
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-3
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)*

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**
(Name and address of agent for service)

(608) 441-8120
(Telephone number, including area code, of agent for service)

Copy to:

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Foley Hoag LLP
155 Seaport Boulevard
Boston, Massachusetts 02210
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Approximate date of commencement of proposed sale to the public: From time to time after this registration statement becomes effective.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

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, other than securities offered only in connection with dividend or interest reinvestment plans, 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 registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

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 to be Registered	Proposed Maximum Offering Price per Share	Proposed Maximum Aggregate Offering Price (1)(2)	Amount of Registration Fee (2)
Common Stock				
Warrants				
Units				
Total			\$ 5,000,000	\$ 581

- The registrant is registering an indeterminate number of shares of common stock, warrants to purchase common stock and units with an aggregate initial offering price not to exceed \$5,000,000, and as may be issuable upon conversion, exercise or exchange of any securities registered hereunder, including under any applicable anti-dilution provisions. Separate consideration may or may not be received for securities that are issuable upon conversion, exercise or exchange of any other securities. This registration statement also relates to an indeterminate number of shares of common stock that may be issued upon stock splits, stock dividends or similar transactions in accordance with Rule 416 under the Securities Act of 1933 (the "Securities Act").
- Estimated solely for the purpose of calculating the registration fee. The proposed maximum aggregate offering price per class of security will be determined from time to time by the registrant in connection with the issuance by the registrant of the securities registered hereunder and is not specified as to each class of security pursuant to General Instruction II.D. of Form S-3 under the Securities Act. Calculated pursuant to Rule 457(o) under the Securities Act. Pursuant to Rule 457(o) under the Securities Act and General Instruction II.D to Form S-3, the table does not specify by each class information as to the amount to be registered, proposed maximum offering price per security or proposed maximum aggregate offering price. In no event will the maximum aggregate offering price of all securities issued pursuant to this registration statement exceed \$5,000,000.

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, or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

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

Prospectus

**Subject to completion, dated
January 9, 2015**

\$5,000,000



**Common Stock
Warrants
Units**

This prospectus provides you with a general description of securities that we may offer and sell from time to time. Each time we sell securities we will provide a prospectus supplement that will contain specific information about the terms of that sale and may add to or update the information in this prospectus. You should read this prospectus and any applicable prospectus supplement carefully before you invest in our securities.

The securities may be offered directly by us through agents designated from time to time by us or to or through underwriters or dealers. If any agents, underwriters or dealers are involved in the sale of any of the securities, their names and any applicable purchase price, fee, commission or discount arrangement between or among them will be set forth, or will be calculable from the information set forth, in the applicable prospectus supplement. See the sections entitled "About This Prospectus" and "How We Plan to Offer and Sell the Securities" for more information. No securities may be sold by us without delivery of this prospectus and the applicable prospectus supplement describing the method and terms of the offering of such securities.

Our common stock is listed on the NASDAQ Capital Market under the symbol "CLRB." On January 5, 2015, the last reported sale price of our common stock on the NASDAQ Capital Market was \$3.09 per share.

As of January 5, 2015, the aggregate market value of our outstanding common stock held by non-affiliates was approximately \$13.9 million, which was calculated based on 4,497,142 shares of outstanding common stock held by non-affiliates and on a price per share of \$3.09. Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell the shelf securities in a public primary offering with a value exceeding more than one-third of the aggregate market value of our common stock held by non-affiliates in any 12-month period so long as the aggregate market value of our outstanding common stock held by non-affiliates remains below \$75 million. During the 12 calendar months prior to and including the date of this prospectus, we have not offered or sold any securities pursuant to General Instruction I.B.6 of Form S-3.

Investing in our securities involves various risks. In our filings with the Securities and Exchange Commission, which are incorporated by reference in this prospectus, we identify and discuss risk factors 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.

The date of this prospectus is _____, 2015.

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ABOUT THIS PROSPECTUS

This document is called a “prospectus,” and it provides you with a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement containing specific information about the terms of the securities being offered. That prospectus supplement may include a discussion of any risk factors or other special considerations that apply to those securities. The prospectus supplement may also add to, update or change the information in this prospectus. If there is any inconsistency between the information in this prospectus and in a prospectus supplement, you should rely on the information in that prospectus supplement. You should read both this prospectus and any prospectus supplement together with additional information described under the heading “Where You Can Find More Information.”

We have filed a registration statement with the Securities and Exchange Commission, or the SEC, using a shelf registration process. Under this shelf registration process, we may offer and sell any combination of the securities described in this prospectus in one or more offerings.

Our SEC registration statement containing this prospectus, including exhibits, provides additional information about us and the securities offered under this prospectus. The registration statement can be read at the SEC’s web site or at the SEC’s offices. The SEC’s web site and street address are provided under the heading “Where You Can Find More Information.”

When acquiring securities, you should rely only on the information provided in this prospectus and in the related prospectus supplement, including any information incorporated by reference. No one is authorized to provide you with information different from that which is contained, or deemed to be contained, in the prospectus and related prospectus supplement. We are not offering the securities in any state where the offer is prohibited. You should not assume that the information in this prospectus, any prospectus supplement or any document incorporated by reference is truthful or complete as of any date other than the date indicated on the cover page of the relevant document.

Unless otherwise stated or unless the context otherwise requires, all references to “we,” “us,” “our,” “our company” or “the Company” in this prospectus refer collectively to Collectar Biosciences, Inc., a Delaware corporation.

PROSPECTUS SUMMARY

This section contains a general summary of the information contained in this prospectus. It may not include all of the information that is important to you. You should read the entire prospectus, any accompanying prospectus supplement and the documents incorporated by reference before making an investment decision.

Collectar Biosciences, Inc.

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 image, diagnose 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.

We are 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 contemplate completing this trial during the first half of 2015. 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 selectively 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 its highly radiosensitive nature, clear unmet medical need in the relapse/refractory setting and orphan drug indication, the Company is targeting multiple myeloma, an incurable cancer of plasma cells, as an initial indication for future I-131-CLR1404 development and submitted an Investigational New Drug (IND) application with the FDA. The IND was accepted by the FDA in September 2014. In December 2014, the FDA granted orphan drug designation for I-131-CLR1404 for the treatment of multiple myeloma. We expect to enroll the first patient into the proof-of-concept trial of I-131-CLR1404 in multiple myeloma in the first quarter of 2015.
- CLR1502 is a small-molecule, cancer-targeting, non-radioactive optical imaging agent for intraoperative tumor and tumor margin imaging. We anticipate filing an IND with the FDA for CLR1502 in the first quarter of 2015.

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.

Prior to February 11, 2014, the name of the Company was Novelos Therapeutics, Inc., or Novelos. On April 8, 2011, Novelos entered into a business combination, which we refer to as the acquisition, with Collectar, Inc., a privately held Wisconsin corporation that designed and developed products to detect, treat and monitor a wide variety of human cancers.

Our headquarters and manufacturing operation is located at 3301 Agriculture Drive, Madison, Wisconsin 53716. We maintain a website at www.collectar.com. 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 Securities That May Be Offered

The descriptions of the securities contained in this prospectus, together with an applicable prospectus supplement, summarize all the material terms and provisions of the various types of securities that may be offered under this prospectus and any applicable prospectus supplement. We will describe in the applicable prospectus supplement relating to any securities the particular terms of the securities offered by that prospectus supplement. If we so indicate in the applicable prospectus supplement, the terms of the securities may differ from the terms we have summarized below. We may also include in the prospectus supplement information, where applicable, about material United States federal income tax considerations relating to the securities, and the securities exchange or market, if any, on which the securities will be listed.

We may sell from time to time, in one or more offerings the following securities:

- common stock;
- warrants to purchase common stock; or
- units consisting of a combination of the foregoing.

The aggregate offering price of all securities that we may sell under this prospectus and applicable prospectus supplements will not exceed \$5,000,000. In no event, however, will we sell securities in a primary offering pursuant to General Instruction I.B.6 of Form S-3 with a value exceeding more than one-third of our public float in any 12-month period so long as our public float remains below \$75 million.

Risks Affecting Us

Our business is subject to a number of risks, which are highlighted in the section entitled “Risk Factors” immediately following this summary and in the prospectus supplement and the documents incorporated by reference.

RISK FACTORS

Prior to making an investment decision with respect to the securities that we may offer, prospective investors should carefully consider, in light of their particular investment objectives and financial circumstances, the specific factors set forth under the caption “Risk Factors” in the applicable prospectus supplement pertaining thereto and in our most recent annual report on Form 10-K and any subsequent quarterly reports on Form 10-Q filed with the SEC, as well as any amendments thereto reflected in subsequent filings with the SEC, and in any of our other filings with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, incorporated by reference into this prospectus and the applicable prospectus supplement. For more information, see “Where You Can Find More Information” and “Incorporation of Certain Information by Reference.”

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference in this prospectus, contain forward-looking statements. You should carefully consider the various risk factors described above that are incorporated by reference into this prospectus from our SEC filings, which risk factors may cause our actual results to differ materially from those indicated by such forward-looking statements. You should not place undue reliance on our forward-looking statements.

HOW WE INTEND TO USE THE PROCEEDS

Unless stated differently in a prospectus supplement, we will use the net proceeds from the sale of the securities that we may offer with this prospectus and any accompanying prospectus supplement to fund research and development activities for our current product candidates and for general corporate purposes. General corporate purposes may include the payment of general and administrative expenses, capital expenditures, working capital, prosecution and maintenance of our intellectual property and any other purposes that we may specify in any prospectus supplement. We may invest the net proceeds temporarily until we use them for their stated purpose.

DESCRIPTION OF COMMON STOCK

The following summary description of our common stock is based on the provisions of our Second Amended and Restated Certificate of Incorporation, as amended, which we refer to as our certificate of incorporation or charter, our by-laws, and the applicable provisions of the Delaware General Corporation Law, which we refer to as the DGCL. This description may not contain all of the information that is important to you and is subject to, and is qualified in its entirety by reference to our certificate of incorporation, our by-laws and the applicable provisions of the DGCL. For information on how to obtain copies of our certificate of incorporation and by-laws, see "Where You Can Find More Information."

Authorized and Outstanding Capital Stock

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 certificate of incorporation authorizes us to issue shares of our preferred stock from time to time in one or more series without stockholder approval, each such series to have rights and preferences, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences as our board of directors may determine. The rights of the holders of common stock will be subject to, and may be adversely affected by, the rights of holders of any preferred stock that we may issue in the future. The issuance of preferred stock, while providing desirable flexibility in connection with possible acquisitions and other corporate purposes, could have the effect of making it more difficult for others to acquire, or of discouraging others from attempting to acquire, a majority of our outstanding voting stock. We currently have no plans to issue any shares of preferred stock.

As of December 31, 2014, we had 7,562,762 shares of common stock outstanding and no shares of preferred stock outstanding. All outstanding shares of our common stock are duly authorized, validly issued, fully paid and nonassessable.

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) a number of shares equal to three (3) times the sum of (i) the number of all shares of our common stock outstanding and (ii) 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.

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.

NASDAQ Capital Market Listing

Our common stock is listed for trading and quotation on the NASDAQ Capital Market under the trading symbol “CLRB.” Certain warrants to purchase shares of our common stock expiring on August 20, 2019 are also listed on the NASDAQ Capital market under the trading symbol “CLRBW.”

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer and Trust Company.

DESCRIPTION OF WARRANTS

The following summary describes generally the terms of warrants to purchase shares of our common stock that we may offer from time to time in one or more series. The specific terms of a series of warrants will be described in the applicable prospectus supplement relating to that series of warrants. Each series of warrants will be issued under a separate warrant agreement between us and a warrant agent specified in the related prospectus supplement. The warrant agent will act solely as our agent in connection with the warrants of a series and will not assume any obligation or relationship of agency or trust for or with holders or beneficial owners of the warrants.

The following description of the warrants may not contain all of the information that is important to you and is subject to, and qualified in its entirety by reference to, the underlying warrant agreement, which we will file with the SEC at or prior to the time of the sale of the warrants. You should refer to, and read this summary together with, the form of warrant agreement and the applicable prospectus supplement for a full understanding of the specific terms of any warrant.

The applicable prospectus supplement will describe the terms of any warrants, including the following:

- the title of the warrants;
- the aggregate number of the warrants;
- the price or prices at which the warrants will be issued and sold;
- the number of shares of common stock purchasable upon exercise of the warrants;
- the price at which the common stock purchasable upon exercise of the warrants may be purchased;
- the date on which the right to exercise the warrants shall commence and the date on which that right will expire;
- whether the warrants will be issued in registered form or bearer form;
- if applicable, the minimum or maximum amount of the warrants which may be exercised at any one time;
- if applicable, the date on and after which the warrants and the related underlying securities will be separately transferable;
- information with respect to book-entry procedures, if any;
- if applicable, a summary of the United States federal income tax considerations; and
- any other terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants.

Prior to the exercise of their warrants, holders of warrants will not have any of the rights of holders of the respective underlying securities purchasable upon exercise of the warrants.

DESCRIPTION OF UNITS

The following summary describes generally the terms of the units that we may offer under this prospectus. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, each unit will entitle the holder thereof to the rights and obligations of a holder of each security included in such unit. The specific terms of a series of units will be described in the applicable prospectus supplement relating to that series of units. Units will be issued pursuant to the terms of a unit agreement, which may provide that the securities included in the unit may not be held or transferred separately at any time or at any time before a specified date.

The following description of the units may not contain all of the information that is important to you and is subject to, and qualified in its entirety by reference to, the underlying unit agreement, which we will file with the SEC at or prior to the time of the sale of the units. You should refer to, and read this summary together with, the unit agreement and the applicable prospectus supplement for a full understanding of the specific terms of any series of units.

The applicable prospectus supplement will describe the terms of any units, including the following:

- the designation and terms of the units and the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any provision for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units; and
- whether the units will be issued in fully registered or global form.

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

At the close of business on December 31, 2014, there were 7,562,762 shares of our common stock outstanding. The following table provides information regarding beneficial ownership of our common stock as of December 31, 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 December 31, 2014.

Name and Address of Beneficial Owner	Outstanding	Right to Acquire	Total	Percentage
Austin W. Marx/David M. Greenhouse/Adam C. Stettner ⁽¹⁾ 527 Madison Avenue, Suite 2600 New York, New York 10022	1,142,368	1,066,000	2,208,368	25.59%
Greenway Properties Inc. ⁽²⁾ 4954 N. Shore Drive Egg Harbor, Wisconsin 54209	1,030,158	960,158	1,990,316	23.35%
Venture Investors LLC ⁽³⁾ University Technology Park 505 S. Rosa Road; Suite 201 Madison, Wisconsin 53719	632,426	503,461	1,135,887	14.08%
Cormorant Asset Management ⁽⁴⁾ 100 High Street, Suite 1105 Boston, MA 02110	530,000	530,000	1,060,000	13.10%
Hertzberg Family Trust ⁽⁵⁾ 2637 Longboat Cove Del Mar, CA 92014	419,158	419,158	838,316	10.50%
Sabby Management, LLC ⁽⁶⁾ 10 Mountainview Road, Suite 205 Upper Saddle River, NJ 07458	755,519	—	755,519	9.99%
Enso Ventures 2 Limited ⁽⁷⁾ Suite C1, Hirzel Court St. Peter Port, Guernsey GY12NH	288,058	276,264	564,322	7.20%

Simon Pedder	13,300	55,300	68,600	*
Patrick Genn	3,532	70,415	73,947	*
Chad Kolean	—	5,000	5,000	*
Cameron Szakacs	—	4,166	4,166	*
Kathryn McNeil	—	8,333	8,333	*
Jamey Weichert ⁽⁸⁾	235,336	18,532	253,868	3.35%
Paul L. Berns	—	3,125	3,125	*
Stephen A. Hill	5,300	22,289	27,589	*
John Neis ⁽³⁾	632,426	503,461	1,135,887	14.08%
All directors and officers as a group (9 persons)	889,894	690,621	1,580,515	19.15%

* Less than 1%.

- (1) Based on information contained in a report on Schedule 13D, filed with the Securities and Exchange Commission on September 9, 2014, and a report on Form 4 filed with the Securities and Exchange Commission on September 10, 2014. Shares in the “Outstanding” column include 179,806 shares of common stock owned by Special Situations Cayman Fund, L.P., 539,418 shares owned by Special Situations Fund III QP, L.P., and 423,144 shares owned by Special Situations Life Sciences Fund, L.P. Shares in the “Right to Acquire” column include 179,000 shares of common stock issuable upon the exercise of warrants owned by Special Situations Cayman Fund, L.P., 537,000 shares of common stock issuable upon the exercise of warrants owned by Special Situations Fund III QP, L.P., and 350,000 shares of common stock issuable upon the exercise of warrants owned by Special Situations Life Sciences Fund, L.P. Austin W. Marxe, David M. Greenhouse and Adam C. Stettner are members of SSCayman LLC, the general partner of Special Situations Cayman Fund, L.P., controlling principals of AWM Investment Company, Inc., the general partner of MGP Advisers Limited Partnership, the general partner of Special Situations Fund III QP, L.P., and members of LS Advisers LILAC., the general partner of Special Situations Life Sciences Fund, L.P. AWM Investment Company, Inc. serves as the investment adviser to of Special Situations Cayman Fund, L.P., Special Situations Fund III QP, L.P. and Special Situations Life Sciences Fund, L.P. Messrs. Marxe, Greenhouse and Stettner share sole voting and investment power of the shares of common stock beneficially owned by Special Situations Cayman Fund, L.P., Special Situations Fund III QP, L.P. and Special Situations Life Sciences Fund, L.P.
- (2) Shares in the “Outstanding” column include shares held by Jeffrey Straubel. Mr. 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 consist of shares of common stock issuable upon the exercise of warrants at exercise prices ranging from \$4.68 to \$25.00 per share expiring between March 1, 2016 and August 20, 2019.
- (3) 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 consist of 492,141 shares of common stock issuable upon the exercise of warrants held by Venture Investors Early Stage Fund IV Limited and Advantage Capital Wisconsin Partners I, Limited Partnership and common stock issuable upon options to purchase 11,250 shares of common stock issued to Mr. Neis in his capacity as director.
- (4) Based on information contained in a report on Schedule 13G, filed with the Securities and Exchange Commission on September 2, 2014. Shares in the “Outstanding” column include 530,000 shares of common stock held by Cormorant Global Healthcare Master Fund, LP. Shares in the “Right to Acquire” column consists of 530,000 shares of common stock issuable upon the exercise of warrants held by Cormorant Global Healthcare Master Fund, LP. Cormorant Global Healthcare GP, LLC serves as the general partner of Cormorant Global Healthcare Master Fund, LP, and Cormorant Asset Management, LLC serves as the investment manager of Cormorant Global Healthcare Master Fund, LP. Bihua Chen serves as the managing member of Cormorant Global Healthcare GP, LLC and Cormorant Asset Management, LLC. Cormorant Global Healthcare Master Fund, LP, Cormorant Global Healthcare GP, LLC, Cormorant Asset Management, LLC, and Ms. Chen share dispositive and voting power of the shares of common stock beneficially owned by Cormorant Global Healthcare Master Fund, LP.

- (5) Shares in the “Right to Acquire” column consist of shares common stock issuable upon the exercise of warrants at exercise prices ranging from \$4.68 to \$12.00 per share, expiring between December 6, 2016 and August 20, 2019. Richard H. Hertzberg is the trustee of Hertzberg Family Trust and has sole dispositive and voting power for the shares held.
- (6) Consists of shares held by Sabby Healthcare Volatility Master Fund, Ltd. and Sabby Volatility Warrant Master Fund, Ltd. 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. Sabby Management LLC beneficially owns warrants to purchase 865,000 shares of common stock at exercise prices ranging from \$4.68 per share to \$25.00 per share expiring between June 13, 2017 and August 20, 2019, all of which 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. Due to this limitation all such warrants to purchase shares of common stock have been omitted from the shares in the “Right to Acquire” column of this table.
- (7) Shares in the “Right to Acquire” column consist of shares of common stock issuable upon the exercise of warrants at exercise prices ranging from \$4.68 to \$25.00 per share expiring between December 6, 2016 and August 20, 2019. 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.
- (8) 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.

HOW WE PLAN TO OFFER AND SELL THE SECURITIES

We may sell the securities in any one or more of the following ways:

- directly to investors;
- to investors through agents;
- to dealers;
- through a special offering, an exchange distribution or a secondary distribution in accordance with applicable Nasdaq Capital Market or other stock exchange rules;
- through underwriting syndicates led by one or more managing underwriters; and
- through one or more underwriters acting alone.

Any underwritten offering may be on a best efforts or a firm commitment basis. We may also make direct sales through subscription rights distributed to our stockholders on a pro rata basis, which may or may not be transferable. In any distribution of subscription rights to stockholders, if all of the underlying securities are not subscribed for, we may then sell the unsubscribed securities directly to third parties or may engage the services of one or more underwriters, dealers or agents, including standby underwriters, to sell the unsubscribed securities to third parties.

The distribution of the securities may be effected from time to time in one or more transactions:

- at a fixed price or prices, which may be changed;
- at market prices prevailing at the time of sale;
- at prices related to such prevailing market prices; or
- at negotiated prices.

Any of the prices may represent a discount from the prevailing market prices.

In the sale of the securities, underwriters or agents may receive compensation from us or from purchasers of the securities, for whom they may act as agents, in the form of discounts, concessions or commissions. Underwriters may sell the securities to or through dealers, and such dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters and/or commissions from the purchasers for whom they may act as agents. Underwriters, dealers and agents that participate in the distribution of the securities may be deemed to be underwriters under the Securities Act of 1933, as amended, or the Securities Act, and any discounts or commissions they receive from us and any profit on the resale of securities they realize may be deemed to be underwriting discounts and commissions under the Securities Act. The applicable prospectus supplement will, where applicable:

- identify any such underwriter or agent;
- describe any compensation in the form of discounts, concessions, commissions or otherwise received from us by each such underwriter or agent and in the aggregate to all underwriters and agents;
- identify the amounts underwritten;
- identify the nature of the underwriter's obligation to take the securities;
- and any other material terms of the offering, including any over-allotment option.

Common stock sold by us pursuant to a prospectus supplement will be listed on the Nasdaq Capital Market, subject to the Nasdaq Capital Market's approval of the listing of the additional shares. We may elect to list other securities on an exchange, but we are not obligated to do so. It is possible that one or more underwriters may make a market in a series of securities, but such underwriters will not be obligated to do so and may discontinue any market making at any time without notice. Therefore, no assurance can be given as to the liquidity of, or the trading market for, any series of securities.

Until the distribution of the securities is completed, rules of the Securities and Exchange Commission may limit the ability of any underwriters and selling group members to bid for and purchase the securities. As an exception to these rules, underwriters are permitted to engage in some transactions that stabilize the price of the securities. Such transactions consist of bids or purchases for the purpose of pegging, fixing or maintaining the price of the securities.

If any underwriters create a short position in the securities in an offering in which they sell more securities than are set forth on the cover page of the applicable prospectus supplement, the underwriters may reduce that short position by purchasing the securities in the open market.

The lead underwriters may also impose a penalty bid on other underwriters and selling group members participating in an offering. This means that if the lead underwriters purchase securities in the open market to reduce the underwriters' short position or to stabilize the price of the securities, they may reclaim the amount of any selling concession from the underwriters and selling group members who sold those securities as part of the offering.

In general, purchases of a security for the purpose of stabilization or to reduce a short position could cause the price of the security to be higher than it might be in the absence of such purchases. The imposition of a penalty bid might also have an effect on the price of a security to the extent that it discourages resales of the security before the distribution is completed.

We do not make any representation or prediction as to the direction or magnitude of any effect that the transactions described above might have on the price of the securities. In addition, we do not make any representation that underwriters will engage in such transactions or that such transactions, once commenced, will not be discontinued without notice.

Under agreements into which we may enter, underwriters, dealers and agents who participate in the distribution of the securities may be entitled to indemnification by us against some liabilities, including liabilities under the Securities Act, or to contribution from us with respect to such liabilities.

Underwriters, dealers and agents may engage in transactions with us, perform services for us or be our customers in the ordinary course of business.

If indicated in the applicable prospectus supplement, we will authorize underwriters or other persons acting as our agents to solicit offers by particular institutions to purchase securities from us at the public offering price set forth in such prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on the date or dates stated in such prospectus supplement. Each delayed delivery contract will be for an amount no less than, and the aggregate principal amounts of securities sold under delayed delivery contracts shall be not less nor more than, the respective amounts stated in the applicable prospectus supplement. Institutions with which such contracts, when authorized, may be made include commercial and savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions and others, but will in all cases be subject to our approval. The obligations of any purchaser under any such contract will be subject to the conditions that (a) the purchase of the securities shall not at the time of delivery be prohibited under the laws of any jurisdiction in the United States to which the purchaser is subject, and (b) if the securities are being sold to underwriters, we shall have sold to the underwriters the total principal amount of the securities less the principal amount thereof covered by the contracts. The underwriters and such other agents will not have any responsibility in respect of the validity or performance of such contracts.

To comply with applicable state securities laws, the securities offered by this prospectus will be sold, if necessary, in such jurisdictions only through registered or licensed brokers or dealers. In addition, securities may not be sold in some states unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The Securities and Exchange Commission allows us to incorporate by reference information into this prospectus. This means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is considered to be a part of this prospectus, except for any information that is superseded by information that is included directly in this prospectus or incorporated by reference subsequent to the date of this prospectus. We do not incorporate the contents of our website into this prospectus. 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 Exchange Act until all of the shelf securities are sold:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2013 filed on March 19, 2014;
- our Quarterly Report on Form 10-Q for the quarter ended March 31, 2014 filed on May 14, 2014;
- our Quarterly Report on Form 10-Q for the quarter ended June 30, 2014 filed on August 4, 2014;
- our Quarterly Report on Form 10-Q for the quarter ended September 30, 2014 filed on November 12, 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 February 11, 2014 filed on February 13, 2014;
- our Current Report on Form 8-K for the event date of April 11, 2014 filed on April 11, 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;
- our Current Report on Form 8-K for the event date of June 11, 2014 filed on June 17, 2014
- our Current Report on Form 8-K for the event date of November 24, 2014 filed on November 25, 2014; and
- the description of our securities contained in our Registration Statement on Form 8-A filed on August 14, 2014, including any amendment or report filed for the purpose of updating such description.

In addition, we incorporate by reference all documents that we may file with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act on or after (1) the date of the initial registration statement and prior to the effectiveness of the registration statement and (2) the date of effectiveness of the registration statement until the date on which this registration statement has been withdrawn. These documents will become a part of this prospectus from the date that the documents are filed with the SEC. These documents include periodic reports, such as annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, excluding any information filed or furnished pursuant to Item 2.02, Item 7.01 or Item 9.01 and excluding any information furnished pursuant to Item 8.01 of any current report on Form 8-K solely for purposes of satisfying the requirements of Regulation FD under the Exchange Act, unless such Form 8-K expressly provides to the contrary.

Upon oral or written request and at no cost to the requester, we will provide to each person, including any beneficial owner, to whom a prospectus is delivered, a copy of any or all of the information that has been incorporated by reference in this prospectus but not delivered with this prospectus. You may request copies of these filings, at no cost, by writing to us at Cellestar Biosciences, Inc., 3301 Agriculture Drive, Madison, WI 53716, Attention: Chief Financial Officer.

This prospectus is part of a registration statement on Form S-3 that we filed with the SEC under the Securities Act. This prospectus does not contain all of the information contained in the registration statement. For further information about us and our securities, you should read the prospectus and the exhibits filed with the registration statement, as well as all prospectus supplements.

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.

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.

LEGAL MATTERS

The legality of the securities offered hereby will be passed upon for us by Foley Hoag llp of Boston, Massachusetts.

Part II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The expenses in connection with the issuance and distribution of the securities being registered are set forth in the following table (all amounts other than the registration fee are estimated):

Registration fee — Securities and Exchange Commission	\$	581
Accountants' fees and expenses		**
Legal fees and expenses		**
Stock exchange listing fees		**
Printing expenses		**
Miscellaneous		**
TOTAL	\$	581

** These fees and expenses cannot be estimated at this time because the amounts will be affected by the number of offerings and the method of offering.

Item 15. Indemnification of Directors and Officers.

Section 102 of the Delaware General Corporation Law permits a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit.

Section 145 of the Delaware General Corporation Law provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against expenses (including attorneys' fees), judgments, fines and amounts paid in settlements actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he is or is threatened to be made a party by reason of such position, if such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

As permitted by the Delaware General Corporation Law, our certificate of incorporation and bylaws provide that: (i) we are required to indemnify our directors to the fullest extent permitted by the Delaware General Corporation Law; (ii) we may, in our discretion, indemnify our employees and agents as set forth in the Delaware General Corporation Law; (iii) we are required, upon satisfaction of certain conditions, to advance all expenses incurred by our directors and officers in connection with certain legal proceedings; (iv) the rights conferred in the bylaws are not exclusive; and (v) we are authorized to enter into indemnification agreements with our directors, officers, employees and agents.

We maintain a directors' and officers' liability insurance policy. The policy insures directors and officers against unindemnified losses arising from certain wrongful acts in their capacities as directors and officers and reimburses us for those losses for which we have lawfully indemnified the directors and officers. The policy contains various exclusions.

In the underwriting agreement, if any, entered into with respect to an offering of securities registered hereunder, the underwriters will agree to indemnify, under certain conditions, us, our directors, certain of our officers and persons who control us within the meaning of the Securities Act, against certain liabilities.

Item 16. Exhibits.

Exhibit Number	Description	Incorporated by Reference			
		Filed with this Form S-3	Form	Filing date with SEC	Exhibit Number
*1.1	Form of Underwriting Agreement				
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 13, 2014	3.1
3.3	Certificate of Amendment to Second Amended and Restated Certificate of Incorporation		8-K	June 13, 2014	3.1
3.3	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
*4.2	Form of Warrant Agreement				
*4.3	Form of Warrant				
*4.4	Form of Unit Agreement				
5.1	Opinion of Foley Hoag LLP regarding the legality of securities being registered	X			
23.1	Consent of Grant Thornton LLP	X			
23.2	Consent of Foley Hoag LLP (contained in Exhibit 5.1)	X			
24.1	Powers of Attorney (included on signature page)	X			

*To be filed, if necessary, by amendment or as an exhibit to a document incorporated by reference herein.

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 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

provided, however, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) of this section do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Securities and Exchange Commission by the registrant pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b).

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:
 - (i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
 - (ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. 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 effective date, 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 effective date.
 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) That, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement 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.

- (c) The undersigned registrant hereby undertakes to supplement the prospectus, after the expiration of the subscription period, to set forth the results of the subscription offer, the transactions by the underwriters during the subscription period, the amount of unsubscribed securities to be purchased by the underwriters, and the terms of any subsequent reoffering thereof. If any public offering by the underwriters is to be made on terms differing from those set forth on the cover page of the prospectus, a post-effective amendment will be filed to set forth the terms of such offering.
- (d) 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.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Madison, State of Wisconsin, on January 9, 2015.

CELLECTAR BIOSCIENCES, INC.

By: /s/ Simon Pedder
Simon Pedder
President and Chief Executive Officer

POWER OF ATTORNEY

We, the undersigned officers and directors of Cellectar Biosciences, Inc., hereby severally constitute and appoint Simon Pedder, Chad J. Kolean and Stephen A. Hill, and each of them singly (with full power to each of them to act alone), our true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution in each of them for him and in his name, place and stead, and in any and all capacities, to sign for us and in our names in the capacities indicated below any and all amendments (including post-effective amendments) to this registration statement (or any other registration statement for the same offering that is to be effective upon filing pursuant to Rule 462(b) under the Securities Act of 1933), and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as full to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the indicated capacities as of January 9, 2015.

<u>Signature</u>	<u>Title</u>
<u>/s/ Simon Pedder</u> Simon Pedder	President, Chief Executive Officer and Director <i>(Principal Executive Officer)</i>
<u>/s/ Chad J. Kolean</u> Chad J. Kolean	Chief Financial Officer <i>(Principal Financial Officer and Principal Accounting Officer)</i>
<u>/s/ Stephen A. Hill</u> Stephen A. Hill	Chairman of the Board of Directors
<u>/s/ Paul L. Berns</u> Paul L. Berns	Director
<u>/s/ John Neis</u> John Neis	Director
<u>/s/ Jamey P. Weichert</u> Jamey P. Weichert	Director

Exhibit Index

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23.2	Consent of Foley Hoag LLP (contained in Exhibit 5.1)	X			
24.1	Powers of Attorney (included on signature page)	X			

*To be filed, if necessary, by amendment or as an exhibit to a document incorporated by reference herein.



Seaport West
155 Seaport Boulevard
Boston, MA 02210-2600

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

January 9, 2015

Cellectar Biosciences, Inc.
3301 Agriculture Drive
Madison, Wisconsin 53716

Ladies and Gentlemen:

We have acted as counsel to Cellectar Biosciences, Inc., a Delaware corporation (the "**Company**"), in connection with the registration statement on Form S-3 (the "**Registration Statement**") being filed by the Company with the Securities and Exchange Commission (the "**Commission**") under the Securities Act of 1933, as amended (the "**Act**"), on the date hereof.

We have reviewed the Registration Statement in the form being filed with the Commission. The Registration Statement includes a base prospectus (the "**Prospectus**"), which provides that it will be supplemented in the future by one or more supplements to the Prospectus (each, a "**Prospectus Supplement**"). The Prospectus provides for the offering of up to \$5,000,000 in aggregate offering price of the following securities: (i) shares of the Company's common stock, \$0.00001 par value per share ("**Common Stock**"), (ii) warrants to purchase Common Stock ("**Warrants**") and (iii) units consisting of a combination of the foregoing ("**Units**"). The Common Stock, Warrants and Units are collectively referred to as the "**Securities**." The Securities may be offered and sold from time to time pursuant to Rule 415 promulgated under the Act, in amounts, at prices and on terms to be determined at the time of the offering thereof.

We have made such legal and factual examinations and inquiries, including an examination of originals or copies certified or otherwise identified to our satisfaction of such documents, corporate records and instruments, as we have deemed necessary or appropriate for purposes of this opinion. In our examination, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals and the conformity to authentic original documents of all documents submitted to us as copies. As to facts material to the opinions, statements and assumptions expressed herein, we have, with your consent, relied upon oral or written statements and representations of officers and other representatives of the Company and others. We have not independently verified such factual matters.

In expressing our opinions below, we have assumed, with your consent, that:

- (a) the Registration Statement (including any and all required post-effective amendments thereto) will be effective under the Act and will comply with all applicable laws at the time the Securities are offered and sold as contemplated by the Registration Statement (including any and all required post-effective amendments thereto), the Prospectus and the applicable Prospectus Supplement(s);
- (b) no stop order suspending the effectiveness of the Registration Statement (including any and all required post-effective amendments thereto) will have been issued and remain in effect;
- (c) a Prospectus Supplement describing the Securities offered thereby and the offering thereof and complying with all applicable laws will have been prepared and filed with the Commission;
- (d) the Securities will be offered and sold in the form and with the terms set forth in the Registration Statement (including any and all required post-effective amendments thereto), the Prospectus and the applicable Prospectus Supplement(s) and the organizational documents of the Company, as applicable;
- (e) the Securities will be offered and sold in compliance with all applicable federal and state securities laws and in the manner stated in the Registration Statement (including any and all required post-effective amendments thereto), the Prospectus and the applicable Prospectus Supplement(s);
- (f) the Company will have obtained any and all legally required consents, approvals, authorizations and other orders of the Commission and any and all other regulatory authorities and other third parties necessary to offer and sell the Securities being offered in the manner stated in the Registration Statement (including any and all required post-effective amendments thereto), the Prospectus and the applicable Prospectus Supplement(s); and
- (g) a definitive purchase, underwriting or similar agreement (each a "**Purchase Agreement**") with respect to any Securities offered and sold will have been duly authorized and validly executed and delivered by the Company and the other parties thereto.

Our opinions expressed below as to the validity and enforceability of agreements are subject to the qualifications that we express no opinion as to the applicability of, compliance with or effect of: (i) any bankruptcy, insolvency, reorganization, preference, fraudulent conveyance, fraudulent transfer, moratorium or other similar laws relating to or affecting the rights and remedies of creditors generally (including, without limitation, Sections 547 and 548 of the United States Bankruptcy Code);(ii) principles of public policy, or (iii) general principles of equity, whether considered in a proceeding in equity or at law (including the possible unavailability of specific performance or injunctive relief), concepts of materiality, reasonableness, good faith and fair dealing, and the discretion of the court before which a proceeding is brought.

We have assumed, with your consent, that: (i) the Warrants and any applicable warrant agreement and the Units and any applicable unit agreement (collectively the “**Documents**”) will be governed by the internal laws of The Commonwealth of Massachusetts; (ii) the Documents will be duly authorized, executed and delivered by the parties thereto; (iii) the Documents will constitute legally valid and binding obligations of the parties thereto other than the Company, enforceable against each of them in accordance with their respective terms; and (iv) the status of the Documents as legally valid and binding obligations of the parties thereto will not be affected by any (a) breaches of, or defaults under, any agreements or instruments, (b) violations of any statutes, rules, regulations or court or governmental orders, or (c) failures to obtain required consents, approvals or authorizations from, or to make required registrations, declarations or filings with, any governmental authorities or other third parties.

We have also assumed that there will not have occurred, prior to the date of issuance of the Securities, any change in law affecting any of the opinions set forth below.

We are opining herein only as to the federal laws of the United States, and the Delaware General Corporation Law (including the applicable provisions of the Delaware Constitution and reported Delaware judicial decisions interpreting such law and such provisions), in each case as in effect on the date of this opinion, and we express no opinion with respect to the laws of any other jurisdiction or, in the case of Delaware, any other laws, or as to any matters of municipal law or the laws of any other local agencies within any state.

Subject to the foregoing and the other matters set forth herein, it is our opinion that, as of the date hereof:

1. The Company has the authority pursuant to its Second Amended and Restated Certificate of Incorporation, as amended (the “**Charter**”), to issue up to an aggregate of 20,000,000 shares of Common Stock. Upon adoption by the board of directors of the Company of a resolution in form and content as required by applicable law duly authorizing the issuance of shares of Common Stock (with such shares, together with all shares of Common Stock issued or reserved for issuance and not duly and lawfully retired, not exceeding an aggregate of 20,000,000 shares), and upon issuance and delivery of and payment of legal consideration not less than the par value thereof in accordance with the applicable Purchase Agreement, all applicable law and such resolution, such shares of Common Stock will be validly issued, fully paid and nonassessable.

2. When (a) a warrant agreement has been duly authorized by all necessary corporate action of the Company (including, without limitation, the adoption by the board of directors of the Company of a resolution in form and content as required by applicable law duly authorizing the execution and delivery of such warrant agreement) and duly executed and delivered by the Company, (b) the specific terms of a particular issuance of Warrants have been duly established in accordance with such warrant agreement and all applicable law and authorized by all necessary corporate action of the Company (including, without limitation, the adoption by the board of directors of the Company of a resolution in form and content as required by applicable law duly authorizing the issuance and delivery of the Warrants and the shares of Common Stock issuable upon exercise thereof and reserving such shares for such issuance), and (c) the Warrants have been duly executed, authenticated issued and delivered against payment therefor in accordance with such warrant agreement, the applicable Purchase Agreement, all applicable law and such corporate action (and assuming the satisfaction of the conditions described in numbered paragraph 1 of this opinion letter with respect to our opinion regarding any shares of Common Stock issuable upon exercise of the Warrants), such Warrants will be legally valid and binding obligations of the Company, enforceable against the Company in accordance with their terms (and upon the exercise of such Warrants in accordance with their terms, the shares of Common Stock issuable upon such exercise will be validly issued, fully paid and nonassessable).

3. When (a) a unit agreement has been duly authorized by all necessary corporate action of the Company (including, without limitation, the adoption by the board of directors of the Company of a resolution in form and content as required by applicable law duly authorizing the execution and delivery of such unit agreement) and duly executed and delivered by the Company, (b) the specific terms of a particular issuance of Units have been duly established in accordance with such unit agreement and all applicable law and authorized by all necessary corporate action of the Company (including, without limitation, the adoption by the board of directors of the Company of a resolution in form and content as required by applicable law duly authorizing the issuance and delivery of the Units), and (c) the Units have been duly executed, authenticated, issued and delivered against payment therefor in accordance with such unit agreement, the applicable Purchase Agreement, all applicable law and such corporation action (and assuming the satisfaction of the conditions described in the applicable numbered paragraphs of this opinion letter with respect to our opinions regarding the Securities underlying the Units), such Units will be legally valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.

This opinion is being delivered solely for the benefit of the Company and such other persons as are entitled to rely upon it pursuant to applicable provisions of the Securities Act. This opinion may not be used, quoted, relied upon or referred to for any other purpose nor may this opinion be used, quoted, relied upon or referred to by any other person, for any purpose, without our prior written consent.

Collectar Biosciences, Inc.
January 9, 2015
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We consent to your filing this opinion as an exhibit to the Registration Statement and to the reference to our firm in the Prospectus under the heading "Legal Matters." In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission thereunder.

Very truly yours,

FOLEY HOAG LLP

By: /s/ Paul Bork
A Partner

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. We consent to the incorporation by reference in the Registration Statement of the aforementioned report, and to the use of our name as it appears under the caption "Experts."

/s/ GRANT THORNTON LLP

Chicago, Illinois
January 9, 2015
