesses and conditions that need to be addressed in our internal control over financial reporting or disclosure of management's assessment of our internal controls over financial reporting may have an adverse impact on the price of our common stock.

We are required to comply with certain provisions of Section 404 of the Sarbanes-Oxley Act of 2002 and if we fail to continue to comply, our business could be harmed and our stock price could decline.

Rules adopted by the SEC pursuant to Section 404 of the Sarbanes-Oxley Act of 2002 require an annual assessment of internal controls over financial reporting, and for certain issuers an attestation of this assessment by the issuer's independent registered public accounting firm. The standards that must be met for management to assess the internal controls over financial reporting as effective are evolving and complex, and require significant documentation, testing, and possible remediation to meet the detailed standards. We expect to incur significant expenses and to devote resources to Section 404 compliance on an ongoing basis. It is difficult for us to predict how long it will take or costly it will be to complete the assessment of the effectiveness of our internal control over financial reporting for each year and to remediate any deficiencies in our internal control over financial reporting. As a result, we may not be able to complete the assessment and remediation process on a timely basis. In addition, although attestation requirements by our independent registered public accounting firm are not presently applicable to us we could become subject to these requirements in the future and we may encounter problems or delays in completing the implementation of any resulting changes to internal controls over financial reporting. In the event that our Chief Executive Officer or Chief Financial Officer determine that our internal control over financial reporting is not effective as defined under Section 404, we cannot predict how regulators will react or how the market prices of our shares will be affected; however, we believe that there is a risk that investor confidence and share value may be negatively affected.

Our common stock could be further diluted as the result of the issuance of additional shares of common stock, convertible securities, warrants or options.

In the past, we have issued common stock, convertible securities (such as convertible preferred stock and debentures) and warrants in order to raise money. We have also issued options as compensation for services and incentive compensation for our employees and directors. We have shares of common stock reserved for issuance upon the exercise of certain of these securities and may increase the shares reserved for these purposes in the future. Our issuance of additional common stock, convertible securities, options and warrants could affect the rights of our stockholders, could reduce the market price of our common stock or could result in adjustments to exercise prices of outstanding warrants (resulting in these securities becoming exercisable for, as the case may be, a greater number of shares of our common stock), or could obligate us to issue additional shares of common stock to certain of our stockholders.

Shares eligible for future sale may adversely affect the market.

From time to time, certain of our stockholders may be eligible to sell all or some of their shares of common stock by means of ordinary brokerage transactions in the open market pursuant to Rule 144 promulgated under the Securities Act, subject to certain limitations. In general, pursuant to amended Rule 144, non-affiliate stockholders may sell freely after six months subject only to the current public information requirement. Affiliates may sell after six months subject to the Rule 144 volume, manner of sale (for equity securities), current public information, and notice requirements. Of the approximately 2.9 million shares of our common stock outstanding as of July 3, 2014, approximately 1.6 million shares are tradable without restriction, and approximately an additional 0.7 million shares that had been issued in unregistered transactions and are held by non-affiliates are tradable without time or volume limitations pursuant to Rule 144. We have registered the resale of an additional 200,000 shares of our common stock, pursuant to registration obligations, and have registered the resale of the shares underlying certain warrants to purchase common stock. Given the limited trading of our common stock, resale of even a small number of shares of our common stock pursuant to Rule 144 or an effective registration statement may adversely affect the market price of our common stock.

Provisions of our charter, bylaws, and Delaware law may make an acquisition of us or a change in our management more difficult.

Certain provisions of our amended restated certificate of incorporation and bylaws could discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable, including transactions in which an investor might otherwise receive a premium for their shares. These provisions also could limit the price that investors might be willing to pay in the future for shares of our common stock or warrants, thereby depressing the market price of our common stock. Stockholders who wish to participate in these transactions may not have the opportunity to do so.

Furthermore, these provisions could prevent or frustrate attempts by our stockholders to replace or remove our management. These provisions:

- provide for the division of our board into three classes as nearly equal in size as possible with staggered three-year terms and further limit the removal of directors and the filling of vacancies;
- authorize our board of directors to issue without stockholder approval blank-check preferred stock that, if issued, could operate as a “poison pill” to dilute the stock ownership of a potential hostile acquirer to prevent an acquisition that is not approved by our board of directors;
- require that stockholder actions must be effected at a duly called stockholder meeting and prohibit stockholder action by written consent;
- establish advance notice requirements for stockholder nominations to our board of directors or for stockholder proposals that can be acted on at stockholder meetings;
- limit who may call stockholder meetings; and
- require the approval of the holders of 75% of the outstanding shares of our capital stock entitled to vote in order to amend certain provisions of our restated certificate of incorporation and restated bylaws.

In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which may, unless certain criteria are met, prohibit large stockholders, in particular those owning 15% or more of our outstanding voting stock, from merging or combining with us for a prescribed period of time.

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

No cash dividends have been paid on our common stock. We do not expect to pay cash dividends in the near future. Payment of dividends would depend upon our profitability at the time, cash available for those dividends, and other factors as our board of directors may consider relevant. If we do not pay dividends, our common stock may be less valuable because a return on an investor’s investment will only occur if our stock price appreciates.

Risks Related to this Offering**Our management team will have immediate and broad discretion over the use of the net proceeds from this offering and we may use the net proceeds in ways with which you disagree.**

The net proceeds from this offering will be immediately available to our management to use at their discretion. We currently intend to use the net proceeds from this offering to fund our research and development activities, for general corporate purposes, and possibly for acquisitions of other companies, products or technologies, though no such acquisitions are currently contemplated. See “Use of Proceeds.” We have not allocated specific amounts of the net proceeds from this offering for any of the foregoing purposes. Accordingly, our management will have significant discretion and flexibility in applying the net proceeds of this offering. You will be relying on the judgment of our management with regard to the use of these net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. It is possible that the net proceeds will be invested in a way that does not yield a favorable, or any, return for us or our stockholders. The failure of our management to use such funds effectively could have a material adverse effect on our business, prospects, financial condition, and results of operation.

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 up to \$ ____ in securities offered in this offering, at an assumed public offering price of \$ ____ per share and warrant, and after deducting the underwriters discounts and commissions and other estimated offering expenses payable by us, investors in this offering can expect an immediate dilution of \$ ____ per share, or ____ %, at the assumed public offering price, assuming no exercise of the warrants. 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.

We may not obtain a listing on a national securities exchange for the warrants to purchase common stock included in this offering. If we do obtain a listing, we may not be able to comply with continued listing standards.

We have applied for the warrants being offered in this offering to be listed on the Nasdaq Capital Market. There can be no assurance that we will obtain such a listing. If the warrants are not listed on a national securities exchange, the liquidity of the warrants will be limited. Even if we obtain an initial listing of the warrants on a national securities exchange, there can be no assurance that we will be able to continue to comply with applicable listing standards.

Risks Related to the Listing Reverse Split

On June 13, 2014, we effected a 1-for-20 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.

FORWARD-LOOKING STATEMENTS

This prospectus, including the documents that we incorporate by reference, contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the Securities Act), and Section 21E of the Exchange Act. Such forward-looking statements include those that express plans, anticipation, intent, contingency, goals, targets or future development and/or otherwise are not statements of historical fact. These forward-looking statements are based on our current expectations and projections about future events and they are subject to risks and uncertainties known and unknown that could cause actual results and developments to differ materially from those expressed or implied in such statements.

In some cases, you can identify forward-looking statements by terminology, such as “expects,” “anticipates,” “intends,” “estimates,” “plans,” “believes,” “seeks,” “may,” “should”, “could” or the negative of such terms or other similar expressions. Accordingly, these statements involve estimates, assumptions and uncertainties that could cause actual results to differ materially from those expressed in them. Any forward-looking statements are qualified in their entirety by reference to the factors discussed throughout this prospectus.

You should read this prospectus and the documents that we reference herein and therein and have filed as exhibits to the registration statement, of which this prospectus is part, completely and with the understanding that our actual future results may be materially different from what we expect. You should assume that the information appearing in this prospectus is accurate as of the date on the front cover of this prospectus or such prospectus supplement only. Because the risk factors referred to above could cause actual results or outcomes to differ materially from those expressed in any forward-looking statements made by us or on our behalf, you should not place undue reliance on any forward-looking statements. Further, any forward-looking statement speaks only as of the date on which it is made, and we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which the statement is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible for us to predict which factors will arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. We qualify all of the information presented in this prospectus and any accompanying prospectus supplement, and particularly our forward-looking statements, by these cautionary statements.

USE OF PROCEEDS

Based on an assumed public offering price of \$ _____ per share of common stock and warrant, we estimate that the net proceeds to us from the sale of the securities that we are offering, assuming gross proceeds of \$ _____ million and no exercise of the overallotment option, will be approximately \$ _____ million, after deducting underwriting discounts and commissions and estimated offering expenses. 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.

We expect to use any proceeds received from this offering as follows:

- to fund our research and development activities, including the further development of our I-124-CLR1404, I-131-CLR1404 and CLR1502 compounds in a wide range of cancers; and
- for general corporate purposes, such as general and administrative expenses, capital expenditures, working capital, repayment of debt, prosecution and maintenance of our intellectual property, and the potential investment in technologies or products that complement our business.

We believe that our cash on hand at March 31, 2014, plus the net proceeds from this offering (assuming \$20 million of securities are sold in this offering and no exercise of the warrants being issued pursuant to the offering) would be adequate to fund operations through the end of 2015. We estimate that our costs during that time will be approximately \$17.6 million. This amount consists of approximately \$3.8 million for I-124-CLR1404 development, approximately \$1.4 million for I-131-CLR1404 development, approximately \$1.3 million for CLR1502 development, approximately \$6.0 million for general, fixed and overhead research and development expenses that are not allocated to specific projects and approximately \$5.1 million in general and administrative costs. In addition to operating costs we anticipate using \$4.2 million in proceeds for the repayment of debt, including \$4.0 million for the repayment of the Bridge Notes.

The above cost estimates contemplate the following clinical development activity:

- continuation of the investigator-sponsored I-124-CLR1404 Phase 1-2 imaging trials in brain cancer and lung cancer which we anticipate will generate additional proof-of-concept data in 2014 and 2015;
- continuation of an investigator-sponsored I-124-CLR1404 Phase 1-2 imaging trial across 9 solid tumors, which we anticipate will generate initial proof-of-concept data in 2015;
- completion of the company-sponsored Phase 2 clinical trial which commenced in March 2014 studying I-124-CLR1404 in the imaging of glioblastoma by the end of 2014;
- initiation of a Phase 3 registration study studying I-124 CLR1404 in the imaging of glioblastoma;
- initiation and completion of a Phase 1-2 proof-of-concept clinical trial studying I-131-CLR1404 in patients with multiple myeloma; and
- filing of an IND for CLR1502 in 2014, and initiation and completion of a Phase 1 proof-of-concept clinical trial studying CLR1502 in the intraoperative optical imaging of patients undergoing breast cancer surgery.

Even if we sell all of the securities subject to this offering, we will still need to obtain additional financing in the future in order to fully fund these product candidates through the regulatory approval process. We may seek such additional financing through public or private equity or debt offerings or other sources, including collaborative or other arrangements with corporate partners, and through government grants and contracts. There can be no assurance we will be able to obtain such additional financing. Although we currently anticipate that we will use the net proceeds of this offering as described above, there may be circumstances where a reallocation of funds may be necessary. The amounts and timing of our actual expenditures will depend upon numerous factors, including the progress of our development and commercialization efforts, the progress of our clinical studies, whether or not we enter into strategic collaborations or partnerships and our operating costs and expenditures. Accordingly, our management will have significant flexibility in applying the net proceeds of this offering.

The costs and timing of drug development and regulatory approval, particularly conducting clinical studies, are highly uncertain, are subject to substantial risks and can often change. Accordingly, we may change the allocation of use of these proceeds as a result of contingencies such as the progress and results of our clinical studies and other development activities, the establishment of collaborations, our manufacturing requirements and regulatory or competitive developments.

Pending the application of the net proceeds as described above or otherwise, we may invest the proceeds in short-term, investment-grade, interest-bearing securities or guaranteed obligations of the U.S. government or other securities.

CAPITALIZATION

The following table sets forth our cash and cash equivalents and capitalization, each as of March 31, 2014:

- on an actual basis, retroactively adjusted for the Listing Reverse Split; and
- on an adjusted basis to give effect to the issuance of the securities offered hereby.

You should consider this table in conjunction with our financial statements and the notes to those financial statements included elsewhere in this prospectus.

	As of March 31, 2014	
	Actual	As Adjusted (1)
Cash and cash equivalents	\$ 3,807,967	\$
Convertible debt	3,765,028	
Notes payable to the Wisconsin Department of Commerce	450,000	
Capital lease obligations	1,068	
Total debt obligations	4,216,096	
Stockholders' equity:		
Common stock, par value \$0.00001 per share: 20,000,000 shares authorized; 2,869,739 issued as of March 31, 2014	29	
Additional paid in capital	53,275,639	
Deficit accumulated during the development stage	(54,002,981)	
Total stockholders' equity	(727,313)	
Total capitalization	\$ 3,488,783	\$

- (1) Assumes that \$_____ of securities are sold in this offering at an assumed offering price of \$_____ per share and warrant and that the net proceeds thereof are approximately \$_____ after underwriter's discounts and commissions and estimated offering expenses.

MARKET FOR COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

Market Information

Our common stock was quoted on the OTC Bulletin Board under the symbol NVLT beginning on June 14, 2005 and until February 16, 2012, since which time it has been quoted on the OTCQX platform. On February 12, 2014, our ticker symbol was changed to CLRB in connection with the change in our corporate name and on June 13, 2014 we effected the Listing Reverse Split. The following table provides, for the periods indicated, the high and low bid prices for our common stock. These over-the-counter market quotations reflect inter-dealer prices, without retail mark-up, mark-down or commission, and may not represent actual transactions.

Fiscal Year 2012	High	Low
First Quarter	\$ 19.80	\$ 8.00
Second Quarter	44.00	15.00
Third Quarter	24.00	18.20
Fourth Quarter	21.40	13.20
Fiscal Year 2013	High	Low
First Quarter	\$ 15.80	\$ 9.20
Second Quarter	9.40	7.20
Third Quarter	9.40	6.40
Fourth Quarter	8.20	5.00
Fiscal Year 2014	High	Low
First Quarter	\$ 9.00	\$ 7.00
Second Quarter	9.20	6.00
Third Quarter (through July 3, 2014)	6.89	6.26

The above share prices have been adjusted to give effect to the Listing Reverse Split.

On July 3, 2014 there were 387 holders of record of our common stock. This number does not include stockholders for whom shares were held in a “nominee” or “street” name.

We have not declared or paid any cash dividends on our common stock and do not anticipate declaring or paying any cash dividends in the foreseeable future. We currently expect to retain future earnings, if any, for the development of our business.

Our transfer agent and registrar is American Stock Transfer and Trust Company, 6201 15th Avenue, Brooklyn, NY 11219.

DILUTION

Our net tangible book value as of March 31, 2014 was \$1,011,533, or \$0.35 per share of common stock, based upon 2,869,739 shares outstanding as of that date, taking into effect the Listing Reverse Split. Net tangible book value per share is determined by dividing such number of outstanding shares of common stock into our net tangible book value, which is our total tangible assets, less total liabilities, excluding the derivative liability of \$3,414,308 at that date. After giving effect to the sale of the securities in this offering at the public offering price of \$ ____ per share of common stock, together with a warrant to purchase one share of common stock, excluding the exercise of the underwriter’s overallotment option and after deducting underwriting discounts and commission and other estimated offering expenses payable by us, our adjusted net tangible book value at March 31, 2014 would have been approximately \$ ____ million, or \$ ____ per share. This represents an immediate increase in net tangible book value of approximately \$ ____ per share to our existing stockholders, and an immediate dilution of \$ ____ per share to investors purchasing securities in the offering.

The following table illustrates the per share dilution to investors purchasing securities in the offering:

Assumed public offering price per share of common stock, together with a warrant to purchase one share of common stock		\$
Net tangible book value per share as of March 31, 2014	\$	0.35
Increase per share attributable to sale of securities to investors	\$	
Adjusted net tangible book value per share after the offering		\$
Dilution per share to investors		\$

The foregoing illustration does not reflect the potential dilution from the exercise of outstanding options or warrants to purchase shares of our common stock or the conversion of convertible debentures. The foregoing illustration also does not reflect the dilution that would result from the exercise of the warrants sold in the offering.

BUSINESS

Cellectar Biosciences, Inc. (Cellectar Bio or the Company) is a biopharmaceutical company developing compounds for the treatment and imaging of cancer. Prior to February 11, 2014, the name of the Company was Novelos Therapeutics, Inc. (Novelos). On April 8, 2011, Novelos entered into a business combination (the Acquisition) with Cellectar, Inc., a privately held Wisconsin corporation that designed and developed products to detect, treat and monitor a wide variety of human cancers. Our shares are quoted on the OTCQX® marketplace under the symbol CLRB and prior to February 12, 2014 were quoted under the symbol NVLT.

References to “Cellectar, Inc.” relate to the activities and financial information of Cellectar, Inc. prior to the Acquisition, references to “Novelos” relate to the activities and financial information of Novelos prior to the Acquisition and references to “Cellectar Bio” or “the Company” or “we” or “us” or “our” relate to the activities and obligations of the combined Company following the Acquisition.

Our cancer-targeting technology permits selective delivery of a wide range of agents to cancer cells, including cancer stem cells. By attaching different agents to our proprietary phospholipid ether (PLE) cancer-targeting delivery platform, we believe we can engineer product candidates with the potential to both image and treat a wide range of cancers. This offers the potential for a paradigm shift in the detection and treatment of cancer by using the same delivery platform for both detecting malignancy and providing efficacy versus all three major drivers of morbidity and mortality in cancer: primary tumors, metastases and stem cell-based relapse.

The Company is currently developing three proprietary product candidates:

- I-124-CLR1404 is a small-molecule, broad-spectrum, cancer-targeting positron emission tomography (PET) imaging agent that we believe has the potential to be the first of its kind for the selective detection of tumors and metastases in a broad range of cancers. Investigator-sponsored Phase 1/2 clinical trials of I-124-CLR1404 are ongoing across 11 solid tumor indications. In March 2014, we commenced enrollment in a company-sponsored Phase 2 clinical trial studying I-124-CLR1404 in the imaging of glioblastoma, a type of glioma. We expect to complete this trial by the end of 2014, subject to additional funding. In April, 2014, the FDA granted I-124-CLR1404 orphan status as a diagnostic for the management of glioma.
- I-131-CLR1404 is a small-molecule, broad-spectrum, cancer-targeting molecular radiotherapeutic that delivers cytotoxic (cell-killing) radiation directly and selectively to cancer cells and cancer stem cells. We believe I-131-CLR1404 also has the potential to be the first therapeutic agent to use PLE analogs to target cancer cells. In November 2013, we completed enrollment in a Phase 1b dose-escalation trial evaluating I-131-CLR1404 in the treatment of patients with advanced solid tumors and the results of the trial were presented at the American Society of Clinical Oncology (ASCO) June 2014 Annual Meeting. Because of the highly radiosensitive nature, clear unmet medical need in the relapse/refractory setting and the potential to receive orphan drug designation, we are pursuing multiple myeloma as an initial target indication for future I-131-CLR1404 development and plan to submit an Investigational New Drug Application (IND) with the FDA in 2014.
- CLR1502 is a preclinical, small-molecule, cancer-targeting, non-radioactive optical imaging agent for intraoperative tumor margin illumination and non-invasive tumor imaging. We anticipate filing an IND with the FDA for CLR1502 in 2014.

Together, we believe our compounds have the potential to improve upon current standard of care (SOC) for the detection, treatment and monitoring of a wide variety of human cancers.

Technology Overview

Our product candidates are based on a cancer-targeting delivery platform of optimized PLE analogs that interact with lipid rafts, which are specialized microdomains within cell membranes. Importantly, the core chemical structure shared across all three products provides selective targeting of cancer cells, including cancer stem cells, in preference to normal cells, due to enrichment of lipid rafts in the former. The cancer-targeting PLE carrier molecule was deliberately designed to be coupled to imaging or therapeutic molecules. For example iodine can be attached via a very stable covalent bond resulting in two distinct products differing only with respect to the isotope of iodine they contain – I-131-CLR1404 contains radioactive I-131 and I-124-CLR1404 contains the shorter-lived radioactive I-124. Because of their chemical identity, I-124-CLR1404 also represents an ideal biomarker that may be used to predict tumor sensitivity of I-131-CLR1404 and, potentially, establish an efficacious dose in individual patients. Other, non-radioactive molecules can also be attached to the PLE carrier. In the case of CLR1502, this is a near-infrared (NIR) emitting fluorophore (800 nm) whose signal can penetrate through up to approximately 1 cm of tissue. This may enable the use of CLR1502 to visualize tumor margins during cancer surgery and to non-invasively detect relatively superficial tumors. Thus, to date, three cancer-targeting product profiles have been generated from a single chemical core structure that is the foundation of our technology platform – a diagnostic PET imaging agent, I-124-CLR1404, a molecular radiotherapeutic agent, I-131-CLR1404 and a non-radioactive optical imaging agent, CLR1502, to increase the success of cancer surgery and non-invasively image certain tumors.

Malignant tumor targeting, including targeting of cancer stem cells, has been demonstrated *in vivo*. Mice without intact immune systems, and inoculated with Panc-1 (pancreatic carcinoma) cells, were injected with CLR1502 24 or 96 hours prior to imaging. *In vivo* optical imaging showed pronounced accumulation of CLR1502 in tumors versus non-target organs and tissues. Similarly, PET imaging of tumor-bearing animals (colon, glioma, triple negative breast and pancreatic tumor xenograft models) administered the imaging agent I-124-CLR1404 clearly shows selective uptake and retention by both primary tumors and metastases, including cancer stem cells. PET/CT analysis following co-injection of I-131-CLR1404 (for therapy) and I-124-CLR1404 (for imaging) revealed time-dependent tumor responses and disappearance over 9 days in a cancer xenograft model. We believe that the capability of our technology to target and be selectively retained by cancer stem cells *in vivo* was demonstrated by treating glioma stem cell derived orthotopic tumor-bearing mice with another fluorescent-labeled PLE (CLR1501), and then removing the tumor and isolating cancer stem cells, which continued to display CLR1501 labeling even after three weeks in cell culture.

The basis for selective tumor targeting of our compounds lies in differences between the plasma membranes of cancer cells as compared to those of most normal cells. Specifically, cancer cell membranes are highly enriched in “lipid rafts”. Lipid rafts are specialized regions of the membrane phospholipid bilayer that contain high concentrations of cholesterol and sphingolipids and serve to organize cell surface and intracellular signaling molecules (e.g., growth factor and cytokine receptors, the phosphatidylinositol 3-kinase (PI3K)/Akt survival pathway). Data suggests that lipid rafts serve as portals of entry for PLEs such as I-124-CLR1404, I-131-CLR1404 and CLR1502. The marked selectivity of our compounds for cancer cells versus non-cancer cells is due to the fact that cancer cells have far more lipid rafts. Following cell entry via lipid rafts, I-124-CLR1404, I-131-CLR1404 and CLR1502 are transported into the cytoplasm, where they distribute to organelle membranes (mitochondria, ER, lysosomes) but not the nucleus. The pivotal role played by lipid rafts is underscored by the fact that disruption of lipid raft architecture suppresses uptake of PLEs into cancer cells.

Our core technology platform is based on research conducted by Cellectar, Inc.’s founder and our Chief Scientific Officer, Dr. Jamey Weichert, beginning in 1994 at the University of Michigan (U. Mich.), where phospholipid ether analogs were initially designed, synthesized, radiolabeled, and evaluated in the laboratory of Raymond Counsell. Since 1998, Dr. Weichert has continued his research at the University of Wisconsin (U. Wisc.) and subsequently founded Cellectar, Inc. in 2002 to further develop and commercialize the technology. Cellectar, Inc. obtained exclusive rights to the related technology patents owned by U. Mich. in 2003 and continued development of the platform while obtaining ownership of numerous additional patents and patent applications (lasting until 2025, 2028 and 2030 without extensions).

Products in Development

I-124-CLR1404

I-124-CLR1404 is a small-molecule, broad-spectrum, cancer-targeting imaging agent that we believe has first-in-class potential for selective detection of primary tumors and metastases in a broad range of cancers. Chemically, I-124-CLR1404 is comprised of our proprietary PLE, 18-(p-[I-124]iodophenyl) octadecyl phosphocholine, acting as a cancer-targeting delivery and retention vehicle, covalently labeled with iodine -124, a PET imaging radioisotope with a radiation half-life of four days. PET imaging used in conjunction with CT scanning has now become the imaging method of choice in much of oncology. In preclinical studies to date, I-124-CLR1404 selectively illuminated malignant tumors in over 60 animal models of different cancer types, demonstrating broad-spectrum, cancer-selective uptake and retention. We also compared I-124-CLR1404 and the current standard of care PET agent, F-18-fluoro-deoxyglucose (FDG)), side by side (24 hours apart) in the same tumor-bearing mouse (PC3 human prostate carcinoma) that was treated with carrageenan to generate a site of inflammation. As expected, FDG demonstrated significant uptake in the inflammatory lesion and organs such as heart, liver, brain and bladder compared to the malignant tumors, which were poorly imaged. I-124-CLR1404, on the other hand, showed no uptake into the inflammatory lesion and organs, yet displayed clear and demonstrable uptake in the tumors. Investigator-sponsored Phase 1/2 clinical trials of I-124-CLR1404 as a PET imaging agent are ongoing across 11 solid tumor indications. These trials have demonstrated positive initial imaging results in multiple tumor types. Based on positive initial I-124-CLR1404 imaging results in 15 primary and metastatic brain cancer patients, we believe I-124-CLR1404 has potential to address a significant unmet medical need for post-treatment efficacy assessment and differentiating tumor growth from pseudoprogression in brain cancer, potentially avoiding unnecessary surgeries, biopsies and other treatments and resulting in better patient management and lower healthcare costs. We enrolled the first patient in an I-124-CLR1404 Phase 2 imaging trial in brain cancer in March 2014 and, subject to additional funding, expect to complete the trial by the end of 2014. This trial will compare I-124-CLR1404 imaging of glioblastoma to standard of care magnetic resonance imaging (MRI) based on pathology confirmation in approximately 36 patients. The primary objective of the trial will be to optimize dosing and imaging parameters of I-124-CLR1404. We expect glioblastoma to be our lead indication for I-124-CLR1404 with additional development opportunities that could include brain metastases and other primary brain tumors, as well as other solid tumors such as prostate, breast, lung, colorectal, head and neck, and pancreatic cancers. In April 2014, the FDA granted our request for orphan designation of I-124-CLR1404 as a diagnostic for the management of glioma. In addition to seven years of marketing exclusivity following marketing approval by the FDA for I-124-CLR1404 as a diagnostic for the management of glioma, orphan status benefits include tax credits related to clinical trial expenses, a possible exemption from the FDA-user fee, assistance in clinical trial protocol design, and fewer patients required for new drug applications.

These human trials are intended to provide proof-of-concept for I-124-CLR1404 as a PET imaging agent with the potential to supplant current imaging standards of care, FDG for various solid tumors or MRI in the case of brain cancers, due to what we believe to be I-124-CLR1404's superior cancer selectivity. Furthermore, the radiation half-life of only 110 minutes for fluorine-18 labeled agents, such as FDG, severely limits their use to locations close to the point of manufacture. I-124-CLR1404's much longer radiation half-life affords a longer imaging window of up to seven days following injection, resulting in more favorable logistics of clinical use, including the ability to be distributed to clinics throughout the U.S. from a single manufacturing site. As a chemically identical biomarker for I-131-CLR1404, I-124-CLR1404 imaging may be capable of estimating an efficacious dose of I-131-CLR1404 in individual cancer patients.

A three-part investigator-sponsored Phase 1/2 trial of radiolabeled CLR1404 for patients with advanced non-small cell lung cancer (NSCLC) was initiated in February 2004 at the University of Wisconsin Carbone Cancer Center (UWCCC). The first part of the trial evaluated imaging characteristics of I-131-CLR1404 in seven patients and the second part of the trial evaluated tumor accumulation in one patient. The third part of the trial is now evaluating tumor imaging with I-124-CLR1404 at increasing doses. Dr. Anne M. Traynor at UWCCC is the principal investigator for this trial. We provide funding for the trial and the data is shared with us while the study progresses and at the conclusion of the study. A total of 8 patients have been enrolled across three dose levels (1.5 mCi, 3mCi and 5 mCi) in this part of the Phase 1/2 trial. With the 5 mCi dose level, we saw clear and sustained uptake of I-124-CLR1404 in cancerous tumors against low background and have not observed any adverse safety signals. Although still early and in a small number of subjects, there is some suggestion that I-124-CLR1404 imaging was more tumor-selective than the comparator modality FDG PET. In addition, in one patient, three brain metastases were detected with I-124-CLR1404 that were not identified with FDG PET, which following confirmation with current SOC, prompted an alteration to the treatment plan for this patient. Having observed initial cancer-specific uptake with I-124-CLR1404 at a 5 mCi dose in NSCLC patients, study investigators continue exploration of dose and imaging time points in an effort to optimize dosing and results. Enrollment began in September 2013 for the evaluation of doses of 7.5 and 10 mCi in up to 22 patients. As of the end of March 2014, two patients have been enrolled at these increased dose levels. It is anticipated that this trial will be completed in mid-2015.

An investigator-sponsored Phase 1/2 trial of I-124-CLR1404 as a PET imaging agent for brain cancer was initiated in December 2011 at UWCCC and the first patient was enrolled in March 2012. Dr. Lance Hall at the UWCCC is the principal investigator for this trial. This trial is being funded by UWCCC and an Institute for Clinical and Translational Research (ICTR) grant, and the data is shared with the Company while the study progresses and at the conclusion of the study. Up to 20 patients will be enrolled at a 5 mCi dose. In June 2012, we announced that three glioma patients were dosed with I-124-CLR1404 at 5 mCi. The preliminary results from these three glioma patients showed strong and sustained uptake of I-124-CLR1404 in cancerous tumors against very low background and no adverse safety signals were observed. Patient enrollment is continuing and a total of ten patients have been enrolled as of the end of March 2014. It is anticipated that this trial will be completed during 2014.

An investigator-sponsored Phase 1/2 trial of I-124-CLR1404 as a PET imaging agent for glioma was initiated in January 2012 at UWCCC and the clinical trial protocol is being amended to facilitate patient enrollment. Dr. Lance Hall at the UWCCC is the principal investigator for this clinical trial. Dr. Jamey Weichert is the primary principal investigator for the \$1.2 million grant from the National Cancer Institute, which funds the trial. Total enrollment of 25 patients is targeted and seven patients have been enrolled as of the end of March 2014. It is anticipated that this trial will be completed in mid-2015.

An investigator-sponsored Phase 1/2 trial of I-124-CLR1404 as a PET imaging agent for patients with multiple solid tumor types (triple negative breast, prostate, colorectal, gastric, ovarian, pancreatic, esophageal, soft tissue sarcoma, and head & neck cancer) was initiated in August 2012 at the UWCCC and the first patient was enrolled in October 2012. Dr. Glenn Liu at UWCCC is the principal investigator for this trial. We provide funding for the trial and the data is shared with us while the study progresses and at the conclusion of the study. Up to 9 patients per tumor type will be enrolled across dose levels ranging from 3 mCi to 10 mCi in this Phase 1/2 trial. Nine patients have been enrolled as of the end of March 2014. It is anticipated that this trial will be completed during 2015.

I-131-CLR1404

I-131-CLR1404 is a small-molecule, broad-spectrum, cancer-targeting molecular radiotherapeutic that we believe has the potential to be the first radiotherapeutic agent to use PLEs to target cancer cells. I-131-CLR1404 is comprised of our proprietary PLE, 18-(p-[I-131]iodophenyl) octadecyl phosphocholine, acting as a cancer-targeting delivery and retention vehicle, covalently labeled with iodine-131, a cytotoxic (cell-killing) radioisotope with a half-life of eight days that is already in common use to treat thyroid and other cancer types. It is this “intracellular radiation” mechanism of cancer cell killing, coupled with delivery to a wide range of malignant tumor types that we believe imbues I-131-CLR1404 with broad-spectrum anti-cancer activity. Selective uptake and retention has been demonstrated in cancer stem cells compared with normal cells, offering the prospect of longer lasting cancer remission.

In 2009, we filed an IND with the FDA to study I-131-CLR1404 in humans. In early 2010, we successfully completed a Phase 1a dosimetry trial demonstrating initial safety, tumor imaging and pharmacokinetic consistency and establishing a starting dose for a Phase 1b dose-escalation trial. Radiation dosimetry measures how much radiation is absorbed by tumors and body organs in order to optimize delivery of radiation therapy. The Phase 1b dose-escalation trial was aimed at determining the Maximum Tolerated Dose (MTD) of I-131-CLR1404.

Preclinical experiments in tumor models have demonstrated selective killing of cancer cells along with a benign safety profile. I-131-CLR1404's anti-tumor/survival-prolonging activities have been demonstrated in more than a dozen models including breast, prostate, lung, brain, pancreatic, ovarian, uterine, renal, and colorectal cancers as well as, melanoma and multiple myeloma. In all but two models, a single administration of a well-tolerated dose of I-131-CLR1404 was sufficient to demonstrate efficacy. Moreover, efficacy was also seen in a model employing human uterine sarcoma cells that over-express efflux pumps known to underlie resistance to many standard chemotherapeutic drugs. I-131-CLR1404 was also tested in combination with a standard efficacious dose of gemcitabine in a pancreatic cancer model. Single doses of I-131-CLR1404 or gemcitabine given alone were equally efficacious while the combination therapy was significantly more efficacious than either treatment alone (additive). In each study, the dose of I-131-CLR1404 was ~100 μ Ci, which is approximately 50-fold less than the maximum tolerated dose of I-131-CLR1404 determined in a six-month rat radiotoxicity study.

Extensive, IND-enabling, Good Laboratory Practices (GLP) *in vivo* and *in vitro* preclinical pharmacokinetic/distribution, toxicology and drug safety studies were successfully completed in 2007 through 2009 using non-pharmacological concentrations/doses of PLE consistent with its role as a delivery/retention vehicle in I-131-CLR1404. Tissue distribution studies supported prediction of acceptable human organ exposures and body clearance for I-131-CLR1404. Importantly, and in sharp distinction from biological products labeled with I-131, the small molecule I-131-CLR1404 showed very minimal variation in excretion kinetics and tissue distribution among individuals within species or across a 500-fold variation in dose. Single- and repeated-dose animal toxicology studies indicated very high margins of safety with our PLE delivery and retention vehicle even when administered at 80-200x over the amount required to deliver the anticipated maximum human therapy dose of I-131-CLR1404.

In February 2010 we completed a Phase 1 dosimetry trial with a single intravenous dose of 10 mCi I-131-CLR1404 in eight patients with relapsed or refractory advanced solid tumors. Single doses of I-131-CLR1404 were well tolerated. The reported adverse events were all considered minimal, manageable and either not dose limiting or not related to I-131-CLR1404. There were no serious adverse events reported. Analysis of total body imaging and blood and urine samples collected over 42 days following injection indicated that doses of I-131-CLR1404 expected to be therapeutically effective can be administered without harming vital organs. Two subjects (one with colorectal cancer metastasized to lung and another with prostate cancer) had tumors that were imaged with 3D nuclear scanning (SPECT/CT) on day 6 after administration of I-131-CLR1404. Uptake of I-131-CLR1404 into tumor tissue (but not adjacent normal tissue or bone marrow) was clearly demonstrated in both subjects. Echoing animal studies, pharmacokinetic analyses demonstrated a prolonged half-life of radioactivity in the plasma after I-131-CLR1404 administration (approximately 200 hours) and that there was no significant variation in excretion or radiation dosimetry among subjects. The trial established an initial dose of 12.5 mCi/m² for the Phase 1b escalating dose trial that commenced in January 2012.

The primary objective of the multicenter Phase 1b dose-escalation trial in patients with a range of advanced solid tumors is to define the MTD of I-131-CLR1404. In addition to determining the MTD, the Phase 1b trial is intended to evaluate overall tumor response (using standard RESIST 1.1 criteria) and safety. In September 2012, we announced that we had successfully completed the second cohort in this Phase 1b dose-escalation trial. The second two-patient cohort was successfully dosed with 25 mCi/m² of I-131-CLR1404, triggering enrollment into the third cohort at 37.5 mCi/m². Data from the second cohort indicated I-131-CLR1404 was well-tolerated, without any dose limiting or sub-dose limiting toxicities, enabling enrollment of the third cohort. Data from the two-patient third cohort indicated the onset of dose-limiting hematologic toxicities with I-131-CLR1404, triggering enrollment into a five-patient fourth cohort at a dose midway between those used in the second and third cohorts, as per trial protocol. Four patients were enrolled in the fourth cohort and we ceased enrollment in November 2013. The results of this trial were presented at the American Society of Clinical Oncology (ASCO) June 2014 Annual Meeting.

In view of I-131-CLR1404's selective uptake and retention in a wide range of cancers and in cancer stem cells, its single-agent efficacy in animal models and its non-specific mechanism of cancer-killing (radiation), we are first developing I-131-CLR1404 as a monotherapy for cancer indications with significant unmet medical need. Because of the highly radiosensitive nature, clear unmet medical need in the relapse/refractory setting and the potential to receive orphan drug designation, the Company is targeting multiple myeloma as an initial target indication for future I-1231-CLR1404 development. I-131-CLR1404 is anticipated to be used as monotherapy through proof-of-concept clinical trials, with subsequent exploration of combination with chemotherapeutic agents (a number of which are known to be radiosensitizers and thus have the potential to enhance the efficacy of I-131-CLR1404) and in combination with external beam radiotherapy.

Tumor treatment with radioactive isotopes has been used as a fundamental cancer therapeutic for decades. The goals of targeted cancer therapy — selective delivery of effective doses of isotopes that destroy tumor tissue, sparing of surrounding normal tissue, and non-accumulation in vital organs such as the liver and kidneys — remain goals of new therapies as well. We believe our isotope delivery technology is poised to achieve these goals. Because, to date, I-131-CLR1404 has been shown to reliably and near-universally accumulate in cancer cells, including cancer stem cells, and because the therapeutic properties of iodine-131 are well known, we believe the risk of non-efficacy in human clinical trials is less than that of other cancer therapies at this stage of development, although no assurance can be given.

CLR1502

CLR1502 is a small-molecule, broad-spectrum, cancer-targeting, non-radioactive optical imaging agent that we believe has the potential to be the first of its kind for intraoperative tumor margin illumination and non-invasive tumor imaging. CLR1502 is comprised of a proprietary PLE, acting as a cancer-targeting delivery and retention vehicle, covalently attached to a near-infrared (800nm) fluorophore. According to the American Cancer Society, most cancer patients will have some type of surgery and more than 1.6 million new cancers will be diagnosed in the U.S. alone in 2014. CLR1502 may facilitate and enable diagnostic, staging, debulking and curative cancer surgeries, intraoperatively in real-time, by defining tumor margins and regional lymph node involvement, resulting in more complete tumor resections and improving outcome and prognosis. In this context, CLR1502 would effectively act as an adjunct to cancer surgery. In preclinical tumor models, non-invasive optical imaging showed pronounced accumulation of CLR1502 in tumors versus normal tissues and successfully delineated tumor margins during tumor resection. CLR1502 may also have utility for non-invasive imaging of relatively superficial tumor types in man (e.g., melanoma, head & neck, colon, esophageal). We expect to submit an IND for CLR1502 in 2014. We anticipate initiating a multi-site Phase 1 study with CLR1502 in breast cancer patients undergoing lumpectomy. The trial is intended to confirm the safety and tolerability of CLR1502 while demonstrating its utility in the real-time identification of malignant tissue.

Other Pipeline Compounds

We have other preclinical compounds that are based on our proprietary cancer-targeting technology. For example, CLR1404 is a cancer-targeted chemotherapy when used in high (100x) doses that, in preclinical experiments, has been observed to inhibit the phosphatidylinositol 3-kinase (PI3K)/Akt survival pathway that is aberrantly activated in many types of cancer. In preclinical experiments, CLR1404 has been observed to selectively inhibit Akt activity, induce apoptosis through caspase activation and inhibit cell proliferation in cancer cells. CLR1404 also exhibits significant *in vivo* efficacy in mouse tumor models, including non-small cell lung cancer and triple-negative breast cancers, producing long-lasting tumor growth suppression and significantly increased survival. We believe CLR1404 represents a compelling future development opportunity due to (a) cancer cell/cancer stem cell targeting, resulting in cancer-selective inhibition of Akt and cell proliferation and (b) suitability for intravenous administration that we believe offers the prospect of greater systemic exposure and hence Akt inhibition in cancer cells, which we believe could result in superior efficacy.

Legacy Products

Prior to the Acquisition, Novelos had been developing compounds based on a proprietary oxidized glutathione technology. From November 2006 through January 2010, Novelos conducted and completed a Phase 3 trial of its lead compound, NOV-002, in combination with chemotherapy in the treatment of advanced non-small cell lung cancer. The Phase 3 trial enrolled a total of 903 patients, but did not demonstrate efficacy of NOV-002. Based on the results from the Phase 3 trial, Novelos discontinued development of NOV-002 for NSCLC in combination with first-line paclitaxel and carboplatin chemotherapy. The aggregate costs incurred in connection with the development of NOV-002, including administrative overhead, were approximately \$70 million.

Prior to the Acquisition, Novelos had also been developing NOV-205, a second oxidized glutathione-based compound, which had been administered to approximately 200 hepatitis patients in clinical trials and was in Phase 2 development for chronic hepatitis C non-responders. Although safety was established, no efficacy was demonstrated in Phase 2 development.

Further development of NOV-002 and NOV-205 has been suspended. At this time, we expect to devote our resources to the development and commercialization of the Collectar Bio compounds, and we do not expect to conduct any further development of the oxidized glutathione compounds. The IND for NOV-205 was withdrawn on July 5, 2011. The IND for NOV-002 was placed on inactive status in July 2013.

Market Overview

Our target market is broad and represents the market for the treatment and imaging of cancer. The American Cancer Society estimated that approximately 1.67 million new cancer cases would be diagnosed in the U.S. in 2014 and most cancer patients will have some type of surgery. According to the Society, about 6 million people worldwide would die of cancer in 2013, including approximately 580,000 in the U.S.

According to Cowen Therapeutic Categories Outlook (February 2013), cancer was the largest global pharmaceutical category with worldwide sales of \$74 billion in 2011. Cowen estimates that targeted therapies are changing the landscape of cancer treatment and will likely be used in most cancer patients in 5 to 10 years. Furthermore, the worldwide sales of targeted cancer therapies could exceed \$61 billion by 2017. The National Institutes of Health (NIH) estimates the direct medical costs for treating cancer in 2008 (the latest figure available under the NIH's new methodology) was \$77.4 billion in the U.S. Furthermore, the U.S. National Cancer Institute estimated in January 2011 that the overall cost of treating cancer in the U.S. will increase to \$158 billion by 2020 from \$125 billion in 2010.

According to a BCC Research report from April 2011, the total market for next-generation cancer diagnostics was \$776 million in 2010 and was growing at a compound annual growth rate of 47%, and was forecasted to reach a market size of \$5.3 billion in 2015.

Manufacturing

We maintain a Good Manufacturing Practices compliant (cGMP) radiopharmaceutical manufacturing facility in Madison, Wisconsin, in which we manufacture drug substance for our I-124-CLR1404, I-131-CLR1404 and CLR1502 product candidates and also manufacture I-131-CLR1404 for clinical trials. This facility, consisting of approximately 19,500 square feet, contains offices, laboratories, a radiopharmaceutical research lab, a cGMP radiopharmaceutical manufacturing suite and a cGMP analytical laboratory for product release. Our manufacturing facility holds a State of Wisconsin Department of Health Services Radioactive Materials License which authorizes the use and possession of radioactive material for both manufacturing and distribution activities. The facility also holds a State of Wisconsin DHS Radioactive Materials License that authorizes the use and possession of radioactive materials for research and development. The research and development license permits the use and possession of iodine-125, iodine-131 and iodine-124 in quantities sufficient to support in-house drug substance and I-131-CLR1404 manufacturing for current clinical programs and other research needs. Each of these iodine isotopes is purchased from third party vendors.

Manufacturing of I-124-CLR1404 is conducted by our collaborator, the University of Wisconsin in Madison, cGMP, using drug substance produced in our Madison manufacturing facility. We have completed the transfer of I-124-CLR1404 manufacturing to a U.S. based contract manufacturer pursuant to an agreement expiring July 29, 2018, also using drug substance produced in our Madison manufacturing facility. The agreement contains standard provisions for the protection of data and intellectual property and may be terminated by either party with 60-days' notice, pending the completion of any obligations by either party set forth in an outstanding statement of work. The proprietary contract manufacturing process is sufficient to provide materials for Phase 2 trials and is scalable for larger trials. We do not plan to build in-house manufacturing capability for I-124-CLR1404 over the next several years.

The drug substance is identical for I-131-CLR1404 and I-124-CLR1404 products. The base molecule is a dry powder produced via a six-step synthetic scheme. The release specifications for drug substance have been established and validated. The impurity levels at small scale are very low, suggesting that larger scale production should be feasible. We have also demonstrated 60-month stability for the drug substance in desiccated and refrigerated form. We believe our laboratories are well equipped with the appropriate equipment for manufacturing pilot and small-scale batches in accordance with cGMP. We believe we have adequate drug substance manufacturing and I-131-CLR1404 drug product manufacturing capacity for any Phase 2 trials and the potential for larger scale build-out for larger Phase 3 trials.

CLR1502 drug substance is synthesized at the Madison facility via a cGMP process from the same chemical precursor used in the manufacture of I-131-CLR1404. The facility has the capability to manufacture the CLR1502 drug product to support Phase 1 clinical trials. Manufacturing of drug substance and drug product for subsequent clinical trials will likely be achieved through contract manufacturing.

All investigational drug substance and product intended for human use during clinical studies will be manufactured according to the guidelines of the International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use, FDA requirements (CFR part 211) and cGMP.

Sales and Marketing

We have not entered into any joint development, licensing or similar partnering agreements with respect to any of our clinical stage product candidates or pre-clinical compounds. We plan to pursue and evaluate all available options to develop, launch and commercialize our compounds. These options presently include, but are not limited to, entering into a partnering arrangement with one or more pharmaceutical, imaging agent or imaging device companies with strong development and commercial expertise and infrastructure in the U.S., Europe and/or Japan. While we currently do not plan to build our own sales force or utilize a contract sales organization for launch and commercialization of our compounds, we may reconsider in the future.

Competition for Our Clinical-Stage Compounds

I-124-CLR1404

FDG is the current gold standard for cancer PET imaging. According to Bio-Tech Systems (November 2010), sales of FDG in the U.S. in 2009 were approximately \$300 million and projected to grow to approximately \$880 million in 2017. FDG accumulates in any tissue having increased glucose metabolism (i.e. energy utilization) compared to surrounding tissue. As a result, and in contrast to I-124-CLR1404, FDG is not selective for malignant tumors. FDG localizes in certain normal tissue such as heart, liver and brain tissues that also have high glucose metabolism as well as kidney and bladder due to FDG excretion paths. FDG is also known to localize in inflammatory sites, which are often found in the vicinity of malignancies and can result in diagnostic and treatment plan uncertainties. Other major limitations to the use of FDG are found in pelvic imaging due to the high renal (kidney) clearance of the compound. Moreover, there are clinically important malignancies that do not demonstrate reliable FDG avidity such as prostate cancer. We believe these characteristics of FDG decrease its diagnostic specificity for certain malignancies. FDG is no longer covered by patent and is typically manufactured at or extremely proximate to PET imaging medical facilities because of its very short (110 minute) radiation half-life. I-124 has a four-day half-life that permits worldwide distribution of I-124-CLR1404 from one manufacturing location. Additionally, the longer half-life affords a longer imaging window of up to seven days following injection.

MRI is the current SOC for imaging brain cancer, in part due to FDG PET's limited utility in brain imaging. While MRI can differentiate tissue densities and demark structural changes in tissue, it is not cancer selective. This imaging can result in a diagnostic dilemma for clinicians, particularly with respect to glioma, the most common form of primary brain cancer. After chemoradiation - commonly employed in glioma management - MRI changes suggestive of tumor recurrence are seen in approximately 50% of high-grade glioma patients. However, in approximately 50% of these cases, the MRI changes actually represent treatment-related changes that do not truly represent disease progression. This is termed pseudoprogression. The dilemma facing clinicians is the decision whether to re-treat the patient (surgery, chemotherapy, biological therapy, reirradiation) with associated risks to the patient (e.g. damage to normal brain tissue and consequent loss of function), or monitor with periodic re-imaging with the risk of the imaging changes actually representing tumor recurrence and with the costs associated with re-imaging.

In Phase 1/2 Investigator-sponsored trials at the UWCCC, preliminary results suggest that I-124-CLR1404 may provide a more accurate assessment of the post-treatment progression of glioma when compared to MRI. Specifically, I-124-CLR1404 appears to be capable of distinguishing malignant tumors from tissue changes associated with pseudoprogression. A key goal of Company sponsored Phase 2 trials of I-124-CLR1404 in glioma patients will be to employ pathology confirmation to demonstrate that I-124-CLR1404 provides a more accurate assessment of malignant vs. non-malignant tissue, including in cases of suspected pseudoprogression. Pathology confirmation will also be applied in primary glioma patients to assess the accuracy and completeness of tumor resection. The available market for addressing unmet medical need with respect to pseudoprogression alone is approximately 40,000 patients annually (U.S. and Europe). The opportunity for robust pricing while still reducing current SOC healthcare costs is substantial. Current National Comprehensive Cancer Network® (NCCN®) guidelines provide for up to 18 MRIs over three years for post-treatment assessment of glioma progression. The cost of each MRI is approximately \$2,500 to \$5,000. The opportunity for I-124-CLR1404 to become the SOC for assessment of post-treatment progression of glioma results from the potential for better patient management (avoid unnecessary surgeries, biopsies, and treatments) and better patient outcomes (detect progression earlier, avoid tumor spread to critical structures) while reducing current SOC healthcare system costs.

Following the first commercial opportunity for I-124-CLR1404 addressing the unmet need for better assessment of post-treatment progression in glioma, brain metastases may represent the next commercial opportunity. Metastatic cancer patients with brain metastases are commonly followed with both FDG PET and brain MRI due to the inability of FDG PET to surveil for intracranial disease. I-124-CLR1404 may supplant this dual modality imaging surveillance paradigm due to its ability to image both intracranial and extracranial disease. Initial data from Phase 1/2 imaging trials at the UWCCC demonstrates avid uptake in brain metastases. The available market for addressing this unmet need in brain metastases is considerably larger than glioma. In 2014, the National Cancer Institute estimated that there are between 98,000 and 170,000 new cases in the U.S. each year.

I-131-CLR1404

I-131-CLR1404's "intracellular radiation" mechanism of cancer cell killing, coupled with delivery to a wide range of malignant tumor types, imbues I-131-CLR1404 with broad-spectrum anti-cancer activity. Selective uptake and retention of our PLE analogs has also been demonstrated in cancer stem cells compared with normal stem cells, offering a prospect of longer lasting cancer remission. Other targeted radiotherapies include the marketed drugs Zevalin® (manufactured by Spectrum Pharmaceuticals) and Bexxar® (manufactured by GlaxoSmithKline). In both cases, tumor-targeting is monoclonal antibody-based and limited to non-Hodgkins lymphoma, which is a type of cancer involving cells of the immune system. Thus, these agents are not appropriate comparators for I-131-CLR1404 because of their limited therapeutic utility (only one type of tumor) and because their target indication is often well-managed by other drugs (unlike I-131-CLR1404 which has potential to treat tumor types for which the current standard of care is associated with very poor outcomes). Notably, both Zevalin® and Bexxar® were approved on the basis of objective response rates (shrinking of tumors) without data to support improvement in survival, suggesting that regulatory approval of radiopharmaceuticals may be based on relatively shorter and smaller pivotal clinical trials than is often the case in oncology. We do not believe Zevalin® or Bexxar® would be competing products of I-131-CLR1404 in any material respect. Other cancer-targeted molecular radiotherapeutic agents are in various stages of development for solid tumors. These primarily utilize monoclonal antibodies for cancer cell targeting and are, therefore, restricted to a relatively narrow range of tumor indications compared to I-131-CLR1404.

CLR1502 is a preclinical, cancer-targeting, non-radioactive optical imaging agent for intraoperative tumor margin illumination and non-invasive tumor imaging. The topic of providing cancer surgeons with better technology for intraoperative assessment of tumor margins designed to result in more complete tumor removal has gained considerable attention in recent years. While there are a number of technologies in various stages of development, some of the most common categories include the use of fluorescence agents either alone, or attached to cancer delivery vehicles, nanoparticle technologies and electromagnetic technologies. At present, the only known FDA approved technology for tumor margin assessment is believed to be MarginProbe™, marketed by Dune Medical Devices. MarginProbe™ received FDA approval in January, 2013, as an intraoperative tissue assessment tool for early-stage breast cancer surgery. MarginProbe™ claims to use electromagnetic “signatures” to identify healthy and cancerous tissue.

A technology approved in Europe for use with intraoperative tumor margin assessment is 5-aminolevulinic acid (5-ALA), a small molecule that is preferentially taken up by tumor cells leading to biosynthesis and accumulation of protoporphyrin IX, a natural fluorophore with red fluorescence emission. Investigator sponsored trials of 5-ALA are ongoing in the U.S., primarily in newly diagnosed and recurrent brain cancer indications.

Other technologies known to be in development include Blaze Biosciences’ Tumor Paint™, a combination of a targeting peptide and a fluorescent beacon, under development for cancer surgery in multiple solid tumor types. In December, 2013, Blaze Biosciences announced the initiation of the first Phase 1 clinical study of the first Tumor Paint™ product candidate, BLZ-100. The study, titled “A Phase I Dose Escalation/Expansion Study of BLZ-100 Administered by Intravenous Injection in Adult Subjects with Skin Cancer”, is taking place in Australia. Additionally, Avelas Biosciences, based in San Diego, CA, is developing a fluorescence peptide based compound named AVB-620 for fluorescence image-guided cancer surgery. Avelas disclosed the intention to initiate human clinical trials with AVB-620 in 2014.

While a number of technologies are in development to provide intraoperative tumor margin guidance we are leveraging our cancer-targeting delivery platform to provide cancer selectivity and specificity for accurate tumor margin illumination. Further, CLR1502 may be able to demonstrate application with a broad spectrum of cancer types based on data that includes our other product candidates utilizing the same cancer-targeting delivery platform in pre-clinical studies and human clinical trials (I-124-CLR1404 and I-131-CLR1404). Lastly, clinical development of CLR1502 may incorporate potentially useful data and insight from the pre-clinical studies and human clinical trials conducted with these other product candidates.

Intellectual Property

We have established a broad U.S. and international intellectual property rights portfolio around our proprietary cancer-targeting PLE technology platform including I-124-CLR1404, I-131-CLR1404 and CLR1502.

Our proprietary rights include patents and patent applications that are either owned by us or exclusively licensed to us by the University of Michigan (the “Michigan patents”). I-124-CLR1404 and I-131-CLR1404 are covered by the Michigan patents that provide compound (composition of matter) coverage in the U.S. and Canada and expire in 2016. Our patents and applications cover methods of use, composition and method of manufacture related to I-124-CLR1404, I-131-CLR1404, CLR1502 and other PLEs. Many of these patents and applications are filed in key commercial markets worldwide. These patents will generally expire between 2025 and 2030 unless extended.

In particular, I-124-CLR1404 is covered by the Michigan patents as well as three of our U.S. patents, one of which is directed to detecting certain cancers, one of which is directed to its use for virtual colonoscopy and one of which is directed to its use for *in vitro* diagnostics. Each of these is expected to expire in 2025. I-124-CLR1404 is also covered by an issued European patent and pending U.S. and Japanese patent applications, which once issued should expire in 2025. Lastly, the use of I-124-CLR1404 for diagnostics purposes with cancer stem cells is pending in the U.S., Japan and Europe. Patents resulting from these applications are expected to expire in 2030. Separate from these patents, we have been granted orphan status for I-124-CLR1404 as a diagnostic for the management of glioma by the US FDA. Orphan status provides for seven years of marketing exclusivity following US approval of I-124-CLR1404 as a diagnostic for the management of glioma.

I-131-CLR1404 is covered by two additional series of our patents and applications aside from the Michigan patents. The first is directed to a method of use for cancer therapy and has also been filed in Europe and Japan, in addition to the U.S. We have one issued patent in the U.S. and two in Europe, in addition to pending applications in the U.S. and Japan. These are expected to expire in 2025. Secondly, an application directed to cancer stem-cell therapy is pending in the U.S., Europe and Japan. Patents resulting from these applications are expected to expire in 2030. Some of these resulting patents may be extendable on a country-by-country basis. We also plan to file a request for orphan designation from the US FDA for I-131-CLR1404 for the treatment of multiple myeloma. Such designation, if awarded, would provide for seven years of marketing exclusivity following US approval for the same indication.

CLR1502 is covered by patent applications directed to the compound, methods of use and method of manufacture that have been filed in U.S., Europe and Japan. Patents resulting from these applications are expected to expire in 2029. Some of these resulting patents may be extendable on a country-by-country basis.

Separate from any patent protection and following product approval by regulatory authorities, data exclusivity may be available for various compounds for up to 10 years on a country-by-country basis (e.g., up to 5 years in the U.S.).

In addition to the above noted patents/applications directed to I-124-CLR1404, I-131-CLR1404 and CLR1502, we own other patents/applications directed to different forms of phospholipid ethers and methods of manufacturing of phospholipid ethers.

We also own all intellectual property rights in the U.S. related to our clinical-stage pipeline compound, NOV-002, and other preclinical compounds based on oxidized glutathione. Issued composition-of-matter patents cover proprietary formulations of oxidized glutathione that expire in 2019, and these patents include methods of manufacture for oxidized glutathione formulated with various metals.

Licenses / Collaborations

In September 2003, Cellestar, Inc. entered into a license agreement with the University of Michigan (the U. Mich. License), which granted Cellestar, Inc. exclusive rights to the development, manufacture and marketing of products under several composition of matter patents in North America that expire at varying dates in 2016. The U. Mich. License expires upon the expiration of the last covered patent. We are responsible for an annual license fee of \$10,000 and are required to pay costs associated with the maintenance of the patents covered by the U. Mich. License. Additionally, we are required to make milestone payments of \$50,000 upon the filing of a NDA for a licensed product intended for use in a therapeutic or diagnostic application (such milestone fees may be deferred and paid within twelve months of the first commercial sale of such product) and make certain milestone payments within a year following the first commercial sale of any licensed products. The sales milestones range from \$100,000 to \$200,000, dependent upon whether the drug is for use in a diagnostic or therapeutic application. If sales in the first 12 months are less than the amount of the milestone, then we are required to pay 50% of all sales until the milestone is satisfied. The milestone payments may total up to \$400,000. The U. Mich. License provides that we pay a royalty equal to 3% of net sales of any licensed products sold by us or our sublicensees for such licensed products unless the sublicense fee payable to us is between 4% and 5% of net sales, then the royalties payable to U. Mich. shall be equal to 50% of the sublicense fee. Furthermore, the U. Mich. License provides for a reduction in the royalties owed by up to 50% if we are required to pay royalties to any third parties related to the sale of the licensed products. If we receive any revenue in consideration of rights to the licensed technology that is not based on net sales, excluding any funded research and development, we are required to pay U. Mich. 10% of amounts received. During 2003, pursuant to the U. Mich. License, Cellestar, Inc. paid approximately \$54,000 of back patent costs and issued 203,483 shares of common stock to U. Mich. as partial consideration for the rights described above. U. Mich. may terminate the license agreement if we cease operations, fail to make any required payment under the license agreement, or otherwise materially breach the license agreement, subject to applicable notice and cure periods. To date, we have made all payments as they have become due, there have been no defaults under the U. Mich. License, nor have we ever been notified of a default by U. Mich. We may terminate the U. Mich. License agreement with six months' notice to U. Mich. and the return of licensed product and related data. The U. Mich. License contains milestones that required certain development activities to be completed by specified dates. All such development milestones have been either completed or removed by subsequent amendment to the agreement. U. Mich. has provided no warranties as to validity or otherwise with respect to the licensed technology. The early termination of the University of Michigan License agreement would result in the loss of our rights to use the covered patents.

Regulation

The production, distribution, and marketing of products employing our technology, and our development activities, are subject to extensive governmental regulation in the United States and in other countries. In the United States, we are subject to the Federal Food, Drug, and Cosmetic Act, as amended, and the regulations of the FDA, as well as to other federal, state, and local statutes and regulations, including the federal, state and local laws and regulations governing the storage, use and disposal of hazardous materials, including radioactive isotopes. These laws, and similar laws outside the United States, govern the clinical and preclinical testing, manufacture, safety, effectiveness, approval, labeling, distribution, sale, import, export, storage, record-keeping, reporting, advertising, and promotion of drugs. Product development and approval within this regulatory framework, if successful, will take many years and involve the expenditure of substantial resources. Violations of regulatory requirements at any stage may result in various adverse consequences, including the FDA's and other health authorities' delay in approving or refusal to approve a product. Violations of regulatory requirements also may result in enforcement actions.

The following paragraphs provide further information on certain legal and regulatory issues with a particular potential to affect our operations or future marketing of products employing our technology.

Research, Development, and Product Approval Process

The research, development, and approval process in the United States and elsewhere is intensive and rigorous and generally takes many years to complete. The typical process required by the FDA before a therapeutic drug may be marketed in the United States includes:

- preclinical laboratory and animal tests performed under the FDA's Good Laboratory Practices regulations, referred to herein as GLP;
- submission to the FDA of an IND application, which must become effective before human clinical trials may commence;
- human clinical studies performed under the FDA's Good Clinical Practices regulations, to evaluate the drug's safety and effectiveness for its intended uses;

- FDA review of whether the facility in which the drug is manufactured, processed, packed, or held meets standards designed to assure the product's continued quality; and
- submission of a marketing application to the FDA, and approval of the application by the FDA.

Preclinical Testing

During preclinical testing, studies are performed with respect to the chemical and physical properties of candidate formulations. These studies are subject to GLP requirements. Biological testing is typically done in animal models to demonstrate the activity of the compound against the targeted disease or condition and to assess the apparent effects of the new product candidate on various organ systems, as well as its relative therapeutic effectiveness and safety.

Submission of IND

An IND must be submitted to the FDA and become effective before studies in humans may commence. The IND must include a sufficient amount of data and other information concerning the safety and effectiveness of the compound from laboratory, animal, and human clinical testing, as well as data and information on manufacturing, product quality and stability, and proposed product labeling.

Clinical Trials

Clinical trial programs in humans generally follow a three-phase process. Typically, Phase 1 studies are conducted in small numbers of healthy volunteers or, on occasion, in patients afflicted with the target disease. Phase 1 studies are conducted to determine the metabolic and pharmacological action of the product candidate in humans and the side effects associated with increasing doses, and, if possible, to gain early evidence of effectiveness. In Phase 2, studies are generally conducted in larger groups of patients having the target disease or condition in order to validate clinical endpoints, and to obtain preliminary data on the effectiveness of the product candidate and optimal dosing. This phase also helps determine further the safety profile of the product candidate. In Phase 3, large-scale clinical trials are generally conducted in patients having the target disease or condition to provide sufficient data for the statistical proof of effectiveness and safety of the product candidate as required by United States regulatory agencies.

In the case of products for certain serious or life-threatening diseases, the initial human testing may be done in patients with the disease rather than in healthy volunteers. Because these patients are already afflicted with the target disease or condition, it is possible that such studies will also provide results traditionally obtained in Phase 2 studies. These studies are often referred to as "Phase 1/2" studies. However, even if patients participate in initial human testing and a Phase 1/2 study carried out, the sponsor is still responsible for obtaining all the data usually obtained in both Phase 1 and Phase 2 studies.

Before proceeding with a study, sponsors may seek a written agreement from the FDA regarding the design, size, and conduct of a clinical trial. This is known as a Special Protocol Assessment (SPA). Among other things, SPAs can cover clinical studies for pivotal trials whose data will form the primary basis to establish a product's efficacy. SPAs help establish upfront agreement with the FDA about the adequacy of a clinical trial design to support a regulatory approval, but the agreement is not binding if new circumstances arise. There is no guarantee that a study will ultimately be adequate to support an approval even if the study is subject to an SPA.

United States law requires that studies conducted to support approval for product marketing be "adequate and well controlled." In general, this means that either a placebo or a product already approved for the treatment of the disease or condition under study must be used as a reference control. Studies must also be conducted in compliance with good clinical practice requirements, and informed consent must be obtained from all study subjects. The clinical trial process for a new compound can take ten years or more to complete. The FDA may prevent clinical trials from beginning or may place clinical trials on hold at any point in this process if, among other reasons, it concludes that study subjects are being exposed to an unacceptable health risk. Trials may also be prevented from beginning or may be terminated by institutional review boards, which must review and approve all research involving human subjects. Side effects or adverse events that are reported during clinical trials can delay, impede, or prevent marketing authorization. Similarly, adverse events that are reported after marketing authorization can result in additional limitations being placed on a product's use and, potentially, withdrawal of the product from the market.

Submission of NDA

Following the completion of clinical trials, the data is analyzed to determine whether the trials successfully demonstrated safety and effectiveness and whether a product approval application may be submitted. In the United States, if the product is regulated as a drug, a NDA must be submitted and approved before commercial marketing may begin. The NDA must include a substantial amount of data and other information concerning the safety and effectiveness of the compound from laboratory, animal, and human clinical testing, as well as data and information on manufacturing, product quality and stability, and proposed product labeling.

Each domestic and foreign manufacturing establishment, including any contract manufacturers we may decide to use, must be listed in the NDA and must be registered with the FDA. The application generally will not be approved until the FDA conducts a manufacturing inspection, approves the applicable manufacturing process and determines that the facility is in compliance with cGMP requirements.

Under the Prescription Drug User Fee Act, as amended, the FDA receives fees for reviewing an NDA and supplements thereto, as well as annual fees for commercial manufacturing establishments and for approved products. These fees can be significant. For fiscal year 2014, the NDA review fee alone is \$2,169,100, although certain limited deferral, waivers, and reductions may be available, such as those related to orphan designation.

Each NDA submitted for FDA approval is usually reviewed for administrative completeness and reviewability within 45 to 60 days following submission of the application. If deemed complete, the FDA will “file” the NDA, thereby triggering substantive review of the application. The FDA can refuse to file any NDA that it deems incomplete or not properly reviewable. The FDA has established performance goals for the review of NDAs— six months for priority applications and 10 months for standard applications. However, the FDA is not legally required to complete its review within these periods and these performance goals may change over time.

Moreover, the outcome of the review, even if generally favorable, typically is not an actual approval but an “action letter” that describes additional work that must be done before the application can be approved. The FDA’s review of an application may involve review and recommendations by an independent FDA advisory committee. Even if the FDA approves a product, it may limit the approved therapeutic uses for the product as described in the product labeling, require that warning statements be included in the product labeling, require that additional studies be conducted following approval as a condition of the approval, impose restrictions and conditions on product distribution, prescribing, or dispensing in the form of a risk management plan, or otherwise limit the scope of any approval.

Post NDA Regulation

Significant legal and regulatory requirements also apply after FDA approval to market under an NDA. These include, among other things, requirements related to adverse event and other reporting, product advertising and promotion and ongoing adherence to cGMPs, as well as the need to submit appropriate new or supplemental applications and obtain FDA approval for certain changes to the approved product labeling, or manufacturing process. The FDA also enforces the requirements of the Prescription Drug Marketing Act which, among other things, imposes various requirements in connection with the distribution of product samples to physicians.

The regulatory framework applicable to the production, distribution, marketing and/or sale of our product pipeline may change significantly from the current descriptions provided herein in the time that it may take for any of our products to reach a point at which an NDA is approved.

Overall research, development, and approval times depend on a number of factors, including the period of review at FDA, the number of questions posed by the FDA during review, how long it takes to respond to the FDA’s questions, the severity or life-threatening nature of the disease in question, the availability of alternative treatments, the availability of clinical investigators and eligible patients, the rate of enrollment of patients in clinical trials, and the risks and benefits demonstrated in the clinical trials.

Other United States Regulatory Requirements

In the United States, the research, manufacturing, distribution, sale, and promotion of drug and biological products are potentially subject to regulation by various federal, state, and local authorities in addition to the FDA, including the Centers for Medicare and Medicaid Services (formerly the Health Care Financing Administration), other divisions of the United States Department of Health and Human Services (e.g., the Office of Inspector General), the United States Department of Justice and individual United States Attorney offices within the Department of Justice, and state and local governments. For example, sales, marketing, and scientific/educational grant programs must comply with the anti-fraud and abuse provisions of the Social Security Act, the False Claims Act, the privacy provision of the Health Insurance Portability and Accountability Act, and similar state laws, each as amended. Pricing and rebate programs must comply with the Medicaid rebate requirements of the Omnibus Budget Reconciliation Act of 1990 and the Veterans Health Care Act of 1992, each as amended. If products are made available to authorized users of the Federal Supply Schedule of the General Services Administration, additional laws and requirements apply. All of these activities are also potentially subject to federal and state consumer protection, unfair competition, and other laws.

Our research and development, manufacturing and administration of our drugs involve the controlled use of hazardous materials, including chemicals and radioactive materials, such as radioactive isotopes. Therefore, we are subject to federal, state and local laws and regulations governing the storage, use and disposal of these materials and some waste products and are required to maintain both a manufacturer’s license and a radioactive materials license with State of Wisconsin agencies.

Moreover, we are now, and may become subject to, additional federal, state, and local laws, regulations, and policies relating to safe working conditions, laboratory practices, the experimental use of animals, and/or the use, storage, handling, transportation, and disposal of human tissue, waste, and hazardous substances, including radioactive and toxic materials and infectious disease agents used in conjunction with our research work.

Foreign Regulatory Requirements

We and any future collaborative partners may be subject to widely varying foreign regulations, which may be quite different from those of the FDA, governing clinical trials, manufacture, product registration and approval, and pharmaceutical sales. Whether or not FDA approval has been obtained, we or any future collaboration partners must obtain a separate approval for a product by the comparable regulatory authorities of foreign countries prior to the commencement of product marketing in these countries. In certain countries, regulatory authorities also establish pricing and reimbursement criteria. The approval process varies from country to country, and the time may be longer or shorter than that required for FDA approval. In addition, under current United States law, there are restrictions on the export of products not approved by the FDA, depending on the country involved and the status of the product in that country.

Reimbursement and Pricing Controls

In many of the markets where we or any future collaborative partners would commercialize a product following regulatory approval, the prices of pharmaceutical products are subject to direct price controls by law and to drug reimbursement programs with varying price control mechanisms. Public and private health care payers control costs and influence drug pricing through a variety of mechanisms, including through negotiating discounts with the manufacturers and through the use of tiered formularies and other mechanisms that provide preferential access to certain drugs over others within a therapeutic class. Payers also set other criteria to govern the uses of a drug that will be deemed medically appropriate and therefore reimbursed or otherwise covered. In particular, many public and private health care payers limit reimbursement and coverage to the uses of a drug that are either approved by the FDA or that are supported by other appropriate evidence (for example, published medical literature) and appear in a recognized drug compendium. Drug compendia are publications that summarize the available medical evidence for particular drug products and identify which uses of a drug are supported or not supported by the available evidence, whether or not such uses have been approved by the FDA. For example, in the case of Medicare coverage for physician-administered oncology drugs, the Omnibus Budget Reconciliation Act of 1993, with certain exceptions, prohibits Medicare carriers from refusing to cover unapproved uses of an FDA-approved drug if the unapproved use is supported by one or more citations in the American Hospital Formulary Service Drug Information, the American Medical Association Drug Evaluations, or the United States Pharmacopoeia Drug Information. Another commonly cited compendium, for example under Medicaid, is the DRUGDEX Information System.

LITIGATION

From its inception through 2010, Novelos was primarily engaged in the development of certain oxidized glutathione-based compounds for application as therapies for disease, particularly cancer. These compounds were originally developed in Russia and in June 2000, Novelos acquired commercial rights from the Russian company (“ZAO BAM”), which owned the compounds and related Russian patents. In April 2005, Novelos acquired worldwide rights to the compounds (except for the Russian Federation) in connection with undertaking extensive development activities in an attempt to secure FDA approval of the compounds as therapies. These development activities culminated in early 2010 in an unsuccessful Phase 3 clinical trial of an oxidized glutathione compound (NOV-002) as a therapy for non-small cell lung cancer. After the disclosure of the negative outcome of the Phase 3 clinical trial in 2010, ZAO BAM claimed that Novelos modified the chemical composition of NOV-002 without prior notice to or approval from ZAO BAM, constituting a material breach of the June 2000 technology and assignment agreement. In September 2010, Novelos filed a complaint in Massachusetts Superior Court seeking a declaratory judgment by the court that the June 2000 agreement has been entirely superseded by the April 2005 agreement and that the obligations of the June 2000 agreement have been performed and fully satisfied. ZAO BAM answered the complaint and alleged counterclaims. In August 2011, we filed a motion for judgment on the pleadings as to the declaratory judgment count and all counts of ZAO BAM’s amended counterclaims. On October 17, 2011, the court ruled in our favor on each of the declaratory judgment claims and dismissed all counts of ZAO BAM’s counterclaim. Judgment in our favor was entered on October 20, 2011. On November 14, 2011 ZAO BAM filed a notice of appeal. On November 1, 2013, ZAO BAM’s appeal was docketed with the Massachusetts Appeals Court. BAM’s appellate brief and the Company’s opposition have been filed with the Appeals Court but oral arguments have not yet been scheduled. On April 14, 2014, BAM filed a motion to modify the record on appeal. The Company has opposed the motion.

We do not anticipate that this matter will have a material adverse effect on the Company’s future financial position, results of operations or cash flows.

MANAGEMENT

During 2013 we had several changes to our board composition and our executive management, as summarized below.

Changes in Management and Relocation of Executive Offices

On October 4, 2013, Harry S. Palmin departed as Chief Executive Officer and resigned from the Board of Directors, and Dr. Simon Pedder was appointed as Acting Chief Executive Officer to succeed Mr. Palmin, and elected to the Board of Directors as a Class III director. In April 2014, Dr. Pedder became President and Chief Executive Officer of the Company.

On November 8, 2013, the Board of Directors approved the relocation of the Company’s principal executive offices from Newton, Massachusetts to its corporate headquarters in Madison, Wisconsin. In connection with the relocation, the employment of Christopher Pazoles, Vice President of Research and Development, was terminated effective November 30, 2013. On May 28, 2014, Chad J. Kolean was appointed as our Vice President Finance, Chief Financial Officer and Treasurer, replacing Joanne M. Protano .

Restructuring of Board of Directors

On November 7, 2013, Michael F. Tweedle, a Class II director, resigned from the Company's board of directors and from his committee appointments, and Paul L. Berns was appointed as a Class II director to fill the resulting vacancy. Effective November 8, 2013, Thomas Rockwell Mackie, James S. Manuso, John E. Niederhuber and Howard M. Schneider resigned from the Company's board of directors and from their respective committee appointments. Thereafter, the Board set the number of directors constituting the whole Board at five, consisting of two Class I directors, one Class II Director, and two Class III directors. In connection with such action, Stephen A. Hill and John Neis, who had been Class II directors, were designated and elected as Class I directors to fill the vacancies created in that Class.

Our directors ⁽¹⁾ and executive officers are:

<u>Name</u>	<u>Age</u>	<u>Position</u>
Stephen A. Hill, B.M. B.Ch., M.A., F.R.C.S. (2) (3)(4)	56	Chairman of the Board and Director (Class I)
Simon Pedder, Ph.D.	53	President and Chief Executive Officer and Director (Class III)
J. Patrick Genn	57	Vice President of Business Development
Chad J. Kolean	49	Vice President, Chief Financial Officer and Treasurer
Kathryn M. McNeil	39	Vice President of Investor Relations, Public Relations and Corporate Communications
Jamey P. Weichert, Ph.D.	57	Chief Scientific Officer and Director (Class III)
Paul L. Berns (2)(3)(4)	47	Director (Class II)
John Neis (2)(3)(4)	58	Director (Class I)

(1) Our certificate of incorporation provides for the division of the Board into three classes, Class I, Class II and Class III, as nearly equal in size as possible with staggered three-year terms. At each annual meeting of our stockholders, the terms of one such class expires. The Class II director was most recently re-elected in December 2013. Terms of the Class III directors expire at our 2014 annual meeting, or such later time at which their respective successors are duly elected and qualified.

(2) Member of the compensation committee.

(3) Member of the audit committee.

(4) Member of the nominating and corporate governance committee.

Our executive officers are appointed by, and serve at the discretion of, the Board.

Stephen A. Hill. Dr. Hill was elected the chairman of our board of directors in September 2007. Dr. Hill was appointed the President and CEO of Targacept Inc. in November 2012, effective December 1, 2012. Dr. Hill was the President and CEO of 21CB, a nonprofit initiative of UPMC designed to provide the United States government with a domestic solution for its biodefense and infectious disease biologics portfolio, from March 2011 until December 2011. Dr. Hill served as the President and Chief Executive Officer of Solvay Pharmaceuticals, Inc. from April 2008 until its acquisition by Abbott Laboratories in 2010. Prior to joining Solvay, Dr. Hill had served as ArQule's President and Chief Executive Officer since April 1999. Prior to his tenure at ArQule, Dr. Hill was the Head of Global Drug Development at F. Hoffmann-La Roche Ltd. from 1997 to 1999. Dr. Hill joined Roche in 1989 as Medical Adviser to Roche Products in the United Kingdom. He held several senior positions at Roche, including Medical Director where he was responsible for clinical trials of compounds across a broad range of therapeutic areas, including CNS, HIV, cardiovascular, metabolic and oncology products. Subsequently, he served as Head of International Drug Regulatory Affairs at Roche headquarters in Basel, Switzerland, where he led the regulatory submissions for seven major new chemical entities. Dr. Hill also was a member of Roche's Portfolio Management, Research, Development and Pharmaceutical Division Executive Boards. Prior to Roche, Dr. Hill served seven years with the National Health Service in the United Kingdom in General and Orthopedic Surgery. Dr. Hill has served as the chairman of the board of directors of Lipocine Inc. since January 2014. Dr. Hill is a Fellow of the Royal College of Surgeons of England and holds his scientific and medical degrees from St. Catherine's College at Oxford University. Dr. Hill's extensive experience in a broad range of senior management positions with companies in the life sciences sector make him a highly qualified member of our board of directors.

Simon C. Pedder. Dr. Pedder was appointed our Acting Chief Executive Officer and elected a Director of the Company in October 2013 and became President and Chief Executive Officer in April 2014. He served as President, Chief Executive Officer and director of Chelsea Therapeutics, Inc., a development stage biopharmaceutical company, from May 2004 through July 2012. From 1991 through May 2001 and again from January 2003 through May 2004, Dr. Pedder held positions of increasing responsibility at Hoffmann-La Roche Inc., including Director of International Clinical Science, Director of International Clinical Operations, Global Project Leader of Pharmaceutical Development, Life Cycle Leader, PEGASYS/IFN and Head of Hepatitis Franchise, Pharma Business, and Vice President of Pharma Business Oncology. From May 2001 through December 2002, Dr. Pedder was the Vice President and Head of Drug Development at Shearwater Corporation. Dr. Pedder serves on the board of directors of Eboo Pharmaceuticals, Inc. and BTI Pharmaceuticals. Dr. Pedder has a Bachelor of Environmental Studies from the University of Waterloo, a Master of Science in Toxicology from Concordia University and a Ph.D. in Pharmacology from the Medical College at the University of Saskatchewan College of Medicine. Dr. Pedder's experience in

cancer drug development and his experience managing a public life sciences company make him a highly qualified member of our Board.

J. Patrick Genn. Mr. Genn was appointed our Vice President of Business Development in November 2013. He had previously served as our vice president of investor relations since December 2011. He has 30 years of senior management experience in finance, banking and investment management. Mr. Genn was previously President of Continuum Investment Holdings, Inc. from 2006 through mid-2010 while serving on the board of directors of several biotech and technology companies including Collectar, Inc. From 2001 through 2005, he was an advisor and consultant to several companies including Carmel Valley Ventures and Continuum Investment Partners. Mr. Genn held several senior management positions at Wells Fargo between 1987 and 2001. He was a member of the senior management team that launched its mortgage lending division in 1987 and its premier banking division in 1993. He was also a member of the core mergers and acquisitions integration team and managed private client services in San Diego, CA. Mr. Genn received a B.B.A. in Marketing and a M.S. in Product Management from the University of Wisconsin-Madison.

Chad J. Kolean. Mr. Kolean was appointed our vice president, chief financial and accounting officer and treasurer in May 2014. He has over 25 years of finance and senior management experience. He served as Chief Financial Officer of Pioneer Surgical Technology, Inc., a global manufacturer and distributor of spinal, biological and orthopedic implants, from April 2012 through September 2013. From September 2011 through March 2012 he served as Pioneer's Chief Accounting Officer. Pioneer was acquired by RTI Biologics in July 2013. Mr. Kolean served as the Corporate Controller of TomoTherapy, Inc., a publicly traded developer and manufacturer of radiation oncology equipment from July 2010 through August 2011 (TomoTherapy having been acquired by Accuray in June 2011). From 2009 through July 2010, Mr. Kolean served as the Director of Financial Reporting for Pioneer Surgical Technology, Inc. From 2001 through 2008 he held various positions, including Director of Planning, Analysis and Reporting, Vice President and FSG Controller and Vice President of Shared Services, at Metavante Corporation, a provider of banking and payments technologies and services to financial institutions. Mr. Kolean began his career at Arthur Andersen LLP where he practiced as a certified public accountant. Mr. Kolean holds a Bachelor of Arts in Business Administration from Hope College.

Kathryn M. McNeil. Ms. McNeil was appointed our vice president of investor relations, public relations and corporate communications in October 2013. She has over 10 years of investor relations experience in the life sciences industry. From 2005 through 2012, Ms. McNeil served as the primary external communications strategist for clinical, regulatory and corporate developments for Chelsea Therapeutics, Inc., most recently as the senior director of investor and public relations, advising the senior management team and board of directors on matters of investor and public relations, crisis communications and public affairs. From 2004 to 2005, she held various account management positions including assistant vice president at The Investor Relations Group (IRG), a communications consulting firm focused on providing investor and public relations guidance for micro and small cap companies in the healthcare, biotech and technology industries. From early 2000 through 2002, she held various investor relations positions in the telecommunications industry. Ms. McNeil received a B.A. in Art History from Wesleyan University.

Jamey P. Weichert. Dr. Weichert was the primary founder of Collectar, Inc. and served as Collectar, Inc.'s Chairman and Chief Scientific Officer beginning in 2002. He was appointed as our Chief Scientific Officer and a director in April 2011 at the time of the Acquisition. Dr. Weichert is an Associate Professor of the Departments of Radiology, Medical Physics, Pharmaceuticals and member of the Comprehensive Cancer Center at the University of Wisconsin, Madison. He has a bachelor's degree in chemistry from the University of Minnesota and a doctorate in medicinal chemistry from U. Mich. His research interests include the design, synthesis and evaluation of biomimetic CT and MRI imaging agents and dipeptide radiopharmaceuticals. He has been involved in molecularly targeted imaging agent development his entire professional career and has developed or co-developed several imaging agents nearing clinical trial status. Dr. Weichert serves or has served on the editorial boards of numerous scientific journals and has authored more than 40 peer reviewed publications and 150 abstracts. He also has 20 issued or pending patents related to drug delivery, imaging and contrast agent development. Dr. Weichert's experience founding and managing the development of our product candidates and his knowledge of radiation technology are strong qualifications to serve on the Board.

Paul L. Berns. Mr. Berns was appointed a director in November 2013. He was appointed as President and Chief Executive Officer of Anacor Pharmaceuticals in March 2014 and has been a director of Anacor since June 2012. Mr. Berns has served as a member of the board of directors of Jazz Pharmaceuticals, Inc. since June 2010. Mr. Berns has been a director of Anacor Pharmaceuticals, Inc. since June 2012 and of XenoPort, Inc. since 2005. From March 2006 to September 2012, Mr. Berns served as President and Chief Executive Officer, and as a member of the Board of Directors of Allos Therapeutics, Inc., a pharmaceutical company acquired by Spectrum Pharmaceuticals, Inc. From July 2005 to March 2006, Mr. Berns was a self-employed consultant to the pharmaceutical industry. From June 2002 to July 2005, Mr. Berns was president, Chief Executive Officer and a director of Bone Care International, Inc., a specialty pharmaceutical company that was acquired by Genzyme Corporation in 2005. From 2001 to 2002, Mr. Berns served as Vice President and General Manager of the Immunology, Oncology and Pain Therapeutics business unit of Abbott Laboratories. From 2000 to 2001, he served as Vice President, Marketing of BASF Pharmaceuticals/Knoll and from 1990 to 2000, Mr. Berns held various positions, including senior management roles, at Bristol-Myers Squibb Company. Mr. Berns received a B.S. in Economics from the University of Wisconsin. Mr. Berns' experience leading and advising drug development companies make him highly qualified to serve on our board.

John Neis. Mr. Neis became a director of our Company in April 2011 at the time of the Acquisition. He had served as director of Collectar, Inc. since February 2008. Mr. Neis has been Managing Director of Venture Investors LLC since 1986 and heads the firm's Healthcare practice. He has over 28 years' experience in the venture capital industry and has served on the Board of Directors of numerous companies from formation through initial public offering or sale. Mr. Neis currently serves on the boards of directors of Virent Energy Systems and Deltanoid Pharmaceuticals, Inc. He is a former member of the Boards of Directors of several firms including TomoTherapy (acquired by Accuray), Third Wave Technologies (acquired by Hologic), NimbleGen Systems (acquired by Roche) and Inviragen (acquired by Takeda). Mr. Neis was appointed to the Board of the Wisconsin Technology Council and the Wisconsin Growth Capital Coalition. He also serves on the advisory boards for the Weinert Applied Ventures Program, the Dean's Advisory Board in the School of Business and Tandem Press in the School of Education at the University of Wisconsin - Madison. Mr. Neis has a B.S. in Finance from the University of Utah, and a M.S. in Marketing and Finance from the University of Wisconsin, Madison. He is a Chartered Financial Analyst. Mr. Neis' extensive experience leading emerging companies makes him a highly qualified member of the Board.

**SECURITY OWNERSHIP OF CERTAIN
BENEFICIAL OWNERS AND MANAGEMENT**

At the close of business on July 3, 2014, there were 2,869,739 shares of our common stock outstanding. The following table provides information regarding beneficial ownership of our common stock as of July 3, 2014:

- Each person known by us to be the beneficial owner of more than five percent of our common stock;
- Each of our directors;
- Each executive officer named in the summary compensation table; and
- All of our current directors and executive officers as a group.

The address of each executive officer and director is c/o Collectar Biosciences, Inc., 3301 Agriculture Drive, Madison, WI 53716. The persons named in this table have sole voting and investment power with respect to the shares listed, except as otherwise indicated. In these cases, the information with respect to voting and investment power has been provided to us by the security holder. The identification of natural persons having voting or investment power over securities held by a beneficial owner listed in the table below does not constitute an admission of beneficial ownership of any such natural person. Shares included in the “Right to Acquire” column consist of shares that may be purchased through the exercise of options or warrants that are exercisable within 60 days of July 3, 2014.

Name and Address of Beneficial Owner	Outstanding	Right to Acquire	Total	Percentage
Venture Investors LLC (1) University Technology Park 505 S. Rosa Road; Suite 201 Madison, Wisconsin 53719	363,715	333,500	697,215	21.8
Greenway Properties Inc. (2) 4954 N. Shore Drive Egg Harbor, Wisconsin 54209	265,000	458,250	723,250	21.7
Enso Ventures 2 Limited (3) Suite C1, Hirzel Court St. Peter Port, Guernsey GY12NH	190,960	249,166	440,126	14.1
Renova Assets, Ltd. (4) 2nd Terrace West Centreville; P.O. Box N-7755 Nassau, Bahamas	200,000	150,000	350,000	11.6
Sabby Management, LLC (5) 10 Mountainview Road, Suite 205 Upper Saddle River, NJ 07458	98,273	209,340	307,613	9.99
Hertzberg Family Trust(6) 2637 Longboat Cove Del Mar, CA 92014	10,000	273,250	283,250	9.0
Jamey P. Weichert (7) c/o Collectar Biosciences, Inc. 3301 Agriculture Drive Madison, Wisconsin 53716	235,336	14,841	250,177	8.7
Fidelity Management and Research Co. (8) 82 Devonshire Street Boston, Massachusetts 02109	125,000	125,000	250,000	8.3
Deerfield Capital Management LLC (9) 250 Park Avenue New York, New York 10177	61,357	145,000	206,357	6.8
Simon Pedder	-	-	-	*
Stephen A. Hill	-	15,114	15,114	*
Paul L. Berns	-	1,875	1,875	*
John Neis (2)	363,715	333,500	697,215	21.8
All directors and officers as a group (8 persons)	602,583	387,828	990,411	30.4

*Less than 1%

- 1) Ownership consists of shares of common stock held by Venture Investors Early Stage Fund IV Limited Partnership and Advantage Capital Wisconsin Partners I, Limited Partnership. VIESF IV GP LLC is the general partner of Venture Investors Early Stage Fund IV Limited Partnership and Venture Investors LLC is the submanager and special limited partner of Advantage Capital Wisconsin Partners I, Limited Partnership. The investment decisions of VIESF IV GP LLC and Venture Investors LLC are made collectively by seven managers, including Mr. Neis. Each such manager and Mr. Neis disclaim such beneficial ownership except to the extent of his pecuniary interest therein. The address of Mr. Neis is c/o Venture Investors LLC, 505 South Rosa Road, #201, Madison, Wisconsin 53719. Shares in the "Right to Acquire" column include 50,000 shares of common stock issuable upon the conversion of debt and 50,000 shares of common stock issuable upon the exercise of warrants at \$20.00 per share exercisable only upon the conversion of such debt and expire February 6, 2019. Shares in the "Right to Acquire" column also include common stock issuable upon the exercise of warrants held by Venture Investors Early Stage Fund IV Limited to purchase 223,500 shares common stock at exercise prices ranging from \$10.00 to \$25.00 per share expiring between March 1, 2016 and February 20, 2018 and common stock issuable upon options to purchase 10,000 shares of common stock at exercise prices ranging from \$7.40 to \$28.00 per share, issued to Mr. Neis in his capacity as director.
- 2) Shares in the "Outstanding" column include shares held by Jeffery Straubel. Jeffrey Straubel is the President and principal owner of Greenway Properties, Inc. and has sole dispositive and voting power over shares held by Greenway Properties, Inc. Shares in the "Right to Acquire" column include 131,625 shares of common stock issuable upon the conversion of debt and 131,625 shares of common stock issuable upon the exercise of warrants at \$20.00 per share exercisable only upon the conversion of such debt and expire February 6, 2019. Shares in the "Right to Acquire" column also include shares of common stock issuable upon the exercise of 195,000 warrants to purchase shares common stock at exercise prices ranging from \$10.00 to \$25.00 per share expiring between March 1, 2016 and February 20, 2018.
- 3) Shares in the "Right to Acquire" column consist of 35,000 shares of common stock issuable upon the conversion of debt and 35,000 shares of common stock issuable upon the exercise of warrants at \$20.00 per share exercisable only upon the conversion of such debt and expire February 6, 2019. Shares in the "Right to Acquire" column also include 179,166 shares of common stock issuable upon the exercise of warrants at exercise prices ranging from \$10.00 to \$25.00 per share expiring between December 6, 2016 and June 13, 2017. Interlock Director Ltd. has sole dispositive and voting power over shares held by Enso Ventures 2 Limited. Interlock Director Ltd. exercises such power through a combination of two directors of Albecq Directors Limited. The Albecq directors consist of the following individuals: Marianne Domaille, Michael Underdown and Michael Kupenga.
- 4) Dispositive and voting power for the shares is held by a majority vote of the board of directors of Renova Assets, Ltd. consisting of Carl Stadelhofer, Marco Montanari, and Oliver Chaponnier. Shares in the "Right to Acquire" column consist of common stock issuable upon the exercise warrants at exercise prices ranging from \$10.00 to \$25.00 per share expiring between November 2, 2017 and February 20, 2018.
- 5) Consists of shares held by Sabby Healthcare Volatility Master Fund, Ltd. and Sabby Volatility Warrant Master Fund, Ltd. Shares in the "Right to Acquire" column consist of common stock issuable upon the exercise of warrants at exercise prices ranging from \$10.00 per share to \$25.00 per share expiring between June 13, 2017 and February 20, 2018. The warrants beneficially owned by Sabby Management LLC provide that the number of shares of common stock to be obtained by each of the holders upon exercise cannot exceed the number of shares that, when combined with all other shares of our common stock and securities beneficially owned by them, would result in them owning more than 9.99% of our outstanding common stock, provided, however that this limitation may be revoked by the stockholder upon 61 days prior notice to us. As such, warrants to purchase 15,660 shares of common stock have been omitted from the shares in the "Right to Acquire" column of this table as a result of these provisions. Sabby Management, LLC shares voting and investment power with respect to these shares on behalf of this stockholder. As manager of Sabby Management, LLC, Hal Mintz also shares voting and investment power on behalf of this stockholder. Each of Sabby Management, LLC and Hal Mintz disclaim beneficial ownership over the securities owned except to the extent of their pecuniary interest therein. Except as described herein, none of the selling stockholders has had, within the past three years, any position, office or other material relationship with the Company or any of our predecessors or affiliates.
- 6) Shares in the "Right to Acquire" column consist of 131,625 shares of common stock issuable upon the conversion of debt and 131,625 shares of common stock issuable upon the exercise of warrants at \$20.00 per share exercisable only upon the conversion of such debt and expire February 6, 2019. Shares in the "Right to Acquire" column also include common stock issuable upon the exercise of warrants to purchase 10,000 shares at \$12.00 per share, expiring on December 6, 2016. Richard H. Hertzberg is the trustee of Hertzberg Family Trust and has sole dispositive and voting power for the shares held.
- 7) Dr. Weichert serves as a director and our Chief Scientific Officer. The shares beneficially owned by him have been included in the total of directors and officers as a group.
- 8) Consists of shares held by Fidelity Select Portfolios: Biotechnology Portfolio and Fidelity Advisor Series VII: Fidelity Advisor. Dispositive and voting power for the shares is held by the Fidelity Funds Board of Trustees. Shares in the "Right to Acquire" column consists of common stock issuable upon the exercise of warrants at \$12.00 per share expiring on December 6, 2016.
- 9) Consists of shares held by Deerfield Special Situations International Master Fund L.P. and Deerfield Special Situations Fund L.P. Shares in the "Right to Acquire" column consist of common stock issuable upon the exercise of warrants at exercise prices ranging from \$10.00 per share to \$25.00 per share expiring between June 13, 2017 and February 20, 2018. The warrants beneficially owned by Deerfield Capital Management LLC provide that the number of shares of common stock to be obtained by each of the holders upon exercise cannot exceed the number of shares that, when combined with all other shares of our common stock and securities beneficially owned by them, would result in them owning more than 9.99% of our outstanding common stock, provided, however that this limitation may be revoked by the stockholder upon 61 days prior notice to us. No warrants to purchase common stock have been omitted from the shares in the "Right to Acquire" column of this table as a result of these provisions. Dispositive and voting

power for the shares is held by James E. Flynn.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

We do not have a written policy for the review, approval or ratification of transactions with related parties or conflicted transactions. When such transactions arise, they are referred to the Audit Committee for consideration or for referral to the Board of Directors for its consideration.

One of our directors, John Neis, is a managing director of Venture Investors LLC, which beneficially owns approximately 22% of our common stock.

Jamey Weichert, our Chief Scientific Officer and principal founder of Collectar, Inc., and a director and shareholder of the Company, is a faculty member at the University of Wisconsin-Madison (U. Wisc.). During the three months ended March 31, 2014, the Company paid \$262,070 for costs associated with clinical trial agreements and during the three months ended March 31, 2013, the Company paid \$62,500 for use towards unrestricted research activities. During the year ended December 31, 2013, the Company made contributions to UW totaling \$187,500 for use towards unrestricted research activities. The Company paid \$380,625 to UW for costs associated with clinical trial and other research agreements during the year ended December 31, 2013. During the year ended December 31, 2012, the Company made contributions to UW totaling \$269,000 for use towards unrestricted research activities and paid UW approximately \$349,000 for costs associated with clinical trial and other research agreements.

Legacy Compounds – Transactions and Litigation

From its inception through 2010, Novelos was primarily engaged in the development of certain oxidized glutathione-based compounds for application as therapies for disease, particularly cancer. These compounds were originally developed in Russia. In June 2000, Novelos acquired commercial rights from the Russian company (“ZAO BAM”) which owned the compounds and related Russian patents. In April 2005, Novelos acquired worldwide rights to the compounds (except for the Russian Federation) in connection with undertaking extensive development activities in an attempt to secure FDA approval of the compounds as therapies. These development activities culminated in early 2010 in an unsuccessful Phase 3 clinical trial of an oxidized glutathione compound (NOV-002) as a therapy for non-small cell lung cancer. The principal equity owner of ZAO BAM, Mark Balazovsky, was a founder of Novelos and served as a director until November 2006. Pursuant to the April 2005 royalty and technology transfer agreement, Novelos is required to pay ZAO BAM royalties equal to 1.2% of net sales of oxidized glutathione products and \$2,000,000 for each new oxidized glutathione drug following FDA approval of such drug. In the absence of royalty payments, Novelos is required to pay ZAO BAM 3% of all license revenues plus 9% of the amount by which Novelos’ license revenues exceed its total expenses. In 2008, Novelos paid \$15,000 to ZAO BAM representing 3% of payment under a foreign license agreement. Novelos is also obligated to pay Oxford Group, Ltd., or its assignees, a royalty in the amount of 0.8% of our net sales of oxidized glutathione-based products. At this time, Novelos does not expect to devote any substantial resources to the further development of its oxidized glutathione compounds.

After the disclosure of the negative outcome of the Phase 3 clinical trial in 2010, ZAO BAM claimed that Novelos modified the chemical composition of NOV-002 without prior notice to or approval from ZAO BAM, constituting a material breach of the June 2000 technology and assignment agreement. In September 2010, Novelos filed a complaint in Massachusetts Superior Court seeking a declaratory judgment by the court that the June 2000 agreement has been entirely superseded by the April 2005 agreement and that the obligations of the June 2000 agreement have been performed and fully satisfied. ZAO BAM answered the complaint and alleged counterclaims. In August 2011, we filed a motion for judgment on the pleadings as to the declaratory judgment count and all counts of ZAO BAM’s amended counterclaims. On October 17, 2011, the court ruled in our favor on each of the declaratory judgment claims and dismissed all counts of ZAO BAM’s counterclaim. Judgment in our favor was entered on October 20, 2011. On November 14, 2011 ZAO BAM filed a notice of appeal. On November 1, 2013, ZAO BAM’s appeal was docketed with the Massachusetts Appeals Court. BAM’s appellate brief and the Company’s opposition have been filed with the Appeals Court but oral arguments have not yet been scheduled. On April 14, 2014, BAM filed a motion to modify the record on appeal. The Company has opposed the motion.

UNDERWRITING

Aegis Capital Corp. (“Aegis”) is acting as the sole managing underwriter of this offering. Under the terms and subject to the conditions contained in an underwriting agreement dated the date of this prospectus, Aegis, or the underwriter, has agreed to purchase, and we have agreed to sell to them, all securities offered by this prospectus.

Nature of Underwriting Commitment

The underwriting agreement provides that the underwriter is committed to purchase all securities offered in this offering, other than those covered by the over-allotment option described below, if the underwriter purchases any of these securities. The underwriting agreement provides that the obligations of the underwriter to purchase the securities offered hereby is conditional and may be terminated at its discretion based on its assessment of the state of the financial markets. The obligations of the underwriter may also be terminated upon the occurrence of other events specified in the underwriting agreement. Furthermore, pursuant to the underwriting agreement, the underwriters’ obligations are subject to various other customary conditions, representations and warranties contained in the underwriting agreement, such as receipt by the underwriter of officers’ certificates and legal opinions of our counsel.

Pricing of Securities

The underwriter has advised us that it proposes to offer the securities directly to the public at the public offering price set forth on the cover page of this prospectus, and to certain dealers that are members of the Financial Industry Regulatory Authority (FINRA), at such price less a _____ concession not in excess of \$ _____ per share of common stock, together with a warrant to purchase one share of common stock. The underwriter may allow, and the selected dealers may reallocate, a concession not in excess of \$ _____ per share of common stock, together with a warrant to purchase one share of common stock to certain brokers and dealers. After this offering, the offering price and concessions and discounts to brokers and dealers and other selling terms may from time to time be changed by the underwriter. These prices should not be considered an indication of the actual value of our shares of common stock and are subject to change as a result of market conditions and other factors. No variation in those terms will change the amount of proceeds to be received by us as set forth on the cover page of this prospectus.

Our common stock is quoted on the OTCQX® marketplace under the symbol CLRB and prior to February 12, 2014 were quoted under the symbol NVLT. On July _____, 2014, the closing market price of our common stock as quoted on OTCQX was \$ _____. The public offering price for the securities was determined by negotiation between us and the underwriter. The principal factors considered in determining the public offering price of the securities included:

- the information in this prospectus and otherwise available to the underwriters;
- the history and the prospects for the industry in which we will compete;
- our current financial condition and the prospects for our future cash flows and earnings;
- the general condition of the economy and the securities markets at the time of this offering;
- the recent market prices of, and the demand for, publicly-traded securities of generally comparable companies; and
- the public demand for our securities in this offering

We cannot be sure that the public offering price will correspond to the price at which our shares of common stock will trade in the public market following this offering or that an active trading market for our shares of common stock will develop and continue after this offering.

Commissions and Discounts

The following table summarizes the compensation to be paid to the underwriter by us and the proceeds, before expenses, payable to us, assuming a \$ _____ offering price. The information assumes either no exercise or full exercise by the underwriter of the over-allotment option.

	Per Share and Warrant	Total	
		Without Over-Allotment	With Over-Allotment
Public offering price	\$	\$	\$
Underwriting discount (7%) (1) (4)	\$	\$	\$
Non-accountable expense allowance (1 %) (2) (4)	\$	\$	\$
	\$	\$	\$
Proceeds, before expenses, to us (3)			

- (1) Underwriting discount is \$ _____ per share and warrant (7% of the price of the share and warrant securities sold in the offering, provided that such percentage shall be 3.5% with respect to any securities sold to existing investors in the company and no discount shall be applied to any securities issued in exchange for up to \$4.0 million in proceeds from the optional redemption of outstanding convertible notes.)
- (2) The expense allowance of 1% is not payable with respect to securities sold upon exercise of the underwriter's over-allotment option. Includes \$25,000 which was previously paid to the underwriter as an advance against accountable expenses.
- (3) We estimate that the total expenses of this offering, excluding the underwriter's discount and the non-accountable expense allowance are approximately \$ _____.

Over-allotment Option

We have granted to the underwriter an option to purchase up to (i) _____ additional shares of common stock at price of \$ _____ per share, which price reflects underwriting discounts and commissions, and/or (ii) _____ additional warrants at price of \$ _____ per warrant, which price reflects underwriting discounts and commissions. The over-allotment option may be used to purchase shares of common stock or warrants, as determined by the underwriter, but such purchases cannot exceed an aggregate of 15% of the number of shares and warrants sold in the primary offering. The underwriter may exercise this option for 45 days from the date of this prospectus solely to cover sales of securities by the underwriter in excess of the total number of securities set forth in the table above. If any of these additional securities are purchased, the underwriter will offer the additional securities on the same terms as those on which the securities are being offered. We will pay the expenses associated with the exercise of the over-allotment option.

Underwriter's Warrants

We have agreed to issue to the underwriter warrants to purchase up to 5% of shares of common stock sold in this offering, including the shares sold pursuant to the exercise of the over-allotment option, if any, provided that such percentage shall be 2.5% with respect to any shares sold to existing investors in the company and no underwriter warrants will be issued in respect of shares issued in exchange for proceeds from the optional redemption of outstanding convertible debentures. The shares of common stock issuable upon exercise of these warrants are identical to those offered by this prospectus. The underwriter's warrants are exercisable for cash or on a cashless basis at per share exercise price equal to 125% of the public offering price of one share of common stock together with a warrant to purchase one share of common stock in this offering commencing on a date which is one year from the date of effectiveness of the registration statement of which this prospectus is a part and expiring five years from such effective date in compliance with FINRA Rule 5110(f)(2)(H)(i). The underwriter's warrants and the shares of common stock underlying 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 underwriter (or permitted assignees under Rule 5110(g)(2) of FINRA) will not sell, transfer, assign, pledge or hypothecate these warrants or the securities underlying these warrants, nor will it engage in any hedging, short sale, derivative, put or call transaction that would result in the effective economic disposition of these warrants or the underlying securities for a period of 180 days after the effective date. In addition, the underwriter's warrants provide for "piggyback" registration rights, subject to certain exceptions. The piggyback registration rights provided will be available for a period of five 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 underwriter's 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 common stock at a price below the warrant exercise price.

Lock-ups

All of our directors and executive officers and our significant stockholders will enter into lock-up agreements that prevent them from selling any shares of our common stock or any securities convertible into or exercisable or exchangeable for shares of our common stock, subject to certain exceptions, for a period of not less than 3 months from the date of this prospectus without the prior written consent of the underwriter. The underwriter may in its sole discretion and at any time without notice release some or all of the shares subject to lock-up agreements prior to the expiration of the lock-up period. When determining whether or not to release shares from the lock-up agreements, the underwriter will consider, among other factors, the stockholder's reasons for requesting the release, the number of shares for which the release is being requested and market conditions at the time.

Right of Participation

Subject to certain conditions, we granted the underwriter, for a period of twelve months after the effective date (or commencement of sales if later), a non-exclusive right of participation to act as a book-running manager for each and every future public equity and public debt offerings by the company or its successor. If we are successful in obtaining a listing in the Nasdaq Capital Market, such right of participation shall become a right of first refusal to act as lead book-runner during such twelve month period. The underwriter may be compensated for any breach of this right in an amount equal to the greater of 1% of the aggregate gross proceeds at such offering, or 5% of the aggregate underwriter or placement fees in such offering subject to any reduction required by FINRA's rules.

Other Terms

The underwriting agreement provides that we will be responsible for and pay all expenses related to the offering including, among other things, our counsel fees, printing and filing fees, including FINRA filing fees under FINRA Rule 5110, actual road show expenses up to \$20,000, up to \$25,000 for compliance software costs, background checks on our officers and certain directors up to \$5,000 per person, and underwriter counsel fees not to exceed \$75,000. We have advanced the underwriter the sum of \$25,000 against such accountable expenses, which will be reimbursable to us in the event this offering does not close to the extent not expended by the underwriter, in accordance with FINRA Rule 5110(f)(2)(C).

In connection with this offering, the underwriter or certain of the securities dealers may distribute prospectuses electronically. No forms of prospectus other than printed prospectuses and electronically distributed prospectuses that are printable in Adobe PDF format will be used in connection with this offering.

The underwriter has informed us that it does not expect to confirm sales of securities offered by this prospectus to accounts over which they exercise discretionary authority without obtaining the specific approval of the account holder.

Stabilization

Until the distribution of the shares offered by this prospectus is completed, rules of the SEC may limit the ability of the underwriter to bid for and to purchase our securities. As an exception to these rules, the underwriter may engage in transactions effected in accordance with Regulation M under the Securities Exchange Act of 1934 that are intended to stabilize, maintain or otherwise affect the price of our common stock. The underwriter may engage in over-allotment sales, syndicate covering transactions, stabilizing transactions and penalty bids in accordance with Regulation M.

- Stabilizing transactions permit bids or purchases for the purpose of pegging, fixing or maintaining the price of the common stock, so long as stabilizing bids do not exceed a specified maximum.
- Over-allotment involves sales by the underwriter of securities in excess of the number of securities the underwriter is obligated to purchase, which creates a short position. The short position may be either a covered short position or a naked short position. In a covered short position, the number of securities over-allotted by the underwriter is not greater than the number of securities that it 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 underwriter may close out any covered short position by either exercising its over-allotment option as to shares or warrants or by purchasing shares or warrants in the open market.
- Covering transactions involve the purchase of securities in the open market after the distribution has been completed in order to cover short positions. In determining the source of securities to close out the short position, the underwriter will consider, among other things, the price of securities available for purchase in the open market as compared to the price at which it may purchase securities through the over-allotment option. If the underwriter sells more shares of common stock than could be covered by the over-allotment option, creating a naked short position, the position can only be closed out by buying securities in the open market. A naked short position is more likely to be created if the underwriter is concerned that there could be downward pressure on the price of the securities in the open market after pricing that could adversely affect investors who purchase in this offering.
- Penalty bids permit the underwriter to reclaim a selling concession from a selected dealer when the shares of common stock originally sold by the selected dealer are purchased in a stabilizing or syndicate covering transaction.

These stabilizing transactions, 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 may be higher than the price that might otherwise exist in the open market.

Neither we nor the underwriter make any representation or prediction as to the effect that the transactions described above may have on the prices of our securities. These transactions may occur on the over the counter market or on any other trading market. If any of these transactions are commenced, they may be discontinued without notice at any time.

Foreign Regulatory Restrictions on Purchase of the Securities

We have not taken any action to permit a public offering of our securities outside the United States or to permit the possession or distribution of this prospectus outside the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about and observe any restrictions relating to this offering of shares and the distribution of the prospectus outside the United States.

In addition to the public offering of the securities in the United States, the underwriter may, subject to the applicable foreign laws, also offer the securities to certain institutions or accredited persons in the following countries:

Australia. If this document is issued or distributed in Australia it is issued or distributed to “wholesale clients” only, not to “retail clients”. For the purposes of this paragraph, the terms “wholesale client” and “retail client” have the meanings given in section 761 of the Australian Corporations Act 2001 (Cth). This document is not a disclosure document under the Australian Corporations Act, has not been lodged with the Australian Securities & Investments Commission and does not purport to include the information required of a disclosure document under the Australian Corporations Act. Accordingly, (i) the offer of securities under this document is only made to persons to whom it is lawful to offer such securities under one or more exemptions set out in the Australian Corporations Act, (ii) this document is only made available in Australia to those persons referred to 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 referred to 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 to the offeree under this document.

China. THIS PROSPECTUS HAS NOT BEEN AND WILL NOT BE CIRCULATED OR DISTRIBUTED IN THE PRC, AND ADSs MAY NOT BE OFFERED OR SOLD, AND WILL NOT BE OFFERED OR SOLD TO ANY PERSON FOR RE-OFFERING OR RESALE, DIRECTLY OR INDIRECTLY, TO ANY RESIDENT OF THE PRC EXCEPT PURSUANT TO APPLICABLE LAWS AND REGULATIONS OF THE PRC.

DIFC. DIFC and UAE have different requirements and, as a result, a generic legend for each is provided below

UAE. The offering has not been approved or licensed by the Central Bank of the United Arab Emirates (the “UAE”), Securities and Commodities Authority of the UAE and/or any other relevant licensing authority in the UAE including any licensing authority incorporated under the laws and regulations of any of the free zones established and operating in the territory of the UAE, in particular the Dubai Financial Services Authority (the “DFSA”), a regulatory authority of the Dubai International Financial Centre (the “DIFC”).

The offering does not constitute a public offer of securities in the UAE, DIFC and/or any other free zone in accordance with the Commercial Companies Law, Federal Law No.8 of 1984 (as amended), DFSA Offered Securities Rules and NASDAQ Dubai Listing Rules, accordingly, or otherwise. The securities offered hereby may not be offered to the public in the UAE and/or any of the free zones, including, in particular, the DIFC.

The securities offered hereby may be offered and issued only to a limited number of investors in the UAE or any of its free zones (including, in particular, the DIFC) who qualify as sophisticated investors under the relevant laws and regulations of the UAE or the free zone concerned, including, in particular, the DIFC.

The Company represents and warrants that the securities offered hereby will not be offered, sold, transferred or delivered to the public in the UAE or any of its free zones, including, in particular, the DIFC.”

Dubai. The issuer is not licensed by the Dubai Financial Services Authority (“DFSA”) to provide financial services in the Dubai International Financial Centre (“DIFC”). The offering has not been approved or licensed by the Central Bank of the United Arab Emirates (the “UAE”), Securities and Commodities Authority of the UAE and/or any other relevant licensing authority in the UAE including any licensing authority incorporated under the laws and regulations of any of the free zones established and operating in the territory of the UAE, in particular the DFSA, a regulatory of the DIFC.

The offering does not constitute a public offer of securities in the UAE, DIFC and/or any other free zone in accordance with the Commercial Companies Law, Federal Law No.8 of 1984 (as amended), DFSA Offered Securities Rules and NASDAQ Dubai Listing Rules, accordingly, or otherwise. The securities offered hereby may not be offered to the public in the UAE and/or any of the free zones, including, in particular, the DIFC.

The securities offered hereby may be offered and issued only to a limited number of investors in the UAE or any of its free zones (including, in particular, the DIFC) who qualify as sophisticated investors under the relevant laws and regulations of the UAE or the free zone concerned, including, in particular, the DIFC.

The Company represents and warrants that the securities offered hereby will not be offered, sold, transferred or delivered to the public in the UAE or any of its free zones, including, in particular, the DIFC.

Israel. The securities offered by this prospectus have not been approved or disapproved by the Israeli Securities Authority (the ISA), nor have such securities been registered for sale in Israel. The securities 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 common stock being offered. Any resale, 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.

Pakistan. The investors / subscribers in Pakistan will be responsible for ensuring their eligibility to invest under the applicable laws of Pakistan and to obtain any regulatory consents if required for such purpose.

Saudi Arabia. NO OFFERING OF SECURITIES IS BEING MADE IN THE KINGDOM OF SAUDI ARABIA, AND NO AGREEMENT RELATING TO THE SALE OF THE SECURITIES WILL BE CONCLUDED IN SAUDI ARABIA. THIS DOCUMENT IS PROVIDED AT THE REQUEST OF THE RECIPIENT AND IS BEING FORWARDED TO THE ADDRESS SPECIFIED BY THE RECIPIENT. NEITHER THE AGENT NOR THE OFFERING HAVE BEEN LICENSED BY THE SAUDI'S SECURITIES AND EXCHANGE COMMISSION OR ARE OTHERWISE REGULATED BY THE LAWS OF THE KINGDOM OF SAUDI ARABIA.

THEREFORE, NO SERVICES RELATING TO THE OFFERING, INCLUDING THE RECEIPT OF APPLICATIONS AND/OR THE ALLOTMENT OF THE SECURITIES, MAY BE RENDERED WITHIN THE KINGDOM BY THE AGENT OR PERSONS REPRESENTING THE OFFERING.

UK. The content of this prospectus has not been issued or approved by an authorized person within the meaning of the United Kingdom Financial Services and Markets Act 2000 ("FSMA"). Reliance on this prospectus for the purpose of engaging in any investment activity may expose an Investor to a significant risk of losing all of the property or other assets invested. This prospectus does not constitute a Prospectus within the meaning of the FSMA and is issued in reliance upon one or more of the exemptions from the need to issue such a prospectus contained in section 86 of the FSMA.

Indemnification

The underwriting agreement provides for indemnification between us and the underwriter against specified liabilities, including liabilities under the Securities Act, and for contribution by us and the underwriter to payments that may be required to be made with respect to those liabilities. We have been advised that, in the opinion of the SEC, indemnification for liabilities under the Securities Act is against public policy as expressed in the Securities Act, and is therefore, unenforceable.

DESCRIPTION OF SECURITIES

Under our amended and restated certificate of incorporation, our authorized capital stock consists of 20,000,000 shares of common stock, \$0.00001 par value per share and 7,000 shares of preferred stock, \$0.00001 par value per share.

Our amended and restated certificate of incorporation authorizes us to issue shares of our preferred stock from time to time in one or more series without stockholder approval. There is no issued or outstanding preferred stock.

All outstanding shares of our common stock are duly authorized, validly issued, fully-paid and non-assessable.

Reverse Stock Split and Recapitalization

At our annual meeting of stockholders held on May 22, 2014, our stockholders approved an amendment to our certificate of incorporation to effect a reverse split of our common stock at a ratio between 1:10 to 1:20 in order to satisfy requirements for the listing of our common stock on the NASDAQ Capital Market. In addition, the proposal approved by the stockholders provided that if the reverse split was effected, the number of shares of Common Stock that the Corporation is authorized to issue would be reduced from 150,000,000 to the greater of (A) 20,000,000 and (B) the number of shares equal to three (3) times the sum of the number of all shares of our common stock outstanding and the number of shares of common stock issuable upon exercise or conversion of all outstanding options, warrants and convertible debt. Our stockholders further authorized the board of directors to determine the ratio at which the reverse split would be effected and the corresponding reduction in authorized shares of common stock by filing an appropriate amendment to our certificate of incorporation. Our board of directors authorized the ratio of the Reverse Split and corresponding reduction in authorized shares on June 6, 2014 and effective at the close of business on June 13, 2014, we amended our second amended and restated certificate of incorporation to effect the Listing Reverse Split and reduce the number of authorized shares of our common stock to 20,000,000 from 150,000,000. All share and per share numbers included in this prospectus give effect to the Listing Reverse Split.

Common Stock

Voting. Holders of our common stock are entitled to one vote per share held of record on all matters to be voted upon by our stockholders. Our common stock does not have cumulative voting rights. Persons who hold a majority of the outstanding common stock entitled to vote on the election of directors can elect all of the directors who are eligible for election.

Dividends. Subject to preferences that may be applicable to the holders of any outstanding shares of our preferred stock, the holders of our common stock are entitled to receive such lawful dividends as may be declared by our board of directors.

Liquidation and Dissolution. In the event of our liquidation, dissolution or winding up, and subject to the rights of the holders of any outstanding shares of our preferred stock, the holders of shares of our common stock will be entitled to receive pro rata all of our remaining assets available for distribution to our stockholders.

Other Rights and Restrictions. Our charter prohibits us from granting preemptive rights to any of our stockholders. All outstanding shares are fully paid and nonassessable.

Listing. Our common stock is traded on the OTCQX platform of the over-the-counter bulletin board under the symbol “OTCQX: CLRB”.

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.

Underwriter's Warrants

In addition, we have agreed to issue to the underwriters warrants to purchase up to an aggregate of 5% of the shares of common stock sold in this offering, including shares sold pursuant to the over-allotment option, if any, provided that such percentage shall be 2.5% with respect to any shares sold to existing investors in the company and no underwriters warrants will be issued in respect of shares issued in exchange for proceeds from the option from the optional redemption of outstanding convertible debentures. The shares of common stock issuable upon exercise of these warrants are identical to those offered by this prospectus. The underwriter's warrants are exercisable for cash or on a cashless basis at per share exercise price equal to 125% of the public offering price of one share of common stock, together with a warrant to purchase one share of common stock in this offering commencing on a date which is six months from the date of effectiveness of the registration statement of which this prospectus is a part and expiring on a date which is no more than five years from such effective date in compliance with FINRA Rule 5110(f)(2)(H)(i). The underwriter's warrants do not have antidilution protections and are not transferable for 180 days from the date of the commencement of sales of the offering except as allowed by FINRA Rule 5110(g).

THE HOLDER OF A WARRANT WILL NOT POSSESS ANY RIGHTS AS A STOCKHOLDER UNDER THAT WARRANT UNTIL THE HOLDER EXERCISES THE WARRANT. THE WARRANTS MAY BE TRANSFERRED INDEPENDENT OF THE COMMON STOCK WITH WHICH THEY WERE ISSUED, SUBJECT TO APPLICABLE LAWS.

Anti-Takeover Effect of Certain Charter and By-Law Provisions

Provisions of our charter and our by-laws could make it more difficult to acquire us by means of a merger, tender offer, proxy contest, open market purchases, removal of incumbent directors and otherwise. These provisions, which are summarized below, are expected to discourage types of coercive takeover practices and inadequate takeover bids and to encourage persons seeking to acquire control of us to first negotiate with us. We believe that the benefits of increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging takeover or acquisition proposals because negotiation of these proposals could result in an improvement of their terms.

Authorized but Unissued Stock. We have shares of common stock and preferred stock available for future issuance, in some cases, without stockholder approval. We may issue these additional shares for a variety of corporate purposes, including public offerings to raise additional capital, corporate acquisitions, stock dividends on our capital stock or equity compensation plans. The existence of unissued and unreserved common stock and preferred stock may enable our board of directors to issue shares to persons friendly to current management or to issue preferred stock with terms that could render more difficult or discourage a third-party attempt to obtain control of us, thereby protecting the continuity of our management. In addition, if we issue preferred stock, the issuance could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon liquidation.

Amendments to by-laws. Our certificate of incorporation and by-laws authorize the Board to amend, repeal, alter or rescind the by-laws at any time without stockholder approval. Allowing the Board to amend our by-laws without stockholder approval enhances Board control over our by-laws.

Classification of Board; removal of directors; vacancies. Our certificate of incorporation provide for the division of the Board into three classes as nearly equal in size as possible with staggered three-year terms; that directors may be removed only for cause by the affirmative vote of the holders of two-thirds of our shares of capital stock entitled to vote; and that any vacancy on the Board, however occurring, including a vacancy resulting from an enlargement of the board, may be filled only by the vote of a majority of the directors then in office. The limitations on the removal of directors and the filling of vacancies could have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from acquiring, control of us. Our certificate of incorporation requires the affirmative vote of the holders of at least 75% of our shares of capital stock issued and outstanding and entitled to vote to amend or repeal any of these provisions.

Notice Periods for Stockholder Meetings. Our by-laws provide that for business to be brought by a stockholder before an annual meeting of stockholders, the stockholder must give written notice to the corporation not less than 90 nor more than 120 days prior to the one year anniversary of the date of the annual meeting of stockholders of the previous year; provided, however, that in the event that the annual meeting of stockholders is called for a date that is not within 30 days before or after such anniversary date, notice by the stockholder must be received not later than the close of business on the tenth day following the day on which the corporation's notice of the date of the meeting is first given or made to the stockholders or disclosed to the general public, whichever occurs first.

Stockholder action; special meetings. Our certificate of incorporation provides that stockholder action may not be taken by written action in lieu of a meeting and provides special meetings of the stockholders may only be called by our president or by our Board. These provisions could have the effect of delaying until the next stockholders' meeting stockholder actions that are favored by the holders of a majority of our outstanding voting securities. These provisions may also discourage another person or entity from making a tender offer for our common stock, because that person or entity, even if it acquired a majority of our outstanding voting securities, would be able to take action as a stockholder only at a duly called stockholders' meeting, and not by written consent. Our certificate of incorporation requires the affirmative vote of the holders of at least 75% of our shares of capital stock issued and outstanding and entitled to vote to amend or repeal the provisions relating to prohibition on action by written consent and the calling of a special meeting of stockholders.

Nominations. Our by-laws provide that nominations for election of directors may be made only by (i) the Board or a committee appointed by the Board; or (ii) a stockholder entitled to vote on director election, if the stockholder provides notice to the Secretary of the Corporation presented not less than 90 days nor more than 120 days prior to the anniversary of the last annual meeting (subject to the limited exceptions set forth in the bylaws). These provisions may deter takeovers by requiring that any stockholder wishing to conduct a proxy contest have its position solidified well in advance of the meeting at which directors are to be elected and by providing the incumbent Board with sufficient notice to allow them to put an election strategy in place.

DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Our charter contains provisions to indemnify our directors and officers to the maximum extent permitted by Delaware law. We believe that indemnification under our charter covers at least negligence on the part of an indemnified person. Our charter permits us to advance expenses incurred by an indemnified person in connection with the defense of any action or proceeding arising out of the person's status or service as our director, officer, employee or other agent upon an undertaking by the person to repay those advances if it is ultimately determined that the person is not entitled to indemnification.

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

WHERE YOU CAN FIND MORE INFORMATION

We are a reporting company and file annual, quarterly and special reports, and other information with the Securities and Exchange Commission. Copies of the reports and other information may be read and copied at the SEC's Public Reference Room at 100 F Street NE, Washington, D.C. 20549. You can request copies of such documents by writing to the SEC and paying a fee for the copying cost. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains a web site at <http://www.sec.gov> that contains reports, proxy and information statements and other information regarding registrants that file electronically with the SEC.

This prospectus is part of a registration statement on Form S-1 that we filed with the SEC. Certain information in the registration statement has been omitted from this prospectus in accordance with the rules and regulations of the SEC. We have also filed exhibits and schedules with the registration statement that are excluded from this prospectus. For further information you may:

- read a copy of the registration statement, including the exhibits and schedules, without charge at the SEC's Public Reference Room; or
- obtain a copy from the SEC upon payment of the fees prescribed by the SEC.

LEGAL MATTERS

The validity of the securities being offered by this prospectus has been passed upon for us by Foley Hoag LLP, Boston, Massachusetts. Ellenoff Grossman & Schole LLP, New York, New York, is acting as counsel to the underwriters in this offering.

EXPERTS

The audited financial statements incorporated by reference in this prospectus and elsewhere in the registration statement have been so incorporated by reference in reliance upon the report of Grant Thornton LLP, independent registered public accountants, upon the authority of said firm as experts in accounting and auditing.

INCORPORATION OF DOCUMENTS BY REFERENCE

We incorporate by reference the filed documents listed below, except as superseded, supplemented or modified by this prospectus, and any future filings we will make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 (the "Exchange Act"):

- Our Annual Report on Form 10-K for the fiscal year ended December 31, 2013 filed on March 19, 2014;
- Our Current Report on Form 8-K for the event date of February 11, 2014 filed on February 13, 2014;
- Our Current Report on Form 8-K for the event date of February 5, 2014 filed on February 10, 2014;
- Our Current Report on Form 8-K for the event date of April 11, 2014 filed on April 11, 2014;
- Our Quarterly Report on Form 10-Q for the quarter ended March 31, 2014 filed on May 14, 2014;
- Our Current Report on Form 8-K for the event date of May 22, 2014 filed on May 22, 2014;
- Our Current Report on Form 8-K for the event date of May 28, 2014 filed on May 30, 2014;
- Our Current Report on Form 8-K for the event date of June 1, 2014 filed on June 5, 2014;
- Our Current Report on Form 8-K for the event date of June 9, 2014 filed on June 13, 2014; and
- Our Current Report on Form 8-K for the event date of June 11, 2014 filed on June 17, 2014.

The reports and other documents that we file after the date of this prospectus pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act will update, supplement and supersede the information in this prospectus. You may request and obtain a copy of any of the filings incorporated herein by reference, at no cost, by writing or telephoning us at the following address or phone number:

Collectar Biosciences, Inc., 3301 Agriculture Drive, Madison, WI 53716, Attention: Chief Financial Officer

GLOSSARY OF CERTAIN SCIENTIFIC TERMS

Akt - Akt (also known as Akt/PKB) is an important cell signaling enzyme (a serine/threonine protein kinase) that plays a key role in multiple cellular processes such as glucose metabolism, cell proliferation, apoptosis, transcription and cell migration.

Apoptosis - A highly regulated, normal cell process leading to programmed cell death by which organisms can eliminate damaged or aberrant cells. Apoptosis is often abnormally suppressed in cancer cells, contributing to their uncontrolled proliferation.

Cytotoxic - Cytotoxicity is the quality of being toxic to cells (i.e. cell-killing). Many cancer chemotherapeutic drugs are cytotoxic to cancer cells (and, to some extent, normal cells) thus resulting in unwanted side-effects e.g. nausea/vomiting, hair loss, suppression of the immune system.

Dosimetry - Radiation dosimetry is the calculation of absorbed dose and optimization of dose delivery in radiation therapy.

Lipid Rafts - Specialized regions of the membrane phospholipid bilayer that contain high concentrations of cholesterol and sphingolipids and serve to organize cell surface and intracellular signaling molecules (e.g. growth factor and cytokine receptors, the phosphatidylinositol 3-kinase (PI3K)/Akt survival pathway).

Radiolabeled - Refers to a molecule containing a radioisotope as a part of its structure.

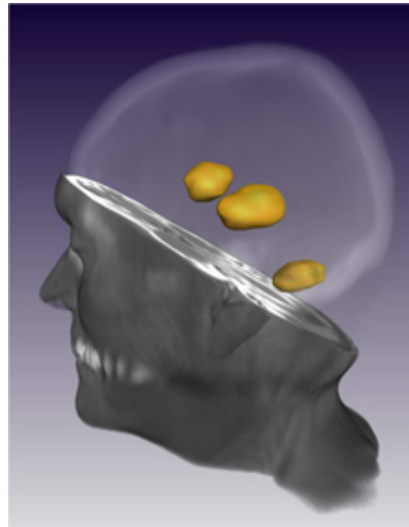
Radioisotope - Also referred to as radioactive isotopes or radionuclides. These are variants of atoms of particular chemical elements (e.g. iodine) with an unstable nucleus that can undergo radioactive decay during which ionizing radiation (e.g. gamma rays, subatomic particles) is emitted.

Uptake - An act of taking in or absorbing, especially into a living organism, tissue or cell.

Xenograft - Tissue, organs or cells from an individual of one species transplanted into or grafted onto an individual of another species.

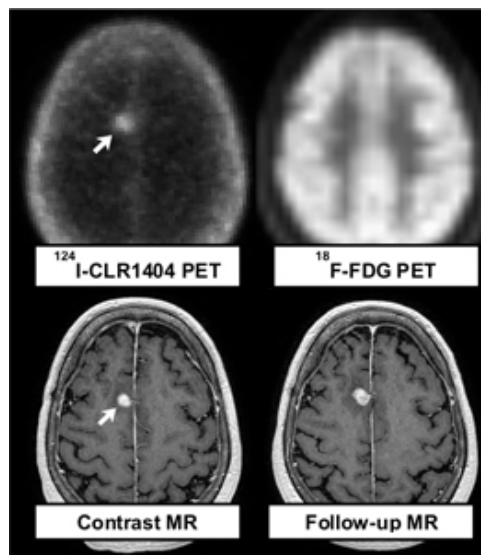
I-124-CLR1404: Cancer PET Imaging:

Non-Small Cell Lung Cancer Brain Metastases



Three previously unknown non-small cell lung cancer brain metastases that were detected by I-124-CLR1404 PET scanning.

Malignant melanoma brain metastasis



Increased I-124-CLR1404 activity (arrow) matched with a small focus of abnormal enhancement within the right frontal lobe on contrast MR in a patient who previously underwent resection and subsequent surgery for metastatic melanoma. No abnormal activity was seen in this area on the concurrent clinical 18F-FDG PET study. Based on the clinical MR and FDG PET findings, distinction between radiation necrosis and tumor recurrence was not possible. However, follow-up MR imaging at 8 months indicated that the lesion had continued to enlarge, associated with progressive perilesional edema, concerning but still indeterminate for metastatic disease. The original I-124-CLR1404 PET image of this small lesion would have suggested malignant recurrence. (Provided by Dr. Perry Pickhardt, University of Wisconsin Carbone Cancer Center)

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



PROSPECTUS

Aegis Capital Corp

Through and including _____, 2014 (the 25th day after the date of this offering), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

The following table provides information regarding the various actual and anticipated expenses (other than underwriter fees and expenses) payable by us in connection with the issuance and distribution of the securities being registered hereby. All amounts shown are estimates except the Securities and Exchange Commission registration fee.

Nature of Expense	Amount
SEC registration fee	\$ 5,925
Accounting fees and expenses	25,000
Legal fees and expenses	170,000
Nasdaq listing fees	50,000
Transfer agent's fees and expenses	5,000
Printing and related fees	20,000
Miscellaneous	70,000
Total	<u>\$ 345,925</u>

Item 14. Indemnification of Directors and Officers

Section 102(b)(7) of the Delaware General Corporation Law allows us to adopt a charter provision eliminating or limiting the personal liability of directors to us or our stockholders for breach of fiduciary duty as directors, but the provision may not eliminate or limit the liability of directors for (a) any breach of the director's duty of loyalty to us or our stockholders, (b) any acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (c) unlawful payments of dividends or unlawful stock repurchases or redemptions under Section 174 of the Delaware General Corporation Law or (d) any transaction from which the director derived an improper personal benefit. Article Seventh of our charter provides that none of our directors shall be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duty as a director, subject to the limitations imposed by Section 102(b)(7). Article Seventh also provides that no amendment to or repeal of Article Seventh shall apply to or have any effect on the liability or the alleged liability of any director with respect to any acts or omissions of such director occurring prior to such amendment or repeal. A principal effect of Article Seventh is to eliminate or limit the potential liability of our directors for monetary damages arising from breaches of their duty of care, unless the breach involves one of the four exceptions described in (a) through (d) above.

Section 145 of the Delaware General Corporation Law provides, in general, that a corporation incorporated under the laws of the State of Delaware, such as us, may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding (other than a derivative action by or in the right of the corporation) by reason of the fact that such person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe such person's conduct was unlawful. In the case of a derivative action, a Delaware corporation may indemnify any such person against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation, except that no indemnification will be made in respect of any claim, issue or matter as to which such person will have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery of the State of Delaware or any other court in which such action was brought determines such person is fairly and reasonably entitled to indemnity for such expenses.

Article Eighth of our amended and restated certificate of incorporation and Section 5.1 of our bylaws provide that we will indemnify our directors, officers, employees and agents to the extent and in the manner permitted by the provisions of the Delaware General Corporation Law, as amended from time to time, subject to any permissible expansion or limitation of such indemnification, as may be set forth in any shareholders' or directors' resolution or by contract.

Item 15. Recent Sales of Unregistered Securities

In the last three years we have sold the following securities in reliance on, unless otherwise indicated, the exemption under Section 4(2) of the Securities Act of 1933, as amended, as transactions not involving any public offering. All share and per share amounts have been adjusted to give effect to the 1-for-20 Listing Reverse Split.

2014

From April 1, 2014 to present:

None.

From January 1, 2014 through March 31, 2014:

On February 6, 2014, we sold \$4,000,000 in principal amount of convertible debentures and warrants to purchase 400,000 shares of our common stock for an aggregate purchase price of \$4,000,000. The debentures mature on February 6, 2016 and are convertible at any time at a conversion price of \$10.00 per share into an aggregate of 400,000 shares of common stock. The debentures accrue interest at an annual rate of 8%, payable upon redemption or conversion, in cash or shares of our common stock. The warrants have an exercise price of \$20.00 and, if unexercised, expire on February 6, 2019. The warrants are exercisable only following the full or partial conversion of the associated debentures, and in the event of a partial conversion the warrant shall become exercisable only for a proportionate number of the total shares subject to the warrant. In the event any debentures cease to be outstanding prior to the associated warrants becoming exercisable, whether by reason of repayment, prepayment, redemption or otherwise, the associated warrants will automatically terminate.

2013

From January 1, 2013 through December 31, 2013:

None

2012

From October 1, 2012 through December 31, 2012:

On November 2, 2012, pursuant to a securities purchase agreement dated November 1, 2012 with an institutional investor, we issued 100,000 shares of our common stock, warrants to purchase up to an aggregate of 100,000 shares of our common stock at an exercise price of \$20.00 per share, exercisable for 90 days from issuance, and warrants to purchase up to an aggregate of 50,000 shares of our common stock at an exercise price of \$25.00 per share, exercisable for five years from issuance, for total gross proceeds of \$2,000,000.

From July 1, 2012 through September 30, 2012:

On September 13, 2012, we issued 6,184 shares of common stock pursuant to the cashless exercise of warrants to purchase 20,322 shares of common stock. The warrants had an expiration date of March 31, 2016 and an exercise price of \$15.00 per share.

From April 1, 2012 through June 30, 2012:

On May 18, 2012, we issued 660 shares of common stock upon the cashless exercise of warrants to purchase 1,155 shares of common stock. The warrants had an expiration date of July 27, 2015 and an exercise price of \$12.00 per share.

On May 3, 2012, we issued 9,087 shares of common stock upon the cashless exercise of warrants to purchase 16,666 shares of common stock. The warrants had an expiration date of March 31, 2016 and an exercise price of \$15.00 per share.

On April 30, 2012, we issued 1,250 shares of common stock upon the cashless exercise of warrants to purchase 2,024 shares of common stock. The warrants had an expiration date of March 31, 2016 and an exercise price of \$15.00 per share.

On April 26, 2012, we issued 29,149 shares of common stock upon the cashless exercise of warrants to purchase 41,666 shares of common stock. The warrants had an expiration date of December 6, 2016 and an exercise price of \$12.00 per share.

From January 1, 2012 through March 31, 2012:

On March 28, 2012, we issued 514 shares of our common stock upon the cashless exercise of warrants to purchase 1,365 shares of common stock. The warrants had an expiration date of July 27, 2015 and an exercise price of \$12.00 per share.

On March 28, 2012, we issued 2,207 shares of our common stock upon the cashless exercise of warrants to purchase 10,000 shares of common stock. The warrants had an expiration date of March 31, 2016 and an exercise price of \$15.00 per share.

2011

From July 1, 2011 through December 31, 2011:

None.

From April 1, 2011 through June 30, 2011:

On April 8, 2011, we issued an aggregate of 850,079 shares of our common stock as merger consideration to the former shareholders of Collectar.

Concurrently with the Acquisition, on April 8, 2011, we entered into a Securities Purchase Agreement with certain accredited investors under which we sold an aggregate of 342,326 units, each unit consisting of one share of our common stock and a warrant to purchase one share of our common stock, at a price of \$15.00 per unit for gross proceeds of \$5,134,903. The warrants have an exercise price of \$15.00 and expire on March 31, 2016. We also issued a warrant to purchase 9,646 shares of our common stock for \$15.00, expiring March 31, 2016, to the placement agent in the financing.

On May 3, 2011, we issued 907 shares of our common stock in connection with the cashless exercise of warrants to purchase 1,365 shares of common stock at \$15.00 per share.

Item 16. Exhibits and Financial Statement Schedules

Exhibit No.	Description	Filed with this Form S-1	Incorporated by Reference		
			Form	Filing Date	Exhibit No.
1.1	Form of Underwriting Agreement	X			
2.1	Agreement and Plan of Merger by and among Novelos Therapeutics, Inc., Cell Acquisition Corp. and Collectar, Inc. dated April 8, 2011		8-K	April 11, 2011	2.1
3.1	Second Amended and Restated Certificate of Incorporation		8-K	April 11, 2011	3.1
3.2	Certificate of Ownership and Merger of Collectar Biosciences, Inc. with and into Novelos Therapeutics, Inc.		8-K	February 11, 2014	3.1
3.3	Certificate of Amendment to the Second Amended and Restated Articles of Incorporation		8-K	June 13, 2014	3.1
3.4	Amended and Restated By-laws		8-K	June 1, 2011	3.1
4.1	Form of common stock certificate		S-1/A	November 9, 2011	4.1
5.1	Legal Opinion of Foley Hoag LLP	X			
10.1	Form of non-plan non-qualified stock option used from February to May 2005		SB-2	November 16, 2005	10.4
10.2	Form of non-plan non-qualified stock option used after May 2005		SB-2	November 16, 2005	10.5
10.3	2006 Stock Incentive Plan, as amended		8-K	December 18, 2013	10.1
10.4	Form of Incentive Stock Option under Novelos Therapeutics, Inc.'s 2006 Stock Incentive Plan		8-K	December 15, 2006	10.1
10.5	Form of Non-Statutory Stock Option under Novelos Therapeutics, Inc.'s 2006 Stock Incentive Plan		8-K	December 15, 2006	10.2
10.6	Common Stock Purchase Warrant dated February 11, 2009		8-K	February 18, 2009	4.2
10.7	Form of Common Stock Purchase Warrant issued pursuant to the Consent and Waiver of Holders of Series C Convertible Preferred Stock and Series E Convertible Preferred Stock dated July 6, 2010		S-1A	July 7, 2010	10.53
10.8	Form of Common Stock Purchase Warrant dated April 8, 2011		8-K	April 11, 2011	4.3
10.9	Securities Purchase Agreement dated April 8, 2011		8-K	April 11, 2011	10.1
10.10	License Agreement between Collectar, LLC and the Regents of the University of Michigan dated September 14, 2003, as amended through June 2010		S-1	July 1, 2011	10.31

10.11	Lease Agreement between Collectar, LLC and McAllen Properties LLC, as amended and extended	S-1	July 1, 2011	10.32
10.12	Loan Agreement between the Wisconsin Department of Commerce and Collectar, Inc. dated September 15, 2010	S-1	July 1, 2011	10.33
10.13	General Business Security Agreement dated September 15, 2010	S-1	July 1, 2011	10.34
10.14	Form of Warrant dated December 6, 2011	S-1/A	November 9, 2011	4.2
10.15	Placement Agent Agreement dated April 9, 2012 between the Company and Rodman and Renshaw, LLC	S-1	April 9, 2012	10.31
10.16	Securities Purchase Agreement dated June 7, 2012	8-K	June 11, 2012	10.1
10.17	Amendment Agreement dated May 11, 2012 between the Company and Rodman and Renshaw, LLC	S-1/A	May 14, 2012	10.33
10.18	Form of Common Stock Purchase Warrant dated June 13, 2012	8-K	June 11, 2012	4.1
10.19	Securities Purchase Agreement between the Company and Renova Industries Ltd.	10-Q	November 6, 2012	10.2
10.20	Form of Securities Purchase Agreement	8-K	February 14, 2013	10.1
10.21	Form of Common Stock Purchase Warrant	8-K	February 14, 2013	4.1
10.22	Amendment and restated Placement Agent Agreement dated January 8, 2013 between the Company and Burrill LLC	S-1/A	January 31, 2013	10.37
10.23	Retention Agreement between the Company and Christopher Pazoles dated July 26, 2013	10-Q	November 13, 2013	10.2
10.24	Retention Agreement between the Company and Joanne M. Protano dated July 26, 2013	10-Q	November 13, 2013	10.3
10.25	Consulting Agreement between the Company and Simon Pedder dated October 4, 2013	10-Q	November 13, 2013	10.4
10.26	Employment Agreement between the Company and Simon Pedder dated October 4, 2013	10-Q	November 13, 2013	10.5
10.27	Waiver Agreement between the Company and Renova Assets Ltd. dated October 9, 2013	8-K	October 10, 2013	10.1
10.28	Securities Purchase Agreement dated February 5, 2014	8-K	February 10, 2014	10.1
10.29	Form of Convertible Debenture	8-K	February 10, 2014	4.1

10.30	Form of Common Stock Purchase Warrant		8-K	February 10, 2014	4.2
10.31	Form of Warrant Agreement between Collectar Biosciences, Inc. and American Stock Transfer and Trust Company	X			
21.1	List of Subsidiaries		10-K	March 19, 2014	21.1
23.1	Consent of Foley Hoag LLP (included in Exhibit 5.1)	X			
23.2	Consent of Grant Thornton LLP	X			
24.1	Powers of Attorney (included on signature page)		S-1	May 19, 2014	24.1

Item 17. Undertakings.

- a. The undersigned registrant hereby undertakes:
1. To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - i. To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;
 - ii. To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.

2. That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
3. To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
4. 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 the offering 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.
5. That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities: The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
 - i. Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
 - ii. Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
 - iii. The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
 - iv. Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

b. Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the 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 Act and will be governed by the final adjudication of such issue.

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this Amendment to the registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Madison, State of Wisconsin, on July 7, 2014.

CELLECTAR BIOSCIENCES, INC.

By: /s/ Simon Pedder

Simon Pedder

President and Chief Executive Officer

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, this Amendment to the Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Simon Pedder</u> Simon Pedder	Chief Executive Officer and Director (<i>principal executive officer</i>)	July 7, 2014
<u>/s/ Chad J. Kolean</u> Chad J. Kolean	Chief Financial Officer (<i>principal financial officer and principal accounting officer</i>)	July 7, 2014
<u>*</u> Stephen A. Hill	Chairman of the Board of Directors	July 7, 2014
<u>*</u> Paul L. Berns	Director	July 7, 2014
<u>*</u> John Neis	Director	July 7, 2014
<u>*</u> Jamey P. Weichert	Director	July 7, 2014

* /s/ Simon Pedder as attorney-in-fact.

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UNDERWRITING AGREEMENT

between

CELLECTAR BIOSCIENCES, INC.

and

AEGIS CAPITAL CORP.,

as Representative of the Several Underwriters

CELLECTAR BIOSCIENCES, INC.

UNDERWRITING AGREEMENT

New York, New York
_____, 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, Collectar Biosciences, Inc., a corporation formed under the laws of the State of Delaware (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 \$0.00001 per share (the “**Common Stock**”), together with Common Stock purchase 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) (such discount, the “**Underwriter Discount**”). 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). Notwithstanding the foregoing (i) the Underwriter Discount shall not apply to Firm Securities purchased using the application of proceeds from the redemption of up to \$4,000,000 in principal amount of outstanding convertible debentures of the Company (the “**Debenture Securities**”), and (ii) the Underwriter Discount shall be 3.5% with respect to Firm Securities (i.e., (96.5% of the per Firm Security offering price) issued and sold to the Company’s existing investors (the “**Existing Investor Securities**”).

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 Ellenoff Grossman & Schole LLP, 1345 Avenue of the Americas, New York, NY 10105 (“**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 Representative is hereby granted an option (the “**Over-Allotment Option**”) to purchase, in the aggregate, up to (a) _____ 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.

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 this Section 1.2 may be exercised by the Representative as to all (at any time) or any part (from time to time) of any combination of the Option Securities within 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 will not be later than three (3) 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 EGS 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, each Option Closing Date will be as set forth in the notice. Upon exercise of the Over-Allotment Option, the Company will become obligated to convey to the Underwriters, and, subject to the terms and conditions set forth herein, the Underwriters will become obligated to purchase, the number of Option Shares and/or Option Warrants specified in such notice. The Representative may cancel the Over-Allotment Option at any time prior to the expiration of the Over-Allotment Option by written notice to the Company. 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**.”

1.2.4. 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 of the 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.

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 ("**Representative's Warrant**") for the purchase of an aggregate of [•] shares of Common Stock, representing 5% of the Firm Shares (excluding the Option Shares), for an aggregate purchase price of \$100.00 (for such Representative's Warrant and not for the shares underlying such warrant, the exercise price for which is described below); provided that such percentage shall be 2.5% with respect to any Firm Shares that are included in any Existing Investor Securities, and 0.0% with respect to any Firm Shares that are included in any Debenture Securities. 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 or as otherwise expressly permitted by FINRA Rule 5110(g); 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 Applicable 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. 333-196091), 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), 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 shares of Common Stock and the Warrants will be registered pursuant to Section 12(b) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), on or prior to the Closing Date. The Company has taken no action designed to, or likely to have the effect of, impairing the registration of the shares of Common Stock under the Exchange Act, nor has the Company received any notification that the Commission would be unwilling to effect such registration.

2.2 Stock Exchange Listing. The shares of Common Stock and the Warrants are approved for listing on the Nasdaq Capital Market upon notice of issuance (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 the 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. The Company has filed an application for the Listing of Additional Shares with the Exchange to list the Public Securities and the Representative’s Securities.

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.

(i i) 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.

(i i i) 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 best of 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 since January 1, 2014, except as disclosed in the Registration Statement, the Pricing Disclosure Package and the Preliminary Prospectus.

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; 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, 2013, (i) none of the Company’s filings with the Commission 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 rules and regulations promulgated of the Commission promulgated thereunder (the “**Exchange Act Regulations**”).

2 . 7 Independent Accountants. To the knowledge of the Company, Grant Thornton 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. 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 shares of capital stock 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. All issued and outstanding securities of the Company issued prior to the transactions contemplated by this Agreement have been duly authorized, and 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. The Public Shares and Representative’s Shares, when issued and paid for, will be validly issued, fully paid and non-assessable; The holders of the Public Securities and Representative’s Securities 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. 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 2.26 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 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 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, in each case other than advances or reimbursement of expenses, including non-accountable expenses.

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) to the Company's knowledge, beneficial owner of 5% or more of any class of the Company's securities or (iii) to the Company's knowledge, 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 best 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), as well as certain other holders of shares of Common Stock heretofore agreed upon between you and the Company] (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 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's 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 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” mean all federal, state, local, foreign and other net income, gross income, gross receipts, sales, use, ad valorem, transfer, franchise, profits, license, lease, service, service use, withholding, payroll, employment, excise, severance, stamp, occupation, premium, property, windfall profits, customs, duties or other taxes, fees, assessments or charges of any kind whatever, together with any interest and any penalties, additions to tax or additional amounts with respect thereto. The term “returns” means all returns, declarations, reports, statements and other documents required to be filed in respect to taxes.

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 . 3 7 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 FDA Form 483, notice of adverse finding, warning letter, untitled letter or other correspondence or notice from the U.S. Food and Drug Administration or any other governmental authority alleging or asserting noncompliance with any Applicable Laws or any licenses, certificates, approvals, clearances, authorizations, permits and supplements or amendments thereto required by any such Applicable Laws (“**Authorizations**”); (C) possesses all material Authorizations and such Authorizations are valid and in full force and effect and are not in material violation of any term of any such Authorizations; (D) has not received notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any governmental authority or third party alleging that any product operation or activity is in violation of any Applicable Laws or Authorizations and has no knowledge that any such governmental authority or third party is considering any such claim, litigation, arbitration, action, suit, investigation or proceeding; (E) has not received notice that any governmental authority has taken, is taking or intends to take action to limit, suspend, modify or revoke any Authorizations and has no knowledge that any such governmental authority is considering such action; (F) has filed, obtained, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Applicable Laws or Authorizations and that all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were complete and correct on the date filed (or were corrected or supplemented by a subsequent submission); and (G) has not, either voluntarily or involuntarily, initiated, conducted, or issued or caused to be initiated, conducted or issued, any recall, market withdrawal or replacement, safety alert, post-sale warning, “dear doctor” letter, or other notice or action relating to the alleged lack of safety or efficacy of any product or any alleged product defect or violation and, to the Company’s knowledge, no third party has initiated, conducted or intends to initiate any such notice or action.

2 . 3 8 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 Regulations.

2 . 3 9 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 . 4 0 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 twenty (20) issued and outstanding shares thereof (the “**Reverse Stock Split**”), such Reverse Stock Split became effective on June 13, 2014.

2 . 4 1 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 reasonable 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 . Free Writing Prospectuses. The Company agrees that, unless it obtains the prior written consent of the Representative, 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.

3.2.4. [Reserved]

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 best efforts to cause the Registration Statement to remain effective with a current prospectus for at least six (6) months after the Applicable Time, 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 Listing. The Company shall use its 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.

3.7 Reserved.

3.8 Payment of Expenses

3.8.1. 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; (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 and the Company may mutually designate (including, without limitation, all filing and registration fees, it being agreed that if the Offering is commenced on the Exchange, the Company shall make a payment of \$5,000 to such counsel at Closing, or if the Offering is commenced on the Over-the-Counter Bulletin Board, the Company shall make a payment of \$10,000 to such counsel upon the commencement of "blue sky" work by such counsel and an additional \$5,000 at Closing); (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 and the Company may mutually 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 of preparing, printing and delivering certificates representing the Public Securities; (i) fees and expenses of the transfer agent for the shares of Common Stock; (j) stock transfer and/or stamp taxes, if any, payable upon the transfer of securities from the Company to the Underwriters; (k) the fees and expenses of the Company's accountants; (l) the fees and expenses of the Company's legal counsel and other agents and representatives (m) the fees and expenses of the Underwriter's legal counsel not to exceed \$75,000; (n) the \$25,000 cost associated with the Underwriter's use of Ipreo's book-building, prospectus tracking and compliance software for the Offering; and (o) up to \$20,000 of the Underwriter'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.

3.8.2. 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 Shares (excluding the Option Shares), 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 . 9 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 . 1 0 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 (15th) 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 . 1 1 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 . 1 2 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 . 1 3 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.

3.14 Company Lock-Up Agreements.

3.14.1. 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 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.

3.14.2. 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.

3.15 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.

3.16 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 Company and the Representative may mutually 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.

3.17 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, 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 Shares, 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 Foley Hoag LLP, counsel to the Company, dated the Closing Date and addressed to the Representative, substantially in the form of Exhibit [] attached hereto.

4.2.2. [Opinion of Special Intellectual Property Counsel for the Company. On the Closing Date, the Representative shall have received the opinion of [IP COUNSEL NAME], special intellectual property counsel for the Company, dated the Closing Date, addressed to the Representative substantially in the form of Exhibit [] attached hereto.]¹

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.

¹ Include if IP Counsel providing an opinion

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 President and Chief Executive Officer, and its Treasurer and Chief Financial Officer stating on behalf of the Company and not in any individual capacity 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 or any Assistant Secretary of the Company, dated the Closing Date or the Option Date, as the case may be, respectively, certifying on behalf of the Company and not in any individual capacity: (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 reasonably 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 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, and each of their respective directors, officers, members, employees, representatives and agents (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 Preliminary Prospectus or 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, persons who control the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, and their respective directors and officers 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 Shares or Option Shares. If any Underwriter or Underwriters shall default in its or their obligations to purchase the Firm Shares or the Option Shares, if the Over-allotment Option is exercised hereunder, and if the number of the Firm Shares or Option Shares with respect to which such default relates does not exceed in the aggregate 10% of the number of Firm Shares or Option Shares that all Underwriters have agreed to purchase hereunder, then such Firm Shares or Option Shares to which the default relates shall be purchased by the non-defaulting Underwriters in proportion to their respective commitments hereunder.

6.2 Default Exceeding 10% of Firm Shares or Option Shares. In the event that the default addressed in Section 6.1 relates to more than 10% of the Firm Shares or Option Shares, you may in your discretion arrange for yourself or for another party or parties to purchase such Firm Shares or Option Shares 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 Shares or Option Shares, you do not arrange for the purchase of such Firm Shares or Option Shares, then the Company shall be entitled to a further period of one (1) Business Day within which to procure another party or parties satisfactory to you to purchase said Firm Shares or Option Shares on such terms. In the event that neither you nor the Company arrange for the purchase of the Firm Shares or Option Shares 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 Shares, this Agreement will not terminate as to the Firm Shares; and provided, further, that nothing herein shall relieve a defaulting Underwriter of its liability, if any, to the other Underwriters and to the Company for damages occasioned by its default hereunder.

6.3 Postponement of Closing Date. In the event that the Firm Shares or Option Shares to which the default relates are to be purchased by the non-defaulting Underwriters, or are to be purchased by another party or parties as aforesaid, 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 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.

7.2 Right of First Refusal. Provided that the Firm Shares 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 the Offering is completed, to act as sole and exclusive investment banker, sole and exclusive book-runner, sole and exclusive financial advisor, sole and exclusive underwriter and/or sole and exclusive placement agent, at the Representative’s sole and exclusive discretion, for each and every future public and private equity and debt offering, including all equity linked financings (each, a “Subject Transaction”), during such twelve (12) month period, of the Company, or any successor to or subsidiary of the Company, on terms and conditions customary to the Representative for such Subject Transactions. For the avoidance of any doubt, the Company shall not retain, engage or solicit any additional investment banker, book-runner, financial advisor, underwriter and/or placement agent in a Subject Transaction without the express written consent of the Representative.

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 during the twelve (12) month period agreed to above.

In the event the Company fails to comply with this provision, damages shall be computed as the greater of 1% of the public offering price of the Firm Securities and Option Securities (if any are purchased) or 5% of the aggregate underwriting or placement fees of such Subject Transaction, or the maximum allowable amount under applicable FINRA rules and regulations.

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 Shares or Option Shares; or (vii) if the Company is in material breach of any of its representations, warranties or covenants hereunder; or (viii) if the Representative shall have become aware after the date hereof of such a material adverse change in the conditions 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 Representative 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:

Ellenoff Grossman & Schole LLP

1345 Avenue of the Americas

New York, NY 10105

Attn: Joseph Smith, Esq.

Fax No.: 212-370-7889

If to the Company:

Cellectar Biosciences, Inc.

3301 Agriculture Drive

Madison, WI 53716

Attention: Dr. Simon Pedder

Fax No: [•]

with a copy (which shall not constitute notice) to:

Foley Hoag LLP

Seaport West

155 Seaport Boulevard

Boston, MA 02210

Attention: Paul Bork, Esq.

Fax No: (617)832-7000

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 2, 2014, 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,

CELLECTAR BIOSCIENCES, INC.

By:

Name: Simon Pedder, PhD
Title: Chief Executive Officer

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:

[Signature Page]
[COMPANY] – Underwriting Agreement

SCHEDULE 1

	Underwriter	Total Number of Firm Shares to be Purchased	Number of Additional Shares to be Purchased if the Over- Allotment Option is Fully Exercised
Aegis Capital Corp.			
TOTAL			

SCHEDULE 2-A

Pricing Information

Number of Firm Shares: [•]

Number of Warrants: [.]

Number of Option Shares: [•]

Number of Option Warrants: [.]

Public Offering Price per Share: \$[•]

Public Offering Price per Warrant: \$[.]

Underwriting Discount per Share: \$[•]

Underwriting Discount per Warrant: \$[.]

Underwriting Non-accountable expense allowance per share and warrant: \$[•]

Proceeds to Company per share and warrant (before expenses): \$[•]

SCHEDULE 2-B

Issuer General Use Free Writing Prospectuses

[None.]

SCHEDULE 3

List of Lock-Up Parties

Sch. 3-1

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

Collectar Biosciences, 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 Collectar Biosciences, 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 \$0.00001 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 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 Reed Smith 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 [Intentionally omitted.]

4.2 "Piggy-Back" Registration.

4.2.1 Grant of Right. The Holder shall have the right, for a period of no more than five (5) 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.

In the event of such a proposed registration, the Company shall furnish the then Holders of outstanding Registrable Securities with not less than ten (10) business 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 five (5) business 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 fourth 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 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.

4.3.4 Damages. Should the Company fail to comply with Section 4.2, the Holder(s) may, 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, 11th 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:

Ellenoff Grossman & Schole LLP
1345 Avenue of the Americas
New York, NY 10105
Attn: Joseph Smith, Esq.
Fax No.: 212-370-7889

If to the Company:

Collectar Biosciences, Inc.
3301 Agriculture Drive
Madison, WI 53716
Attention: Dr. Simon Pedder
Fax No: [•]

with a copy (which shall not constitute notice) to:

Foley Hoag LLP
Seaport West
155 Seaport Boulevard
Boston, MA 02210
Attention: Paul Bork, Esq.
Fax No: (617)832-7000

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.

[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.

CELLECTAR BIOSCIENCES, 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 \$[•] per share (the "Shares"), of Collectar Biosciences, 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 \$0.00001 per share, of Collectar Biosciences, 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 Collectar Biosciences, Inc., a Delaware corporation (the “Company”), providing for the public offering (the “Public Offering”) of shares of common stock, par value \$0.00001 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 “Prospectus”) relating to the Public Offering (the “Lock-Up Period”), (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 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).

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 the Company, or if the Underwriting Agreement (other than the provisions thereof which survive termination) shall terminate or be terminated prior to payment for and delivery 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.

Ex. C-1

EXHIBIT D

Form of Opinion of Counsel

(i) The Company is validly existing as a corporation and is in good standing under the laws of the State of Delaware with the requisite corporate power and authority to own or lease, as the case may be, and operate its respective properties, and to conduct its business, as described in the Registration Statement, the Pricing Disclosure Package and the Prospectus and to enter into and perform its obligations under the Underwriting Agreement.

(ii) The authorized and outstanding shares of capital stock of the Company is as set forth in the Prospectus.

(iii) The Public Securities have been duly authorized for issuance and sale to the Underwriters pursuant to the Underwriting Agreement and, when issued and paid for pursuant to the terms of the Underwriting Agreement, will be validly issued and fully paid and non-assessable; the holders thereof are not and will not be subject to personal liability solely by reason of being such holders. The issuance of the Public Securities is not and will not be subject to the preemptive or similar rights of any holders of any security of the Company arising by operation of law or under the Charter, the Bylaws or the Material Contracts.

(iv) The Underwriting Agreement has been duly and validly authorized, executed and delivered by the Company.

(v) The Representative's Warrant Agreement has been duly and validly authorized, executed and delivered by the Company and constitutes the valid and legally binding obligation of the Company, enforceable against the Company in accordance with its terms. The shares of Common Stock issuable upon exercise of the Representative's Warrant Agreement have been duly authorized and reserved for issuance by all necessary corporate action on the part of the Company and, when issued in accordance with the terms of the Representative's Warrant Agreement, including the payment to the Company of the consideration specified therefor, will be validly issued, fully paid and non-assessable and will not be subject to the preemptive or similar rights of any holders of any security of the Company arising by operation of law or under the Charter, the Bylaws or the Material Contracts. [NTD: Enforceability exceptions to be included in wrap.]

(vi) The execution, delivery and performance of the Underwriting Agreement and the Representative's Warrant Agreement, and compliance by the Company with the terms and provisions thereof and the consummation of the transactions contemplated thereby, and the issuance and sale of the Public Securities, do not and will not, whether with or without the giving of notice or the lapse of time or both, (a) violate, conflict with, or result in a breach of, any of the terms or provisions of, or constitute a default under, or result in the creation or modification of any lien, security interest, charge or encumbrance upon any of the properties or assets of the Company pursuant to the terms of, any mortgage, deed of trust, note, indenture, loan, contract, commitment or other agreement or instrument filed or incorporated by reference as an exhibit to the Registration Statement (collectively, the "Material Contracts"), (b) result in any violation of the provisions of the Charter or the By-laws of the Company, or (c) violate any law, statute or any judgment, order or decree, rule or regulation applicable to the Company of any Governmental Entity.

(vii) The shares of Common Stock offered pursuant to the Prospectus conform in all material respects to the description thereof contained in the Registration Statement, the Pricing Disclosure Package and the Prospectus. No United States or Massachusetts statute or regulation, or any provision of the Delaware General Corporation Law, required to be described in the Prospectus is not described as required (except as to the "blue sky" laws any jurisdiction, as to which we expresses no opinion).

(viii) The form of certificate used to evidence the Common Stock complies in all material respects with all applicable Delaware law requirements, with any applicable requirements of the Charter and By-laws and with the requirements of the Exchange.

(i x) The statements in the Registration Statement, Pricing Disclosure Package and the Prospectus under the heading “Description of Capital Stock,” insofar as such statements purport to summarize legal matters, legal conclusions, the Charter, the By-laws, or other agreements or documents discussed therein, are correct in all material respects.

(x) The Registration Statement has been declared effective by the Commission under the Securities Act and the Securities Act Regulations. To our knowledge, no stop order suspending the effectiveness of the Registration Statement has been issued under the Securities Act or any order preventing or suspending the use of any Preliminary Prospectus, any Issuer Free Writing Prospectus or the Prospectus has been issued, and no proceedings for any such purpose have been instituted or, to such counsel’s knowledge, are pending by the Commission or any other Governmental Entity. Any required filing of the Prospectus, and any required supplement thereto, pursuant to Rule 424(b) under the Securities Act Regulations, has been made in the manner and within the time period required by Rule 424(b) (without reference to Rule 424(b)(8)).

(xi) The Company is not required and, after giving effect to the Offering and sale of the Public Securities 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,” under the Investment Company Act of 1940, as amended.

(x i i) No filing with, or authorization, approval, consent, license, order, registration, qualification or decree of, any United States federal or Massachusetts state Governmental Entity (other than under the Securities Act and the Securities Act Regulations, which have been obtained, or as may be required under the securities or blue sky laws of any jurisdiction, as to which we express no opinion), or under the Delaware General Corporation Law, is necessary or required for the performance by the Company of its obligations under the Underwriting Agreement, in connection with the offering, issuance or sale of the Public Securities thereunder or the consummation of the transactions contemplated thereby, except such as have been already made or obtained or as may be required under the rules of the Exchange, state securities laws or the rules of FINRA.

(xiii) The Reverse Stock Split has been authorized by all necessary corporation action of the Company. The Reverse Stock Split was duly effected by the Company on June 13, 2014 in accordance with the Delaware General Corporation Law.

(xiv) The Public Securities have been approved for listing on the Exchange upon official notice of issuance.

(x v) Each of (1) the Registration Statement, as of the time it became effective, (2) the Pricing Disclosure Package, as of the Applicable Time, and (3) the Prospectus, as of its date (in each case other than the financial statements and supporting schedules included therein, as to which no opinion need be rendered), complied as to form in all material respects with the requirements of the Securities Act and Securities Act Regulations.

Such counsel shall further furnish a letter to the following effect:

Nothing has come to such counsel's attention that caused such counsel to believe that (1) the Registration Statement, as of the time it became effective, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein not misleading; (2) the Pricing Disclosure Package, as of the Applicable Time, contained an untrue statement of a material fact or omitted 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; or (3) the Prospectus, as of its date and as of the Closing Date or Option Closing Date, as applicable, contained or contains an untrue statement of a material fact or omitted or omits 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 (except that, in each case, such counsel need express no view, and make no statement, with respect to the financial statements and schedules and notes thereto and other financial data derived therefrom that are contained in or omitted from the Registration Statement, the Pricing Disclosure Package or the Prospectus).

Foley Hoag LLP
Seaport West
155 Seaport Boulevard
Boston, MA 02210-2600

617 832 1000 *main*
617 832 7000 *fax*

June 16, 2014

Collectar Biosciences, Inc.
3301 Agriculture Drive
Madison, WI 53716

Re: S-1 Registration Statement

Ladies and Gentlemen:

We have acted as counsel to Collectar Biosciences, Inc., a Delaware corporation (the “Company”), in connection with the filing of a Registration Statement on Form S-1, Registration No. 333-196091 (as amended or supplemented to date, the “Registration Statement”), under the Securities Act of 1933, as amended (the “Securities Act”). The Registration Statement covers the proposed public offering of up to \$20,000,000 in units consisting of a to be determined number of shares of the Company’s common stock, \$0.00001 par value per share (“Common Stock”) to be issued directly (such shares of Common Stock, the “Shares”), warrants (the “Warrants”) representing rights to purchase an additional shares of Common Stock in an amount equal to the number of the Shares (the “Warrant Shares”), and the issuance of the Warrant Shares upon exercise of the Warrants. The Shares, the Warrants and the Warrant Shares are collectively referred to herein as the “Securities”.

In rendering the opinions set forth below, we have assumed that (i) all information contained in all documents reviewed by us is true and correct; (ii) all signatures on all documents examined by us are genuine; (iii) all documents submitted to us as originals are authentic, and all documents submitted to us as copies conform to the originals of those documents; (iv) each natural person signing any document reviewed by us had the legal capacity to do so; and (v) the certificates or other documents representing the Securities will be duly executed and delivered.

We express no opinion as to the laws of any state or jurisdiction other than the General Corporation Law of the State of Delaware (including applicable provisions of the Delaware Constitution and reported judicial decisions interpreting such Law and such Constitution), the laws of The Commonwealth of Massachusetts and the federal laws of the United States of America.

We have examined the Registration Statement, including the exhibits thereto, and such other documents, corporate records, and instruments and have examined such laws and regulations as we have deemed necessary for purposes of rendering the opinions set forth herein.

Based upon such examination and subject to the further provisions hereof, we are of the following opinion:

1. The Shares, when issued, sold and delivered in the manner and for the consideration set forth in the Registration Statement, will be validly issued, fully paid and non-assessable.
2. The Warrants, when duly executed and delivered by the Company in the manner and for the consideration set forth in the Registration Statement, will constitute valid and legally binding obligations of the Company.
3. The Warrant Shares, if and when issued, paid for and delivered in compliance with the terms of the Warrants and in compliance with the terms of the Company's Certificate of Incorporation as in effect from time to time, will be validly issued, fully paid and non-assessable.

The foregoing opinions are qualified to the extent that the enforceability of any document, instrument or the Securities may be limited by or subject to bankruptcy, insolvency, fraudulent transfer or conveyance, reorganization, moratorium or other similar laws relating to or affecting creditors' rights generally, and general equitable or public policy principles.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and the reference to us under the caption "Legal Matters" in the prospectus included in the Registration Statement. In giving this consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Securities and Exchange Commission promulgated thereunder.

This opinion letter is given to you solely for use in connection with the offer and sale of the Securities while the Registration Statement is in effect and is not to be relied upon for any other purpose. Our opinion is expressly limited to the matters set forth above, and we render no opinion, whether by implication or otherwise, as to any other matters relating to the Company, the Securities or the Registration Statement.

Very truly yours,

FOLEY HOAG LLP

By: s/Paul Bork
a Partner

WARRANT AGREEMENT

between

CELLECTAR BIOSCIENCES, INC.

and

AMERICAN STOCK TRANSFER & TRUST COMPANY, LLC,
AS WARRANT AGENT

_____, 2014

This WARRANT AGREEMENT (the "Agreement") is dated as of [●], 2014, between CELLECTAR BIOSCIENCES, INC., a Delaware corporation (the "Company"), and AMERICAN STOCK TRANSFER & TRUST COMPANY, LLC, as warrant agent (the "Warrant Agent").

W I T N E S S E T H

WHEREAS, pursuant to the Underwriting Agreement, dated as of _____, 2014 between the Company and the Representative of the underwriters named therein, the Company proposes to issue warrants (the "Warrants") entitling the holders thereof to purchase initially up to an aggregate of _____ shares of the Company's _____ common stock, par value \$ _____ per share (the "Common Stock"), which may be increased by up to 15% through exercise of the underwriters' over-allotment option. The shares of Common Stock issuable pursuant to the Warrants, as adjusted from time to time pursuant to this Agreement, are referred to herein as the "Shares."

WHEREAS, the Warrant Agent, at the request of the Company, has agreed to act as the agent of the Company in connection with the issuance, registration, transfer, exchange, exercise and conversion of the Warrants.

NOW, THEREFORE, in consideration of the premises and mutual agreements herein set forth, the parties hereto agree as follows:

SECTION 1. Appointment of Warrant Agent. The Company hereby appoints the Warrant Agent to act as agent for the Company in accordance with the instructions hereinafter in this Agreement set forth, and the Warrant Agent hereby accepts such appointment, upon the terms and conditions hereinafter set forth.

SECTION 2. Issuances. Subject to the provisions of this Agreement, on the Closing Date pursuant to the terms of the Underwriting Agreement (the "Closing Date"), Warrants to purchase initially up to an aggregate of _____ Shares will be issued and delivered by the Company. The Company will deliver to the Warrant Agent certificates evidencing the Warrants (the "Warrant Certificates").

SECTION 3. Form of Warrant Certificates. The Warrant Certificates to be delivered pursuant to this Agreement and the forms of election to exercise and of assignment to be printed on the reverse thereof shall be in substantially the form set forth in Exhibit A hereto together with such appropriate insertions, omissions, substitutions and other variations as are required or permitted by this Agreement, and may have such letters, numbers or other marks of identification and such legends or endorsements placed thereon as may be required to comply with any law or with any rules made pursuant thereto or with any rules of any securities exchange or as may, consistently herewith, be determined by the officers executing such Warrant Certificates, as evidenced by their execution of the Warrant Certificates.

SECTION 4. Execution of Warrant Certificates. Warrant Certificates shall be signed on behalf of the Company by its Chief Executive Officer, its President, a Vice President or its Treasurer (each, an "Officer") and attested by its Secretary or an Assistant Secretary (each, an "Attesting Officer"). Each such signature upon the Warrant Certificates may be in the form of a facsimile signature of any such Officer and Attesting Officer and may be imprinted or otherwise reproduced on the Warrant Certificates and for that purpose the Company may adopt and use the facsimile signature of any Officer and Attesting Officer.

If any Officer or Attesting Officer who shall have signed any of the Warrant Certificates shall cease to be an Officer or Attesting Officer before the Warrant Certificates so signed shall have been countersigned by the Warrant Agent or delivered by the Company, such Warrant Certificates nevertheless may be countersigned and delivered as though such Officer or Attesting Officer had not ceased to be an Officer or Attesting Officer, and any Warrant Certificate may be signed on behalf of the Company by any person who, at the actual date of the execution of such Warrant Certificate, shall be a proper Officer or Attesting Officer to sign such Warrant Certificate, although at the date of the execution of this Agreement any such person was not such an officer.

SECTION 5. Registration and Countersignature. Warrant Certificates shall be countersigned and dated the date of countersignature by the Warrant Agent and shall not be valid for any purpose unless so countersigned. The Warrants shall be numbered and shall be registered in a register (the "Warrant Register") to be maintained by the Warrant Agent.

The Warrants shall be issuable in book entry (the "Book-Entry Warrant Certificates"). All of the Warrants shall initially be represented by one or more Book-Entry Warrant Certificates deposited with the Warrant Agent and registered in the name of the Registered Holder. Ownership of beneficial interests in the Warrants shall be shown on, and the transfer of such ownership shall be effected through, records maintained by the Warrant Agent.

The Company and the Warrant Agent may deem and treat the registered holder(s) of a Warrant Certificate as the absolute owner(s) thereof (notwithstanding any notation of ownership or other writing thereon made by anyone), for the purpose of any exercise thereof or any distribution to the holder(s) thereof and for all other purposes, and neither the Company nor the Warrant Agent shall be affected by any notice to the contrary.

SECTION 6. Registration of Transfers and Exchanges. (a) Subject to paragraphs (b) and (c) of this Section 6, the Warrant Agent shall from time to time register the transfer of any outstanding Warrant Certificates in the Warrant Register, upon surrender of such Warrant Certificates at the Warrant Agent Office (as defined below), duly endorsed, and accompanied by a completed form of assignment, duly signed by the registered holder or holders thereof or by the duly appointed legal representative thereof or by a duly authorized attorney. Upon any such registration of transfer, a new Warrant Certificate shall be issued to the transferee.

Warrant Certificates may be exchanged at the option of the holder or holders thereof, when surrendered to the Warrant Agent at its offices or agency maintained in American Stock Transfer & Trust Company, LLC, 6201 15th Avenue, Brooklyn, NY 11219 Attention: Corporate Trust Department (or at such other offices or agencies as may be designated by the Warrant Agent) (the "Warrant Agent Office") for the purpose of exchanging, transferring and exercising the Warrants or at the offices of any successor Warrant Agent appointed as provided in Section 17 hereof, without payment of any service charge, for another Warrant Certificate or other Warrant Certificates of like tenor and representing in the aggregate a like number of Warrants.

(b) No Warrants may be sold, exchanged, assigned, encumbered or otherwise transferred in violation of the Securities Act of 1933, as amended (the "Securities Act"), or state securities laws. The Company and the Warrant Agent agree and acknowledge that the Warrants have been effectively registered under the Securities Act of 1933 (Registration Statement on Form S-1 file number 333-196091). The Shares have been registered for issuance upon proper exercise. The Company shall notify the Warrant Agent within one Business Day upon its receipt of any stop order or notice of suspension of the effectiveness of the Registration Statement.

(c) The Warrant Agent is hereby authorized to countersign, in accordance with the provisions of this Section 6 and Section 5, and deliver the new Warrant Certificates required pursuant to the provisions of this Section 6, and for the purpose of any distribution of Warrant Certificates contemplated by Section 13.

(d) In the event of any purported transfer in violation of the provisions of this Agreement, such purported transfer shall be void and of no effect and the Warrant Agent shall not give effect to such transfer.

SECTION 7. Duration and Exercise of Warrants. (a) The Warrants shall expire on _____.m. _____ time on the fifth anniversary of the Closing Date (the "Expiration Date"). After the Expiration Date, the Warrants will become void and of no value.

(b) Subject to the provisions of this Agreement, including Section 12, each Warrant shall entitle the holder thereof to purchase from the Company (and the Company shall issue and sell to such holder) initially one fully paid and nonassessable Share evidenced by the Warrant Certificate at a price equal to \$_____ per share (as the same may be hereafter adjusted pursuant to Section 2 of the Warrant, the "Exercise Price").

(c) If shares of Common Stock are certificated at that time, upon surrender of a Warrant Certificate and payment of the Exercise Amount, the Warrant Agent shall requisition from the Company's transfer agent (the "Transfer Agent") for issuance and delivery to or upon the written order of the registered holder of such Warrant Certificate and in such name or names as such registered holder may designate, a certificate or certificates for the Share or Shares issuable upon the exercise of the Warrant or Warrants evidenced by such Warrant Certificate. In any event, upon receipt of such Warrant Certificate and payment, the Company shall, as promptly as practicable, and in any event within three (3) business days thereafter, cause to be issued to such holder the aggregate number of whole Shares issuable upon such exercise and deliver to such holder written confirmation that such Shares have been duly issued and recorded on the books of the Company as hereinafter provided. The Shares so issued shall be registered in the name of the holder or such other name as shall be designated in the order delivered by the holder and any Person so designated to be named therein shall be deemed to have become the holder of record of such Share or Shares as of the date of surrender of such Warrant Certificate at the Warrant Agent Office duly executed by the holder thereof and upon payment of the Exercise Amount. The Warrants evidenced by a Warrant Certificate shall be exercisable, at the election of the registered holder thereof, either in their entirety or from time to time for a portion of the number of Warrants initially specified in the Warrant Certificate. If less than all of the Warrants evidenced by a Warrant Certificate surrendered upon the exercise of Warrants are exercised at any time prior to the Expiration Date, a new Warrant Certificate or Warrant Certificates shall be issued (or book entry noted) for the remaining number of Warrants evidenced by the Warrant Certificate so surrendered, and the Warrant Agent is hereby authorized to countersign the required new Warrant Certificate or Warrant Certificates pursuant to the provisions of Section 6 and this Section 7. Notwithstanding any provision herein to the contrary, the Company shall not be required to register Shares in the name of any Person who acquired any Warrant or any Shares otherwise than in accordance with this Agreement.

(d) The Warrant Agent shall account promptly to the Company with respect to Warrants exercised and concurrently pay or deliver to the Company all monies and other consideration received by it in connection with the purchase of Shares through the exercise of Warrants.

SECTION 8. Cancellation of Warrants. If the Company or any of its subsidiaries shall purchase or otherwise acquire the Warrants, the Warrant Certificates representing such Warrants shall thereupon be delivered to the Warrant Agent and be cancelled by it and retired. The Warrant Agent shall cancel all Warrant Certificates surrendered for exchange, substitution, transfer or exercise in whole or in part. Such cancelled Warrant Certificates shall thereafter be disposed of in a manner satisfactory to the Company.

SECTION 9. Mutilated or Missing Warrant Certificates. If any of the Warrant Certificates shall be mutilated, lost, stolen or destroyed, the Company shall issue, and the Warrant Agent shall countersign and deliver, in exchange and substitution for and upon cancellation of the mutilated Warrant Certificate, or in lieu of and substitution for the Warrant Certificate lost, stolen or destroyed, a new Warrant Certificate of like tenor and representing an equivalent number of Warrants, but only upon (i) receipt of evidence reasonably satisfactory to the Company and the Warrant Agent of the loss, theft or destruction of such Warrant Certificate and (ii) indemnification by the holder in a reasonable amount and in a reasonable manner, if requested by either the Company or the Warrant Agent, reasonably satisfactory to them. Applicants for such substitute Warrant Certificates shall also comply with such other reasonable regulations and pay such other reasonable charges as the Company or the Warrant Agent may prescribe and as required by Section 8-405 of the Uniform Commercial Code as in effect in the State of New York.

SECTION 10. Reservation of Shares. For the purpose of enabling it to satisfy any obligation to issue the Shares, the Company will at all times through the Expiration Date, reserve and keep available out of its aggregate authorized but unissued or treasury shares of Common Stock, the number of Shares deliverable upon the exercise of all outstanding Warrants. The Company will keep a copy of this Agreement on file with the Transfer Agent and with every transfer agent for any Shares pursuant to Section 7. The Warrant Agent is hereby irrevocably authorized to requisition from time to time from the Transfer Agent stock certificates issuable upon exercise of outstanding Warrants, and the Company will supply the Transfer Agent with duly executed stock certificates for such purpose.

The Company covenants that all Shares will, upon issuance in accordance with the terms of this Agreement, be fully paid and nonassessable and free from all taxes, liens, charges and security interests created by or imposed upon the Company with respect to the issuance and holding thereof.

SECTION 11. Stock Exchange Listings. So long as any Warrants remain outstanding, the Company will use commercially reasonable efforts to take all necessary action to have the Warrants and the Shares, immediately upon their issuance upon exercise of Warrants, (i) listed on each national securities exchange on which the Common Stock is then listed or (ii) if the Common Stock is not then listed on any national securities exchange, listed for quotation on the OTCQB or such other over-the-counter quotation system on which the Common Stock may then be listed.

SECTION 12. Adjustment of Exercise Price and Number of Shares or Number of Warrants. The Exercise Price, the number of shares of Common Stock purchasable upon the exercise of each Warrant and the number of Warrants outstanding are subject to adjustment from time to time upon the occurrence of the events enumerated in the Warrant.

(a) Irrespective of any adjustments in Exercise Price or the number or kind of shares of Common Stock purchasable upon the exercise of the Warrants, Warrants theretofore or thereafter issued may continue to express the same price and number and kind of shares as are stated in the Warrants initially issued pursuant to this Agreement. The Company, however, may at any time in its sole discretion make any change in the form of Warrant Certificate that it may deem appropriate to give effect to such adjustments and that does not affect the substance of the Warrant Certificate, and any Warrant Certificate thereafter issued, whether in exchange or substitution for an outstanding Warrant Certificate or otherwise, may be in the form as so changed.

(b) Before taking any action that would cause an adjustment pursuant to Section 2 of the Warrant reducing any Exercise Price below the then par value (if any) of the Shares, the Company will take any reasonable corporate action that may, in the opinion of its counsel, be necessary in order that the Company may validly and legally issue fully paid and nonassessable Shares at such Exercise Price as so adjusted.

SECTION 13. Fractional Shares. The Company shall not be required to issue Warrants to purchase fractions of Shares or other securities, or to issue fractions of Shares or other securities upon exercise of the Warrants, and, to the extent Shares are certificated, to distribute certificates which evidence fractional Shares. Any fractional shares shall be rounded up to nearest whole share.

SECTION 14. Notices to Warrantholders. Upon any adjustment of the number of shares of Common Stock purchasable upon exercise of each Warrant, any Exercise Price or the number of Warrants outstanding including any adjustment pursuant to Section 2 thereof, the Company, within one business day thereafter, shall (i) cause to be filed with the Warrant Agent a certificate of the Chief Financial Officer of the Company setting forth the event giving rise to such adjustment, such Exercise Price and either the number of shares of Common Stock purchasable upon exercise of each Warrant or the additional number of Warrants to be issued for each previously outstanding Warrant, as the case may be, after such adjustment and setting forth in reasonable detail the method of calculation and the facts upon which such adjustment was made, which certificate shall be conclusive evidence of the correctness of the matters set forth therein, and (ii) cause to be given to each of the registered holders of the Warrant Certificates at such holder's address appearing on the Warrant Register, written notice of such adjustments by first-class mail, postage prepaid. Where appropriate, such notice may be given in advance and included as a part of the notice required to be mailed under the other provisions of this Section 14.

If any of the events set forth in Sections 3 or 4 of the Warrant shall occur, then the Company shall cause written notice of such event to be filed with the Warrant Agent and shall cause written notice of such event to be given to each of the registered holders of the Warrant Certificates at such holder's address appearing on the Warrant Register, by first-class mail, postage prepaid, as set forth in Section 9 of the Warrant.

SECTION 15. Merger, Consolidation or Change of Name of Warrant Agent. Any corporation into which the Warrant Agent may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which the Warrant Agent shall be a party, or any corporation succeeding to the shareholder services business of the Warrant Agent, shall be the successor to the Warrant Agent hereunder without the execution or filing of any document or any further act on the part of any of the parties hereto, provided that such corporation would be eligible for appointment as a successor Warrant Agent under the provisions of Section 17. If at the time such successor to the Warrant Agent shall succeed under this Agreement, any of the Warrant Certificates shall have been countersigned but not delivered, any such successor to the Warrant Agent may adopt the countersignature of the original Warrant Agent; and if at that time any of the Warrant Certificates shall not have been countersigned, any successor to the Warrant Agent may countersign such Warrant Certificates either in the name of the predecessor Warrant Agent or in the name of the successor Warrant Agent; and in all such cases such Warrant Certificates shall have the full force provided in the Warrant Certificates and in this Agreement.

If at any time the name of the Warrant Agent shall be changed and at such time any of the Warrant Certificates shall have been countersigned but not delivered, the Warrant Agent whose name has changed may adopt the countersignature under its prior name; and if at that time any of the Warrant Certificates shall not have been countersigned, the Warrant Agent may countersign such Warrant Certificates either in its prior name or in its changed name; and in all such cases such Warrant Certificates shall have the full force provided in the Warrant Certificates and in this Agreement.

SECTION 16. Warrant Agent. The Warrant Agent undertakes the duties and obligations imposed by this Agreement upon the following terms and conditions, by all of which the Company and the holders of Warrants, by their acceptance thereof, shall be bound:

(a) The statements contained herein and in the Warrant Certificates shall be taken as statements of the Company, and the Warrant Agent assumes no responsibility for the accuracy of any of the same except such as describe the Warrant Agent or action taken or to be taken by it. Except as herein otherwise provided, the Warrant Agent assumes no responsibility with respect to the execution, delivery or distribution of the Warrant Certificates.

(b) The Warrant Agent shall not be responsible for any failure of the Company to comply with any of the covenants contained in this Agreement or in the Warrant Certificates to be complied with by the Company nor shall it at any time be under any duty or responsibility to any holder of a Warrant to make or cause to be made any adjustment in any Exercise Price, in the number of shares of Common Stock issuable upon exercise of any Warrant (except as instructed by the Company), the number of Warrants outstanding, or to determine whether any facts exist which may require any such adjustments, or with respect to the nature or extent of or method employed in making any such adjustments when made.

(c) The Warrant Agent may consult at any time with counsel satisfactory to it (who may be counsel for the Company) and the Warrant Agent shall incur no liability or responsibility to the Company or any holder of any Warrant Certificate in respect of any action taken, suffered or omitted by it hereunder in good faith and in accordance with the opinion or the advice of such counsel.

(d) The Warrant Agent shall incur no liability or responsibility to the Company or to any holder of any Warrant Certificate for any action taken in reliance on any notice, resolution, waiver, consent, order, certificate or other paper, document or instrument believed by it to be genuine and to have been signed, sent or presented by the proper party or parties.

(e) The Company agrees to pay to the Warrant Agent reasonable compensation for all services rendered by the Warrant Agent under this Agreement, to reimburse the Warrant Agent upon demand for all expenses, taxes and governmental charges and other charges of any kind and nature incurred by the Warrant Agent in the performance of its duties under this Agreement and to indemnify the Warrant Agent and save it harmless against any and all losses, liabilities and expenses, including judgments, costs and reasonable counsel fees and expenses, for anything done or omitted by the Warrant Agent arising out of or in connection with this Agreement except as a result of its gross negligence or bad faith.

(f) The Warrant Agent shall be under no obligation to institute any action, suit or legal proceeding or to take any other action likely to involve expense unless the Company or one or more registered holders of Warrant Certificates shall furnish the Warrant Agent with reasonable security and indemnity for any costs or expenses which may be incurred. All rights of action under this Agreement or under any of the Warrants may be enforced by the Warrant Agent without the possession of any of the Warrant Certificates or the production thereof at any trial or other proceeding relative thereto, and any such action, suit or proceeding instituted by the Warrant Agent shall be brought in its name as Warrant Agent, and any recovery or judgment shall be for the ratable benefit of the registered holders of the Warrants, as their respective rights or interests may appear.

(g) The Warrant Agent, and any stockholder, director, officer or employee thereof, may buy, sell or deal in any of the Warrants or other securities of the Company or become pecuniarily interested in any transaction in which the Company may be interested, or contract with or lend money to the Company or otherwise act as fully and freely as though they were not the Warrant Agent under this Agreement, or a stockholder director, officer or employee of the Warrant Agent, as the case may be. Nothing herein shall preclude the Warrant Agent from acting in any other capacity for the Company or for any other legal entity.

(h) The Warrant Agent shall act hereunder solely as agent for the Company, and its duties shall be determined solely by the provisions hereof. The Warrant Agent shall not be liable for anything which it may do or refrain from doing in connection with this Agreement except for its own gross negligence or bad faith.

(i) The Company agrees that it will perform, execute, acknowledge and deliver or cause to be performed, executed, acknowledged and delivered all such further and other acts, instruments and assurances as may reasonably be required by the Warrant Agent for the carrying out or performing of the provisions of this Agreement.

(j) The Warrant Agent shall not be under any responsibility in respect of the validity of this Agreement or the execution and delivery hereof (except the due execution hereof by the Warrant Agent) or in respect of the validity or execution of any Warrant Certificate (except its countersignature thereof), nor shall the Warrant Agent by any act hereunder be deemed to make any representation or warranty as to the authorization or reservation of the Shares to be issued pursuant to this Agreement or any Warrant Certificate or as to whether the Shares will when issued be validly issued, fully paid and nonassessable or as to the Exercise Amount or the number of shares of Common Stock issuable upon exercise of any Warrant.

(k) The Warrant Agent is hereby authorized and directed to accept instructions with respect to the performance of its duties hereunder from the Chief Executive Officer, the President, any Vice President, the Treasurer, the Secretary or an Assistant Secretary of the Company, and to apply to such officers for advice or instructions in connection with its duties, and shall not be liable for any action taken or suffered to be taken by it in good faith in accordance with instructions of any such officer or in good faith reliance upon any statement signed by any one of such officers of the Company with respect to any fact or matter (unless other evidence in respect thereof is herein specifically prescribed) which may be deemed to be conclusively proved and established by such signed statement.

SECTION 17. Change of Warrant Agent. If the Warrant Agent shall resign (such resignation to become effective not earlier than _____ (____) days after the giving of written notice thereof to the Company and the registered holders of Warrant Certificates) or shall become incapable of acting as Warrant Agent or if the Board shall by resolution remove the Warrant Agent (such removal to become effective not earlier than _____ (____) days after the filing of a certified copy of such resolution with the Warrant Agent and the giving of written notice of such removal to the registered holders of Warrant Certificates), the Company shall appoint a successor to the Warrant Agent. If the Company shall fail to make such appointment within a period of _____ (____) days after such removal or after it has been so notified in writing of such resignation or incapacity by the Warrant Agent or by the registered holder of a Warrant Certificate (in the case of incapacity), then the registered holder of any Warrant Certificate may apply to any court of competent jurisdiction for the appointment of a successor to the Warrant Agent. Pending appointment of a successor to the Warrant Agent, either by the Company or by such a court, the duties of the Warrant Agent shall be carried out by the Company. Any successor Warrant Agent, whether appointed by the Company or by such a court, shall be a bank or trust company, in good standing, incorporated under the laws of any state or of the United States of America. As soon as practicable after appointment of the successor Warrant Agent, the Company shall cause written notice of the change in the Warrant Agent to be given to each of the registered holders of the Warrant Certificates at such holder's address appearing on the Warrant Register. After appointment, the successor Warrant Agent shall be vested with the same powers, rights, duties and responsibilities as if it had been originally named as Warrant Agent without further act or deed. The former Warrant Agent shall deliver and transfer to the successor Warrant Agent all books and records of the Company and any property at the time held by it hereunder and execute and deliver, at the expense of the Company, any further assurance, conveyance, act or deed necessary for the purpose. Failure to give any notice provided for in this Section 17 or any defect therein, shall not affect the legality or validity of the removal of the Warrant Agent or the appointment of a successor Warrant Agent, as the case may be.

SECTION 18. Warrantholder Not Deemed a Stockholder. Nothing contained in this Agreement or in any of the Warrant Certificates shall be construed as conferring upon the holders thereof the right to vote or to receive dividends or to consent or to receive notice as stockholders in respect of the meetings of stockholders or for the election of directors of the Company or any other matter, or any rights whatsoever as stockholders of the Company.

SECTION 19. Stock Issuance. The shares of Common Stock deliverable upon the exercise of a Warrant, or any portion thereof, may be either previously authorized but unissued shares or issued shares, which have then been reacquired by the Company. Such shares shall be fully paid and nonassessable. The Company shall not be required to issue or deliver any certificate or certificates for shares of Common Stock purchased upon the exercise of a Warrant or portion thereof, or, as the case may be, make a book entry into the stock ledger of the Company if the shares of Common Stock are not certificated, prior to fulfillment of all of the following conditions:

(a) the obtaining of approval or other clearance from any state or federal governmental agency which the Company shall, in its reasonable and good faith discretion, determine to be necessary or advisable; and

(b) the lapse of such reasonable period of time following the exercise of the Warrant as may be required by applicable law.

SECTION 20. Notices to Company and Warrant Agent. All notices, requests or demands authorized by this Agreement to be given or made by the Warrant Agent or by any registered holder of any Warrant Certificate to or on the Company to be effective shall be in writing (including by telecopy), and shall be deemed to have been duly given or made when delivered by hand, or ____ business days after being delivered to a recognized courier (whose stated terms of delivery are ____ business days or less to the destination such notice), or ____ business days after being deposited in the mail, postage prepaid, or, in the case of telecopy notice, when received, addressed (until another address is filed in writing by the Company with the Warrant Agent), as follows:

Collectar Biosciences, Inc.
3301 Agriculture Drive
Madison, WI 53716
Tel: [●]
Fax: [●]
Attention: Chief Financial Officer

With a copy (which shall not constitute notice) to:

Foley Hoag LLP
Seaport West
155 Seaport Boulevard
Boston, MA 02210
Tel: (617) 832-1000
Fax: (617) 832-7000
Attention: Paul Bork, Esq.

If the Company shall fail to maintain such office or agency or shall fail to give such notice of any change in the location thereof, presentation may be made and notices and demands may be served at the principal office of the Warrant Agent.

Any notice pursuant to this Agreement to be given by the Company or by any registered holder of any Warrant Certificate to the Warrant Agent shall be sufficiently given if sent by first-class mail, postage prepaid, addressed (until another address is filed in writing by the Warrant Agent with the Company), as follows:

American Stock Transfer & Trust Company, LLC
6201 15th Avenue
Brooklyn, NY 11219
Tel: 718-921-8544
Fax: 718-765-8742
Attention: Corporate Trust Department

SECTION 21. Supplements and Amendments. The Company and the Warrant Agent may from time to time supplement or amend this Agreement (a) without the approval of any holders of Warrant Certificates in order to cure any manifest error or other mistake in this Agreement, provided that the Company shall give such holders written notice of any supplements or amendments prior to the effectiveness thereof, or (b) with the prior written consent of holders of the Warrants exercisable for a majority of the shares of Common Stock then issuable upon exercise of the Warrants then outstanding; provided that each amendment or supplement that decreases the Warrant Agent's rights or increases its duties and responsibilities hereunder shall also require the prior written consent of the Warrant Agent.

SECTION 22. Successors. Subject to Section 6(b), all the covenants and provisions of this Agreement by or for the benefit of the holders of the Warrants, the Company or the Warrant Agent shall bind and inure to the benefit of their respective successors and assigns hereunder.

SECTION 23. Termination. This Agreement shall terminate on the Expiration Date. Notwithstanding the foregoing, this Agreement will terminate on any earlier date when all Warrants have been exercised. The provisions of Section 16 shall survive such termination.

SECTION 24. Governing Law. This Agreement and each Warrant Certificate issued hereunder shall be deemed to be a contract made under the laws of the State of New York applicable to contracts made and to be performed therein and for all purposes shall be construed in accordance with the laws of such State.

SECTION 25. Benefits of this Agreement. Nothing in this Agreement shall be construed to give to any Person other than the Company, the Warrant Agent and the registered holders of the Warrant Certificates any legal or equitable right, remedy or claim under this Agreement, and this Agreement shall be for the sole and exclusive benefit of the Company, the Warrant Agent and the registered holders of the Warrant Certificates.

SECTION 26. Counterparts. This Agreement may be executed in any number of counterparts and each of such counterparts shall for all purposes be deemed to be an original, and such counterparts shall together constitute but one and the same instrument.

SECTION 27. Headings. The headings of sections of this Agreement have been inserted for convenience of reference only, are not to be considered a part hereof and in no way modify or restrict any of the terms or provisions hereof.

[Signature page follows]

IN WITNESS WHEREOF, the parties hereto have caused this Warrant Agreement to be executed and delivered as of the day and year first above written.

CELLECTAR BIOSCIENCES, INC.

By: _____
Name:
Title:

AMERICAN STOCK TRANSFER & TRUST COMPANY, LLC, as
Warrant Agent

By: _____
Name:
Title:

EXHIBIT A

FORM OF FACE OF WARRANT CERTIFICATE

VOID AFTER [●], 2019

No. _____ WARRANT TO PURCHASE _____
SHARES OF _____ COMMON STOCK

CELLECTAR BIOSCIENCES, INC.

WARRANT TO PURCHASE COMMON STOCK

This Warrant Certificate certifies that _____ or registered assigns, is the registered holder of a Warrant (the "Warrant") of CELLECTAR BIOSCIENCES, INC., a Delaware corporation (the "Company"), to purchase the number of shares (the "Shares") of _____ common stock, par value \$ _____ per share (the "Common Stock"), of the Company set forth above. This Warrant expires on 5:00 p.m., New York City time, on the fifth anniversary of the Issue Date (the "Expiration Date") and entitles the holder to purchase from the Company the number of fully paid and nonassessable Shares set forth above at the exercise price (the "Exercise Price") multiplied by the number of Shares set forth above (the "Exercise Amount"). The Exercise Amount may be payable as follows: (i) by payment to the Company by certified or official bank check, or by wire transfer of the Exercise Amount, (ii) in the circumstances set forth in Section 1(d) of this Warrant, by surrender to the Company for cancellation of shares of Common Stock newly acquired upon exercise of a Warrant, valued as set forth herein, or (iii) by a combination of the methods described in clauses (i) and (ii) above. The initial Exercise Price shall be \$ _____.

Subject to the terms and conditions set forth herein and in the Warrant Agreement, this Warrant may be exercised by the holder thereof during normal business hours on any business day in the period commencing upon the Issue Date and ending on the Expiration Date, this Warrant Certificate, with the form of Election to Exercise duly completed and executed by the registered holder or holders thereof or by the duly appointed legal representative thereof or by a duly authorized attorney, and payment of the Exercise Amount at the Warrant Agent Office.

The Exercise Price, the number of shares of Common Stock purchasable upon exercise of this Warrant and the number of Warrants outstanding are subject to adjustment upon the occurrence of certain events as set forth in the Warrant.

The Issue Date is _____, 2014. After the Expiration Date, the Warrants will become wholly void and of no value.

REFERENCE IS HEREBY MADE TO THE FURTHER PROVISIONS OF THIS WARRANT CERTIFICATE SET FORTH ON THE REVERSE HEREOF. SUCH FURTHER PROVISIONS SHALL FOR ALL PURPOSES HAVE THE SAME EFFECT AS THOUGH FULLY SET FORTH AT THIS PLACE.

This Warrant Certificate shall not be valid unless countersigned by the Warrant Agent.

Capitalized terms used herein and not defined shall have the respective meanings ascribed to such terms in the Warrant Agreement.

IN WITNESS WHEREOF, the Company has caused this Certificate to be executed by its duly authorized officers.

Dated: _____

By _____
[Title]

ATTEST:

By _____

Countersigned:

AMERICAN STOCK TRANSFER & TRUST COMPANY, LLC

AS WARRANT AGENT

By _____

[FORM OF REVERSE OF WARRANT CERTIFICATE]

The warrant evidenced by this Warrant Certificate is a part of a duly authorized issue of Warrants to purchase a maximum of _____ shares of Common Stock issued pursuant to a Warrant Agreement, dated as of [·] (the "Warrant Agreement"), duly executed and delivered by the Company to American Stock Transfer & Trust Company, LLC, as Warrant Agent (the "Warrant Agent"). The Warrant Agreement hereby is incorporated by reference in and made a part of this instrument and is hereby referred to for a description of the rights, limitation of rights, obligations, duties and immunities thereunder of the Warrant Agent, the Company and the holders (the words "holders" or "holder" meaning the registered holders or registered holder) of the Warrants. A copy of the Warrant Agreement may be inspected at the Warrant Agent Office and is available upon written request addressed to the Company. All terms used herein that are defined in the Warrant Agreement have the meanings assigned to them therein.

1. EXERCISE OF WARRANT.

- (a) Mechanics of Exercise. Subject to the terms and conditions hereof (including, without limitation, the limitations set forth in Section (f)), this Warrant may be exercised by the Holder on any day on or after the Issuance Date (each, an "**Exercise Date**"), in whole or in part, by delivery (whether via facsimile or otherwise) of a written notice to the Warrant Agent, in the form attached hereto as Exhibit A (the "**Exercise Notice**"), of the Holder's election to exercise this Warrant. Within one (1) Trading Day following the Warrant Agent's receipt of a Notice of Exercise for this Warrant as aforesaid, the Holder shall deliver payment to the Warrant Agent of an amount equal to the Exercise Price in effect on the date of such exercise multiplied by the number of Warrant Shares as to which this Warrant was so exercised (the "**Aggregate Exercise Price**") via wire transfer of immediately available funds if the Holder did not notify the Warrant Agent in such Exercise Notice that such exercise was made pursuant to a Cashless Exercise (as defined in Section 1(d)). The Holder shall be required to deliver the original of this Warrant in order to effect an exercise hereunder. If a Notice of Exercise is submitted by anyone other than the holder of record, or by a registered broker dealer on behalf of a client, such Notice of Exercise shall be accompanied by a medallion guarantee. Execution and delivery of an Exercise Notice with respect to less than all of the Warrant Shares shall have the same effect as cancellation of the original of this Warrant and issuance of a new Warrant evidencing the right to purchase the remaining number of Warrant Shares. Execution and delivery of an Exercise Notice for all of the then-remaining Warrant Shares shall have the same effect as cancellation of the original of this Warrant after delivery of the Warrant Shares in accordance with the terms hereof. On or before the third (3rd) Trading Day following the date on which the Company has received such Exercise Notice, the Company shall (X) provided that the Company's transfer agent ("Transfer Agent") is participating in The Depository Trust Company ("**DTC**") Fast Automated Securities Transfer Program, upon the request of the Holder, credit such aggregate number of shares of Common Stock to which the Holder is entitled pursuant to such exercise to the Holder's or its designee's balance account with DTC through its Deposit/Withdrawal at Custodian system, or (Y) if the Transfer Agent is not participating in the DTC Fast Automated Securities Transfer Program, issue and deliver to the Holder or, at the Holder's instruction pursuant to the Exercise Notice, the Holder's agent or designee, in each case, sent by reputable overnight courier to the address as specified in the applicable Exercise Notice, a certificate, registered in the Company's share register in the name of the Holder or its designee (as indicated in the applicable Exercise Notice), for the number of shares of Common Stock to which the Holder is entitled pursuant to such exercise. Upon delivery of an Exercise Notice, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date such Warrant Shares are credited to the Holder's DTC account or the date of delivery of the certificates evidencing such Warrant Shares (as the case may be). If this Warrant is submitted in connection with any exercise pursuant to this Section 1(a) and the number of Warrant Shares represented by this Warrant submitted for exercise is greater than the number of Warrant Shares being acquired upon an exercise, then, at the request of the Holder and delivery to the Warrant Agent of the Warrant Certificate, the Company shall as soon as practicable and in no event later than three (3) Business Days after any exercise and at its own expense, cause the Warrant Agent to issue and deliver to the Holder (or its designee) a new Warrant (in accordance with Section 5) representing the right to purchase the number of Warrant Shares purchasable immediately prior to such exercise under this Warrant, less the number of Warrant Shares with respect to which this Warrant is exercised. No fractional shares of Common Stock are to be issued upon the exercise of this Warrant, but rather the number of shares of Common Stock to be issued shall be rounded up to the nearest whole number. The Company shall pay any and all taxes and fees which may be payable with respect to the issuance and delivery of Warrant Shares upon exercise of this Warrant. Notwithstanding the foregoing, except in the case where an exercise of this Warrant is validly made pursuant to a Cashless Exercise, the Company's failure to deliver Warrant Shares to the Holder on or prior to the second (2nd) Trading Day after the Company's receipt of the Aggregate Exercise Price shall not be deemed to be a breach of this Warrant.

(b) Exercise Price. For purposes of this Warrant, “**Exercise Price**” means [\$_____], subject to adjustment as provided herein.

(c) Company’s Failure to Timely Deliver Securities. If the Company shall fail, for any reason or for no reason, to issue to the Holder within the later of (i) three (3) Trading Days after receipt of the applicable Exercise Notice and (ii) two (2) Trading Days after the Company’s receipt of the Aggregate Exercise Price (or valid notice of a Cashless Exercise) (such later date, the “**Share Delivery Deadline**”), a certificate for the number of shares of Common Stock to which the Holder is entitled and register such shares of Common Stock on the Company’s share register or to credit the Holder’s balance account with DTC for such number of shares of Common Stock to which the Holder is entitled upon the Holder’s exercise of this Warrant (as the case may be) (a “**Delivery Failure**”), and if on or after such Share Delivery Deadline the Holder purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Holder of all or any portion of the number of shares of Common Stock, or a sale of a number of shares of Common Stock equal to all or any portion of the number of shares of Common Stock, issuable upon such exercise that the Holder so anticipated receiving from the Company, then, in addition to all other remedies available to the Holder, the Company shall, within three (3) Business Days after the Holder’s request and in the Holder’s discretion, either (i) pay cash to the Holder in an amount equal to the Holder’s total purchase price (including brokerage commissions and other out-of-pocket expenses, if any) for the shares of Common Stock so purchased (including, without limitation, by any other Person in respect, or on behalf, of the Holder) (the “**Buy-In Price**”), at which point the Company’s obligation to so issue and deliver such certificate or credit the Holder’s balance account with DTC for the number of shares of Common Stock to which the Holder is entitled upon the Holder’s exercise hereunder (as the case may be) (and to issue such shares of Common Stock) shall terminate, or (ii) promptly honor its obligation to so issue and deliver to the Holder a certificate or certificates representing such shares of Common Stock or credit the Holder’s balance account with DTC for the number of shares of Common Stock to which the Holder is entitled upon the Holder’s exercise hereunder (as the case may be) and pay cash to the Holder in an amount equal to the excess (if any) of the Buy-In Price over the product of (A) such number of shares of Common Stock multiplied by (B) the lowest Closing Sale Price of the Common Stock on any Trading Day during the period commencing on the date of the applicable Exercise Notice and ending on the date immediately preceding the date of such issuance and payment under this clause (ii).

(d) Cashless Exercise. Notwithstanding anything contained herein to the contrary (other than Section 1(f) below), if the shares issuable upon the exercise of the Warrants are no longer registered under the Securities Act of 1933, as amended (the “**Securities Act**”), the Holder may, in its sole discretion, exercise this Warrant in whole or in part and, in lieu of making the cash payment otherwise contemplated to be made to the Company upon such exercise in payment of the Aggregate Exercise Price, elect instead to receive upon such exercise the “Net Number” of shares of Common Stock (the “**Net Number**”) determined according to the following formula (a “**Cashless Exercise**”):

$$\text{Net Number} = \frac{(A \times B) - (A \times C)}{D}$$

For purposes of the foregoing formula:

A = the total number of shares with respect to which this Warrant is then being exercised.

B = the quotient of (x) the sum of the Closing Sale Price of the Common Stock of each of the ten (10) Trading Days ending at the close of business on the Principal Market immediately prior to the time of exercise as set forth in the applicable Exercise Notice, divided by (y) ten (10).

C = the Exercise Price then in effect for the applicable Warrant Shares at the time of such exercise.

D = the Closing Sale Price of the Common Stock on the Trading Day immediately preceding the date of the applicable Exercise Notice.

- (e) Disputes. In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the number of Warrant Shares to be issued pursuant to the terms hereof, the Company shall promptly issue to the Holder the number of Warrant Shares that are not disputed and resolve such dispute in accordance with Section 11.
- (f) Limitations on Exercises. Notwithstanding anything to the contrary contained in this Warrant, this Warrant shall not be exercisable by the Holder hereof to the extent (but only to the extent) that after giving effect to such exercise the Holder (together with any of its affiliates) would beneficially own in excess of 4.99% (the “**Maximum Percentage**”) of the Common Stock. To the extent the above limitation applies, the determination of whether this Warrant shall be exercisable (vis-à-vis other convertible, exercisable or exchangeable securities owned by the Holder or any of its affiliates) and of which such securities shall be convertible, exercisable or exchangeable (as the case may be, as among all such securities owned by the Holder) shall, subject to such Maximum Percentage limitation, be determined on the basis of the first submission to the Company for conversion, exercise or exchange (as the case may be). The Holder’s submission of an Exercise Notice shall be conclusive of such Holder’s determination, and the Company shall be under no duty of inquiry with respect thereto. No prior inability to exercise this Warrant pursuant to this paragraph shall have any effect on the applicability of the provisions of this paragraph with respect to any subsequent determination of exercisability. For the purposes of this paragraph, beneficial ownership and all determinations and calculations (including, without limitation, with respect to calculations of percentage ownership) shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. The provisions of this paragraph shall be implemented in a manner otherwise than in strict conformity with the terms of this paragraph to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Maximum Percentage beneficial ownership limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such Maximum Percentage limitation. The limitations contained in this paragraph shall apply to a successor Holder of this Warrant. The holders of Common Stock shall be third party beneficiaries of this paragraph and the Company may not waive this paragraph without the consent of holders of a majority of its Common Stock. For any reason at any time, upon the written or oral request of the Holder, the Company shall within one (1) Business Day confirm orally and in writing to the Holder the number of shares of Common Stock then outstanding, including by virtue of any prior conversion or exercise of convertible or exercisable securities into Common Stock, including, without limitation, pursuant to this Warrant or securities issued pursuant to the Underwriting Agreement. By written notice to the Company, any Holder may increase or decrease the Maximum Percentage to any other percentage not in excess of 9.99% or below 4.99% specified in such notice; provided that (i) any such increase will not be effective until the 61st day after such notice is delivered to the Company, and (ii) any such increase or decrease will apply only to the Holder sending such notice and not to any other holder of Warrants.

(g) Insufficient Authorized Shares. From and after the Issuance Date, the Company shall at all times keep reserved for issuance under this Warrant a number of shares of Common Stock at least equal to 100% of the maximum number of shares of Common Stock as shall be necessary to satisfy the Company's obligation to issue shares of Common Stock hereunder (without regard to any limitation otherwise contained herein with respect to the number of shares of Common Stock that may be acquirable upon exercise of this Warrant). From and after the Issuance Date, if, notwithstanding the foregoing, and not in limitation thereof, at any time while any of the Warrants remain outstanding the Company does not have a sufficient number of authorized and unreserved shares of Common Stock to satisfy its obligation to reserve for issuance upon exercise of the Warrants at least a number of shares of Common Stock (the "**Required Reserve Amount**") equal to the number of shares of Common Stock as shall from time to time be necessary to effect the exercise of all of the Warrants then outstanding (an "**Authorized Share Failure**"), then the Company shall immediately take all action reasonably necessary to increase the Company's authorized shares of Common Stock to an amount sufficient to allow the Company to reserve the Required Reserve Amount for all the Warrants then outstanding. Without limiting the generality of the foregoing sentence, as soon as practicable after the date of the occurrence of an Authorized Share Failure, but in no event later than sixty (60) days after the occurrence of such Authorized Share Failure, the Company shall hold a meeting of its stockholders for the approval of an increase in the number of authorized shares of Common Stock. In connection with such meeting, the Company shall provide each stockholder with a proxy statement and shall use its reasonable best efforts to solicit its stockholders' approval of such increase in authorized shares of Common Stock and to cause its board of directors to recommend to the stockholders that they approve such proposal. In the event that the Company is prohibited from issuing shares of Common Stock upon an exercise of this Warrant due to the failure by the Company to have sufficient shares of Common Stock available out of the authorized but unissued shares of Common Stock (such unavailable number of shares of Common Stock, the "**Authorization Failure Shares**"), in lieu of delivering such Authorization Failure Shares to the Holder, the Company shall pay cash in exchange for the cancellation of such portion of this Warrant exercisable into such Authorization Failure Shares at a price equal to the sum of (i) the product of (x) such number of Authorization Failure Shares and (y) the greatest Closing Sale Price of the Common Stock on any Trading Day during the period commencing on the date the Holder delivers the applicable Exercise Notice with respect to such Authorization Failure Shares to the Company and ending on the date immediately preceding the date of such issuance and payment under this Section 1(g) and (ii) to the extent the Holder purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Holder of Authorization Failure Shares, any brokerage commissions and other out-of-pocket expenses, if any, of the Holder incurred in connection therewith.

- (h) The Warrants shall be issuable in book entry form. All of the Warrants shall initially be represented by one or more book-entry warrant certificates deposited with the Warrant Agent and registered in the name of the registered Holder.

2. ADJUSTMENT OF EXERCISE PRICE AND NUMBER OF WARRANT SHARES.

The Exercise Price and number of Warrant Shares issuable upon exercise of this Warrant are subject to adjustment from time to time as set forth in this Section 2.

- (a) Stock Dividends and Splits. If the Company, at any time on or after the Issuance Date, (i) pays a stock dividend on one or more classes of its then outstanding shares of Common Stock or otherwise makes a distribution on any class of capital stock that is payable in shares of Common Stock, (ii) subdivides (by any stock split, stock dividend, recapitalization or otherwise) one or more classes of its then outstanding shares of Common Stock into a larger number of shares or (iii) combines (by combination, reverse stock split or otherwise) one or more classes of its then outstanding shares of Common Stock into a smaller number of shares, then in each such case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to clause (i) of this paragraph shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution, and any adjustment pursuant to clause (ii) or (iii) of this paragraph shall become effective immediately after the effective date of such subdivision or combination. If any event requiring an adjustment under this paragraph occurs during the period that an Exercise Price is calculated hereunder, then the calculation of such Exercise Price shall be adjusted appropriately to reflect such event.

(b) Number of Warrant Shares. Simultaneously with any adjustment to the Exercise Price pursuant to paragraph (a) of this Section 2, the number of Warrant Shares that may be purchased upon exercise of this Warrant shall be increased or decreased proportionately, so that after such adjustment the aggregate Exercise Price payable hereunder for the adjusted number of Warrant Shares shall be the same as the aggregate Exercise Price in effect immediately prior to such adjustment (without regard to any limitations on exercise contained herein).

(c) Calculations. All calculations under this Section 2 shall be made by rounding to the nearest cent or the nearest 1/100th of a share, as applicable. The number of shares of Common Stock outstanding at any given time shall not include shares owned or held by or for the account of the Company, and the disposition of any such shares shall be considered an issue or sale of Common Stock.

3. FUNDAMENTAL TRANSACTIONS; MARKET STAND-OFF.

- (a) Fundamental Transactions. Upon the consummation of a Fundamental Transaction on or before the second anniversary of the initial issuance date of this Warrant, if the exercise price of the Warrant is greater than the price per share of Common Stock to be received by a holder in connection with the consummation of such Fundamental Transaction, the Warrant shall be terminated in exchange for the right of the registered holder to receive an amount of consideration in connection with such Fundamental Transaction equal to the Black Scholes Consideration Value of the Warrant as of the date of the closing of such Fundamental Transaction, which amount shall be payable in the same kind of securities, cash or property, and in the same proportion, payable to holders of Common Stock and based on the same fair market value, in the case of securities or property, as is applied to such securities or property in the Fundamental Transaction generally. The Company shall not effect any such Fundamental Transaction unless prior to or simultaneously with the consummation thereof, any successor to the Company, surviving entity or the corporation purchasing or otherwise acquiring such assets or other appropriate corporation or person shall assume the Warrant and the obligation to deliver to the registered holder such securities, cash or property as such holder may be entitled to receive pursuant to this Section 3(a), and the other obligations under the Warrant.

4. WARRANT HOLDER NOT DEEMED A STOCKHOLDER

. Except as otherwise specifically provided herein, the Holder, solely in its capacity as a holder of this Warrant, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in this Warrant be construed to confer upon the Holder, solely in its capacity as the Holder of this Warrant, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which it is then entitled to receive upon the due exercise of this Warrant. In addition, nothing contained in this Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of this Warrant or otherwise) or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company.

5. REISSUANCE OF WARRANTS.

(a) Transfer of Warrant. If this Warrant is to be transferred, the Holder shall surrender this Warrant (or the book entry warrant certificate representing this Warrant) to the Warrant Agent, whereupon the Warrant Agent will forthwith issue and deliver upon the order of the Holder a new Warrant (in accordance with Section 5(d)), registered as the Holder may request, representing the right to purchase the number of Warrant Shares being transferred by the Holder and, if less than the total number of Warrant Shares then underlying this Warrant is being transferred, a new Warrant (in accordance with Section 5(d)) to the Holder representing the right to purchase the number of Warrant Shares not being transferred.

(b) Lost, Stolen or Mutilated Warrant. Upon receipt by the Warrant Agent of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant (as to which a written certification and the indemnification contemplated below shall suffice as such evidence), and, in the case of loss, theft or destruction, of any indemnification undertaking by the Holder to the Company in customary and reasonable form and, in the case of mutilation, upon surrender and cancellation of this Warrant, the Company shall execute and deliver to the Holder a new Warrant (in accordance with Section 5(d)) representing the right to purchase the Warrant Shares then underlying this Warrant.

(c) Exchangeable for Multiple Warrants. This Warrant is exchangeable, upon the surrender hereof by the Holder at the principal office of the Company, for a new Warrant or Warrants (in accordance with Section 5(d)) representing in the aggregate the right to purchase the number of Warrant Shares then underlying this Warrant, and each such new Warrant will represent the right to purchase such portion of such Warrant Shares as is designated by the Holder at the time of such surrender; provided, however, no warrants for fractional shares of Common Stock shall be given.

(d) Issuance of New Warrants. Whenever the Company is required to issue a new Warrant pursuant to the terms of this Warrant, such new Warrant (i) shall be of like tenor with this Warrant, (ii) shall represent, as indicated on the face of such new Warrant, the right to purchase the Warrant Shares then underlying this Warrant, (iii) shall have an issuance date, as indicated on the face of such new Warrant which is the same as the Issuance Date, and (iv) shall have the same rights and conditions as this Warrant.

(e) Warrant Register. This Warrant shall be issuable in book entry form (the “Book-Entry Warrant Certificate”) and shall initially be represented by one or more Book-Entry Warrant Certificates deposited with the Warrant Agent and registered in the name of the Holder, or as otherwise directed by the Warrant Agent. Ownership of beneficial interests in this Warrant shall be shown on, and the transfer of such ownership shall be effected through, records maintained by the Warrant Agent (the “Warrant Register”). The Company may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual written notice to the contrary.

6. NOTICES. The Company shall provide the Holder with prompt written notice of all actions taken pursuant to this Warrant, including in reasonable detail a description of such action and the reason therefor. Without limiting the generality of the foregoing, the Company will give written notice to the Holder (i) promptly upon each adjustment of the Exercise Price and the number of Warrant Shares, setting forth in reasonable detail, and certifying, the calculation of such adjustment(s) and (ii) at least ten (10) days prior to the date on which the Company closes its books or takes a record (A) with respect to any dividend or distribution upon the shares of Common Stock, (B) with respect to any grants, issuances or sales of any Options, Convertible Securities or rights to purchase stock, warrants, securities or other property to holders of shares of Common Stock or (C) for determining rights to vote with respect to any Fundamental Transaction, dissolution or liquidation, provided in each case that such information shall be made known to the public prior to or in conjunction with such notice being provided to the Holder and (iii) at least ten (10) Trading Days prior to the consummation of any Fundamental Transaction. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any of its Subsidiaries, the Company shall simultaneously file such notice with the SEC pursuant to a Current Report on Form 8-K. It is expressly understood and agreed that the time of execution specified by the Holder in each Exercise Notice shall be definitive and may not be disputed or challenged by the Company.

7. AMENDMENT AND WAIVER. Except as otherwise provided herein, the provisions of this Warrant (other than Section 1(f)) may be amended and the Company may take any action herein prohibited, or omit to perform any act herein required to be performed by it, only if the Company has obtained the written consent of the Holder. No waiver shall be effective unless it is in writing and signed by an authorized representative of the waiving party.

8. SEVERABILITY. If any provision of this Warrant is prohibited by law or otherwise determined to be invalid or unenforceable by a court of competent jurisdiction, the provision that would otherwise be prohibited, invalid or unenforceable shall be deemed amended to apply to the broadest extent that it would be valid and enforceable, and the invalidity or unenforceability of such provision shall not affect the validity of the remaining provisions of this Warrant so long as this Warrant as so modified continues to express, without material change, the original intentions of the parties as to the subject matter hereof and the prohibited nature, invalidity or unenforceability of the provision(s) in question does not substantially impair the respective expectations or reciprocal obligations of the parties or the practical realization of the benefits that would otherwise be conferred upon the parties. The parties will endeavor in good faith negotiations to replace the prohibited, invalid or unenforceable provision(s) with a valid provision(s), the effect of which comes as close as possible to that of the prohibited, invalid or unenforceable provision(s).

9. GOVERNING LAW. This Warrant shall be governed by and construed and enforced in accordance with, and all questions concerning the construction, validity, interpretation and performance of this Warrant shall be governed by, the internal laws of the State of New York, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of New York or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of New York. The Company hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in The City of New York, Borough of Manhattan, for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. Nothing contained herein shall be deemed or operate to preclude the Holder from bringing suit or taking other legal action against the Company in any other jurisdiction to collect on the Company's obligations to the Holder or to enforce a judgment or other court ruling in favor of the Holder. **THE COMPANY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE TO, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION WITH OR ARISING OUT OF THIS WARRANT OR ANY TRANSACTION CONTEMPLATED HEREBY.**

10. CONSTRUCTION; HEADINGS. This Warrant shall be deemed to be jointly drafted by the Company and the Holder and shall not be construed against any Person as the drafter hereof. The headings of this Warrant are for convenience of reference and shall not form part of, or affect the interpretation of, this Warrant.

11. DISPUTE RESOLUTION. In the case of a dispute as to the determination of the Exercise Price, the Closing Sale Price or fair market value or the arithmetic calculation of the number of Warrant Shares (as the case may be), the Company or the Holder (as the case may be) shall submit the disputed determinations or arithmetic calculations (as the case may be) via facsimile (i) within two (2) Business Days after receipt of the applicable notice giving rise to such dispute to the Company or the Holder (as the case may be) or (ii) if no notice gave rise to such dispute, at any time after the Holder learned of the circumstances giving rise to such dispute. If the Holder and the Company are unable to agree upon such determination or calculation (as the case may be) of the Exercise Price, the Closing Sale Price or fair market value or the number of Warrant Shares (as the case may be) within three (3) Business Days of such disputed determination or arithmetic calculation being submitted to the Company or the Holder (as the case may be), then the Company shall, within two (2) Business Days submit via facsimile (a) the disputed determination of the Exercise Price, the Closing Sale Price or fair market value (as the case may be) to an independent, reputable investment bank selected by the Company and approved by the Holder or (b) the disputed arithmetic calculation of the number of Warrant Shares to the Company's independent, outside accountant. The Company shall cause at its expense the investment bank or the accountant (as the case may be) to perform the determinations or calculations (as the case may be) and notify the Company and the Holder of the results no later than ten (10) Business Days from the time it receives such disputed determinations or calculations (as the case may be). Such investment bank's or accountant's determination or calculation (as the case may be) shall be binding upon all parties absent demonstrable error.

12. REMEDIES, CHARACTERIZATION, OTHER OBLIGATIONS, BREACHES AND INJUNCTIVE RELIEF. The remedies provided in this Warrant shall be cumulative and in addition to all other remedies available under this Warrant, at law or in equity (including a decree of specific performance and/or other injunctive relief). Amounts set forth or provided for herein with respect to payments, exercises and the like (and the computation thereof) shall be the amounts to be received by the Holder and shall not, except as expressly provided herein, be subject to any other obligation of the Company (or the performance thereof). The Company acknowledges that a breach by it of its obligations hereunder will cause irreparable harm to the Holder and that the remedy at law for any such breach may be inadequate. The Company therefore agrees that, in the event of any such breach or threatened breach, the holder of this Warrant shall be entitled, in addition to all other available remedies, to an injunction restraining any breach, without the necessity of showing economic loss and without any bond or other security being required. The Company shall provide all information and documentation to the Holder that is requested by the Holder to enable the Holder to confirm the Company's compliance with the terms and conditions of this Warrant (including, without limitation, compliance with Section 2 hereof). The issuance of shares and certificates for shares as contemplated hereby upon the exercise of this Warrant shall be made without charge to the Holder or such shares for any issuance tax or other costs in respect thereof, provided that the Company shall not be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of any certificate in a name other than the Holder or its agent on its behalf.

15. TRANSFER. This Warrant may be offered for sale, sold, transferred or assigned without the consent of the Company.

16. CERTAIN DEFINITIONS. For purposes of this Warrant, the following terms shall have the following meanings:

“Adjustment Right” means any right granted with respect to any securities issued in connection with, or with respect to, any issuance or sale (or deemed issuance or sale in accordance with Section 2) of shares of Common Stock that could result in a decrease in the net consideration received by the Company in connection with, or with respect to, such securities (including, without limitation, any cash settlement rights, cash adjustment or other similar rights).

“Black Scholes Consideration Value” means the value of the applicable Option, Convertible Security or Adjustment Right (as the case may be) as of the date of issuance thereof; or, in the case of a Fundamental Transaction, the value of this Warrant, calculated using (x) if on or prior to the six month anniversary of the Issuance Date, the greater of the Black Scholes Option Pricing Model obtained from the “OV” function on Bloomberg, as a put option or a call option, or (y) if after the six month anniversary of the Issuance Date, the Black Scholes Option Pricing Model obtained from the “OV” function on Bloomberg as a call option, in each case, utilizing (i) an underlying price per share equal to the Closing Sale Price of the Common Stock on the Trading Day immediately preceding the public announcement of the execution of definitive documents with respect to the issuance of such Option or Convertible Security or Fundamental Transaction (as the case may be), (ii) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the remaining term of such Option, Convertible Security, or Adjustment Right (as the case may be) as of the date of issuance of such Option, Convertible Security or Adjustment Right (as the case may be), or the remaining term of this Warrant in the case of a Fundamental Transaction (iii) a zero cost of borrow and (iv) an expected volatility equal to the greater of 100% and the 100 day volatility obtained from the HVT function on Bloomberg (determined utilizing a 365 day annualization factor) as of the Trading Day immediately following the date of issuance of such Option, Convertible Security or Adjustment Right, or public announcement of a Fundamental Transaction (as the case may be).

“Bloomberg” means Bloomberg, L.P.

“Business Day” means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed.

“Closing Sale Price” means, for any security as of any date, the last closing trade price, respectively, for such security on the Principal Market, as reported by Bloomberg, or, if the Principal Market begins to operate on an extended hours basis and does not designate the closing trade price then the last trade price of such security prior to 4:00:00 p.m., New York City time, as reported by Bloomberg, or, if the Principal Market is not the principal securities exchange or trading market for such security, the last trade price of such security on the principal securities exchange or trading market where such security is listed or traded as reported by Bloomberg, or if the foregoing do not apply, the last trade price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg, or, if no last trade price is reported for such security by Bloomberg, the average of the bid prices, or the ask prices, respectively, of any market makers for such security as reported in the “pink sheets” by OTC Markets Group Inc. (formerly Pink Sheets LLC). If the Closing Sale Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Closing Sale Price of such security on such date shall be the fair market value as mutually determined by the Company and the Holder. If the Company and the Holder are unable to agree upon the fair market value of such security, then such dispute shall be resolved in accordance with the procedures in Section 11. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during such period.

“Common Stock” means (i) the Company’s shares of common stock, \$0.00001 par value per share, and (ii) any capital stock into which such common stock shall have been changed or any share capital resulting from a reclassification of such common stock.

“Convertible Securities” means any stock or other security (other than Options) that is at any time and under any circumstances, directly or indirectly, convertible into, exercisable or exchangeable for, or which otherwise entitles the holder thereof to acquire, any shares of Common Stock.

“Eligible Market” means The New York Stock Exchange, the NYSE MKT, the Nasdaq Global Select Market, the Nasdaq Global Market, the Nasdaq Capital Market, or the Principal Market.

“Expiration Date” means the date that is the fifth anniversary of the Issuance Date or, if such date falls on a day other than a Business Day or on which trading does not take place on the Principal Market (a **“Holiday”**), the next date that is not a Holiday.

“Fundamental Transaction” means that (i) the Company or any of its Subsidiaries shall, directly or indirectly, in one or more related transactions, (1) consolidate or merge with or into (whether or not the Company or any of its Subsidiaries is the surviving corporation) any other Person, or (2) sell, lease, license, assign, transfer, convey or otherwise dispose of all or substantially all of its respective properties or assets to any other Person, or (3) allow any other Person to make a purchase, tender or exchange offer that is accepted by the holders of more than 50% of the outstanding shares of Voting Stock of the Company (not including any shares of Voting Stock of the Company held by the Person or Persons making or party to, or associated or affiliated with the Persons making or party to, such purchase, tender or exchange offer), or (4) consummate a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with any other Person whereby such other Person acquires more than 50% of the outstanding shares of Voting Stock of the Company (not including any shares of Voting Stock of the Company held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination), or (5) (I) reorganize, recapitalize or reclassify the Common Stock, (II) effect or consummate a stock combination, reverse stock split or other similar transaction involving the Common Stock or (III) make any public announcement or disclosure with respect to any stock combination, reverse stock split or other similar transaction involving the Common Stock (including, without limitation, any public announcement or disclosure of (x) any potential, possible or actual stock combination, reverse stock split or other similar transaction involving the Common Stock or (y) board or stockholder approval thereof, or the intention of the Company to seek board or stockholder approval of any stock combination, reverse stock split or other similar transaction involving the Common Stock) (for the avoidance of doubt, this subsection (5) shall not include any forward splits or dividends on the Common Stock), or (ii) any “person” or “group” (as these terms are used for purposes of Sections 13(d) and 14(d) of the Exchange Act and the rules and regulations promulgated thereunder) is or shall become the “beneficial owner” (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of 50% of the aggregate ordinary voting power represented by issued and outstanding Voting Stock of the Company.

“Initial Per Share Offering Price” means [\$_____].

“Options” means any rights, warrants or options to subscribe for or purchase shares of Common Stock or Convertible Securities.

“Person” means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization, any other entity or a government or any department or agency thereof.

“Principal Market” means the Nasdaq Capital Market.

“Subsidiary” means any Person in which the Company, directly or indirectly, (i) owns any of the outstanding capital stock or holds any equity or similar interest of such Person or (ii) controls or operates all or any part of the business, operations or administration of such Person, and all of the foregoing.

“Trading Day” means any day on which the Common Stock is traded on the Principal Market, or, if the Principal Market is not the principal trading market for the Common Stock, then on the principal securities exchange or securities market on which the Common Stock is then traded, provided that “Trading Day” shall not include any day on which the Common Stock is scheduled to trade on such exchange or market for less than 4.5 hours or any day that the Common Stock is suspended from trading during the final hour of trading on such exchange or market (or if such exchange or market does not designate in advance the closing time of trading on such exchange or market, then during the hour ending at 4:00:00 p.m., New York time) unless such day is otherwise designated as a Trading Day in writing by the Holder.

“Voting Stock” of a Person means capital stock of such Person of the class or classes pursuant to which the holders thereof have the general voting power to elect, or the general power to appoint, at least a majority of the board of directors, managers or trustees of such Person (irrespective of whether or not at the time capital stock of any other class or classes shall have or might have voting power by reason of the happening of any contingency).

EXERCISE NOTICE

TO BE EXECUTED BY THE REGISTERED HOLDER TO EXERCISE THIS
WARRANT TO PURCHASE COMMON STOCK

CELLECTAR BIOSCIENCES, INC.

The undersigned holder hereby exercises the right to purchase _____ of the shares of Common Stock (“**Warrant Shares**”) of Cellectar Biosciences, Inc., a Delaware corporation (the “**Company**”), evidenced by Warrant to Purchase Common Stock No. _____ (the “**Warrant**”). Capitalized terms used herein and not otherwise defined shall have the respective meanings set forth in the Warrant.

1. Form of Exercise Price. The Holder intends that payment of the Exercise Price shall be made as:

_____ a “Cash Exercise” with respect to _____ Warrant Shares; and/or

_____ a “Cashless Exercise” with respect to _____ Warrant Shares, resulting in a delivery obligation by the Company to the Holder of _____ shares of Common Stock representing the applicable Net Number, subject to adjustment.

2. Cashless Exercise Adjustment. Check if applicable: _____

The Holder hereby notifies the Company that the Holder has previously delivered the Exercise Notice(s) attached hereto as Schedule I for Cashless Exercise.

As the applicable Net Number has changed since the time of delivery of such Exercise Notice(s):

Check if applicable:

_____ The Company’s delivery obligation to the Holder with respect to such Exercise Notice(s), in the aggregate, should be adjusted to _____ shares of Common Stock.

_____ Due to the application of Section 1(f) of the Warrant, the number of Warrant Shares of this Warrant to be exercised, with respect to such Exercise Notice(s), in the aggregate, was automatically reduced to _____, Warrant Shares, resulting in a delivery obligation by the Company to the Holder of _____ shares of Common Stock representing the applicable Net Number.

3 . Payment of Exercise Price. In the event that the Holder has elected a Cash Exercise with respect to some or all of the Warrant Shares to be issued pursuant hereto, the Holder shall pay the Aggregate Exercise Price in the sum of \$_____ to the Company in accordance with the terms of the Warrant.

4. Delivery of Warrant Shares. The Company shall deliver to Holder, or its designee or agent as specified below, _____ Warrant Shares in accordance with the terms of the Warrant. Delivery shall be made to Holder, or for its benefit, to the following address:

Date: _____, _____

Name of Registered Holder

By: _____

Name:

Title:

Consent of Independent Registered Public Accounting Firm

We have issued our report dated March 19, 2014, with respect to the consolidated financial statements included in the Annual Report on Form 10-K for the year ended December 31, 2013 of Collectar Biosciences, Inc., which is incorporated by reference in this Registration Statement and Prospectus. We consent to the incorporation by reference in the Registration Statement and Prospectus of the aforementioned report, and to the use of our name as it appears under the caption “Experts.”

/s/ GRANT THORNTON LLP

Chicago, Illinois
July 7, 2014
