

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

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 No.)

**100 Campus Drive, Florham Park, New Jersey 07932**  
**Telephone (608) 441-8120**  
(Address, including zip code and telephone number, including area code, of registrant's principal executive offices)

**James V. Caruso**  
**President and Chief Executive Officer**  
**Collectar Biosciences, Inc.**  
**100 Campus Drive, Florham Park, New Jersey 07932**  
**Telephone (608) 441-8120**  
(Name, address, including zip code and telephone number, including area code, of agent for service)

*With copies to:*  
**Asher M. Rubin, Esq.**  
**Istvan Hajdu, Esq.**  
**Sidley Austin LLP**  
**787 Seventh Avenue**  
**New York, New York 10019**  
**Telephone (212) 839-5300**

**From time to time after the effectiveness of this registration statement.**  
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, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated  
filer

Accelerated  
filer

Non-accelerated  
filer

Smaller reporting  
company

Emerging growth  
company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

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, as amended, 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 we are not soliciting offers to buy these securities in any jurisdiction where the offer or sale is not permitted.**

**SUBJECT TO COMPLETION, DATED NOVEMBER 23, 2022**



## 7,027,043 SHARES OF COMMON STOCK ISSUABLE UPON EXERCISE OF OUTSTANDING WARRANTS

We are not selling any shares of our common stock under this prospectus and will not receive any proceeds from the sale of shares by the selling stockholders. This prospectus relates to the resale of up to 7,027,043 shares of our common stock, par value \$0.00001 per share, (the “Common Stock”) including:

- 5,151,098 shares of Common Stock issuable upon the exercise of outstanding common warrants (the “Common Warrants”) to purchase Common Stock; and
- 1,875,945 shares of Common Stock issuable upon the exercise of outstanding pre-funded warrants (the “Pre-Funded Warrants,” and together with the Common Warrants, the “Warrants”) to purchase Common Stock.

The selling stockholders will bear all commissions and discounts, if any, attributable to the sale of the shares. We will bear all costs, expenses and fees in connection with the registration of the shares.

The selling stockholders may sell the shares of our Common Stock offered by this prospectus from time to time on terms to be determined at the time of sale through ordinary brokerage transactions or through any other means described in this prospectus under “Plan of Distribution”. The prices at which the selling stockholder may sell the shares will be determined by the prevailing market price for the shares or in negotiated transactions.

Our Common Stock is listed on the Nasdaq Capital Market under the symbol “CLRB”. On November 22, 2022, the last reported sale price of our common stock on the Nasdaq Capital Market was \$1.90 per share.

**Investing in our securities involves a high degree of risk. See “Risk Factors” on page 6 of this prospectus for more information.**

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.**

The date of this prospectus is           , 2022.

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## ABOUT THIS PROSPECTUS

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

We may authorize one or more free writing prospectuses to be provided to you that may contain material information relating to that offering. We may also use any related free writing prospectus to add, update or change any of the information contained in this prospectus or in documents we have incorporated by reference. This prospectus, together with any related free writing prospectuses and the documents incorporated by reference into this prospectus, includes all material information relating to this offering. Please carefully read both this prospectus together with the additional information described below under “Incorporation of Documents by Reference”.

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 summary highlights selected information contained elsewhere in this prospectus or incorporated by reference in this prospectus, and does not contain all of the information that you need to consider in making your investment decision. You should carefully read the entire prospectus and any related free writing prospectus, including the risks of investing in our common stock discussed under the heading "Risk Factors" contained in this prospectus and any related free writing prospectus, and under similar headings in the other documents that are incorporated by reference into this prospectus. You should also carefully read the information incorporated by reference into this prospectus, including our financial statements, and the exhibits to the registration statement of which this prospectus forms a part.*

### Overview

We are a late-stage clinical biopharmaceutical company focused on the discovery, development and commercialization of drugs for the treatment of cancer. Our core objective is to leverage our proprietary phospholipid drug conjugate™ (PDC™) delivery platform to develop PDCs that are designed to specifically target cancer cells and deliver improved efficacy and better safety as a result of fewer off-target effects. Our PDC platform possesses the potential for the discovery and development of the next generation of cancer-targeting treatments, and we plan to develop PDCs both independently and through research and development collaborations.

### 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 rely on a collaborative outsourced business model, and disruptions with our third-party collaborators, including potential disruptions at our sole source supplier of iopofosine, Centre for Probe Development and Commercialization may impede our ability to gain FDA approval and delay or impair commercialization of any products.
- We cannot assure the successful development and commercialization of our compounds in development.
- Failure to complete the development of our technologies, obtain government approvals, including required FDA approvals, or 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.
- The FDA has granted rare pediatric disease designation, RPDD, to iopofosine for treatment of neuroblastoma, rhabdomyosarcoma, Ewing's sarcoma and osteosarcoma; however, we may not be able to realize any value from such designation.
- Clinical studies involve a lengthy and expensive process with an uncertain outcome, and results of earlier studies may not be predictive of future study results.
- We may be required to suspend or discontinue clinical studies due to unexpected side effects or other safety risks that could preclude approval of our product candidates.
- Controls we or our third-party collaborators have in place to ensure compliance with all applicable laws and regulations may not be effective.

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- We expect to rely on our patents as well as specialized regulatory designations such as orphan drug classification for our product candidates, but regulatory drug designations may not confer marketing exclusivity or other expected commercial benefits.
  - Fast track designation by the FDA may not actually lead to a faster development or regulatory review or approval process and does not assure FDA approval of our product candidates.
  - We rely on a small number of 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.
  - Acceptance of our products in the marketplace is uncertain and failure to achieve market acceptance will prevent or delay our ability to generate revenues.
  - Regulatory approval for any approved product is limited by the FDA, the European Commission and other regulators to those specific indications and conditions for which clinical safety and efficacy have been demonstrated, and we may incur significant liability if it is determined that we are promoting the "off-label" use of any of our future product candidates if approved.
  - Any product for which we have obtained regulatory approval, or for which we obtain approval in the future, is subject to, or will be subject to, extensive ongoing regulatory requirements by the FDA, EMA and other comparable regulatory authorities, and if we fail to comply with regulatory requirements or if we experience unanticipated problems with our products, we may be subject to penalties, we may be unable to generate revenue from the sale of such products, our potential for generating positive cash flow will be diminished, and the capital necessary to fund our operations will be increased.
  - The COVID-19 pandemic as well as conflicts, military actions, terrorist attacks, natural disasters, public health crises, cyber-attacks and general instability could materially adversely affect our business.
  - Failure to meet Nasdaq's continued listing requirements could result in the delisting of our common stock, negatively impact the price of our common stock and negatively impact our ability to raise additional capital.
  - Our stock price has experienced price fluctuations.
  - 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.
  - You may experience future dilution as a result of future equity offerings.

For more information regarding the material risks and uncertainties we face, please see "Risk Factors" beginning on page 6 of this prospectus.

### Corporate Information

Our principal executive offices are located at 100 Campus Drive, Florham Park, New Jersey 07932 and the telephone number of our principal executive offices is (608) 441-8120. We maintain a website at [www.collectar.com](http://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.

## Description of the Private Placements

On October 20, 2022, we entered into a Securities Purchase Agreement (the “Hybrid Offering Purchase Agreement”) with the investor signatories thereto, pursuant to which we issued and sold: (i) in a registered offering directly to the Purchasers (as defined below) on October 25, 2022, an aggregate of 3,275,153 shares of our common stock, par value \$0.00001 per share at an offering price of \$2.085 per share and (ii) in a concurrent private placement (the “Concurrent Private Placement”) Common Warrants to purchase up to an aggregate of 3,275,153 shares of Common Stock.

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In a separate concurrent private placement (the “Separate Concurrent Private Placement” and, together with the Concurrent Private Placement, the “Private Offerings”), we entered into a Private Placement Securities Purchase Agreement (the “PIPE Purchase Agreement” and together with the Hybrid Offering Purchase Agreement, the “Purchase Agreements”), with the investor signatories thereto, pursuant to which we issued to the Purchasers Pre-Funded Warrants to purchase up to an aggregate of 1,875,945 shares of Common Stock and Common Warrants to purchase up to an aggregate of 1,875,945 shares of Common Stock. The investors who are signatories to the Purchase Agreements are the selling stockholders identified in their prospectus under the caption “selling stockholders” (the “Purchasers”).

Gross proceeds from the Private Offerings were approximately \$3.9 million before deducting the placement agent fee and related offering expenses. The Registered Shares were offered by us pursuant to a registration statement on Form S-3 (File No. 333-244362), which was declared effective by the Securities and Exchange Commission (the “SEC”) on August 20, 2020 (the “Registration Statement”). The offering and sale of the Common Warrants, the Pre-Funded Warrants and the shares of Common Stock issuable upon the exercise of the Common Warrants and the Pre-Funded Warrants (the “Warrant Shares”) was made pursuant to an exemption from the registration requirements of the Securities Act of 1933, as amended (the “Securities Act”) provided in Section 4(a)(2) of the Securities Act and Rule 506(b) promulgated thereunder.

The Common Warrants were immediately exercisable at an exercise price of \$1.96 per share and expire on the fifth anniversary of their issuance. The purchase price of each Pre-Funded Warrant was \$2.08499 and the Pre-Funded Warrants were immediately exercisable at an exercise price of \$0.00001 per share and will not expire until exercised in full.

We filed the registration statement on Form S-1, of which this prospectus is a part, to fulfill our contractual obligations under the Purchase Agreements to provide for the resale by the Purchasers of up to 7,027,043 shares of Common Stock. We agreed to file a registration statement with respect to such Warrant Shares within 30 days following the date of issuance of the Warrants and to use reasonable best efforts to keep such registration statement effective at all times until (a) the warrant shares are sold under such registration statement or pursuant to Rule 144 under the Securities Act, (b) the warrant shares may be sold without volume or manner-of-sale restrictions pursuant to Rule 144 under the Securities Act.

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### The Offering

Shares of common stock offered by us:	None
Shares of common stock offered by the selling stockholders:	7,027,043 shares
Shares of common stock outstanding before this offering, assuming no exercise of the Warrants:	9,385,272 shares
Shares of common stock outstanding after completion of this offering, assuming full exercise of the Warrants:	16,412,315 shares
Use of Proceeds:	We will not receive any proceeds from the resale of the shares of common stock by the selling stockholders.
Risk Factors:	See “Risk Factors” on page 6 and the other information included in this prospectus for a discussion of factors you should carefully consider before deciding whether to purchase our securities.
Nasdaq symbol for our common stock:	CLRB

The number of shares of our common stock outstanding before and after this offering is based on 9,385,272 shares of common stock outstanding as of October 31, 2022 and excludes, as of that date:

- an aggregate of 654,263 shares of common stock issuable upon the exercise of outstanding stock options issued to employees, directors and consultants;
- an aggregate of 111,111 shares of common stock issuable upon the conversion of outstanding shares of Series D preferred stock; and
- an aggregate of 1,563,381 additional shares of common stock reserved for issuance under outstanding warrants having expiration dates between July 2023 and June 2025, and exercise prices ranging from \$12.075 to \$178.00 per share.

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## RISK FACTORS

*An investment in our securities involves a high degree of risk. Prior to making a decision about investing in our securities, prospective investors should consider carefully all of the information included and incorporated by reference or deemed to be incorporated by reference in this prospectus, including the risk factors incorporated by reference herein from our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, as updated by annual, quarterly and other reports and documents we file with the*

## 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, and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). Examples of our forward-looking statements include:

- our current views with respect to our business strategy, business plan and research and development activities;
- the future impacts of the COVID-19 pandemic on our business, employees, operating results, ability to recruit patients for clinical studies, ability to obtain additional funding, product development programs, research and development programs, suppliers and third-party manufacturers;
- the progress of our product development programs, including clinical testing and the timing of commencement and results thereof;
- our projected operating results, including research and development expenses;
- our ability to continue development plans for iopofosine I 131 (also known as CLR 131), CLR 1900 series, CLR 2000 series and CLR 12120;
- our ability to continue development plans for our Phospholipid Drug Conjugates (PDC)<sup>TM</sup>;
- our ability to maintain orphan drug designation in the U.S. for iopofosine as a therapeutic for the treatment of multiple myeloma, neuroblastoma, osteosarcoma, rhabdomyosarcoma, Ewing’s sarcoma and lymphoplasmacytic lymphoma, and the expected benefits of orphan drug status;
- any disruptions at our sole supplier of iopofosine;
- our ability to pursue strategic alternatives;
- our ability to advance our technologies into product candidates;
- our enhancement and consumption of current resources along with ability to obtain additional funding;
- our current view regarding general economic and market conditions, including our competitive strengths;
- uncertainty and economic instability resulting from conflicts, military actions, terrorist attacks, natural disasters, public health crises, including the occurrence of a contagious disease or illness, such as the COVID-19 pandemic, cyber-attacks and general instability;
- the future impacts of legislative and regulatory developments in the United States on the pricing and reimbursement of our product candidates;
- our ability to meet the continued listing standards of Nasdaq;
- assumptions underlying any of the foregoing; and
- any other statements that address events or developments that we intend or believe will or may occur in the future.

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. Forward-looking statements also involve risks and uncertainties, many of which are beyond our control. 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 only as of the date on the front cover of this prospectus or such prospectus. 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

All proceeds from the resale of the Warrant Shares offered by this prospectus will belong to the selling stockholders. We will not receive any proceeds from the sale or other disposition by the selling stockholders of the shares of our common stock covered by this prospectus. However, we will receive proceeds upon any cash exercise of the Warrants, the underlying shares of which are offered by this prospectus. If the Warrants are all exercised for cash, we will receive gross proceeds of \$10.1 million. We intend to use any proceeds from any such exercise for funding clinical studies, research and development, working capital and general corporate purposes. There is no assurance, however, that the Warrants will ever be exercised.

## SELLING STOCKHOLDERS

The common stock being offered by the selling stockholders are the Warrant Shares. For additional information regarding the issuances of the Warrant Shares, see “Description of the Private Placements” in the summary to this prospectus. We are registering the shares of common stock in order to permit the selling stockholders to offer the Warrant Shares for resale from time to time. Except for the ownership of our common stock, warrants and pre-funded warrants, the selling stockholders have not had any material relationship with us within the past three years.

The table below lists the selling stockholders and other information regarding the beneficial ownership of the shares of Common Stock by each of the selling stockholders. The second column lists the number of shares of common stock beneficially owned by each selling stockholder, based on its ownership of the shares of common stock, warrants and pre-funded warrants, as of November 22, 2022, assuming exercise of the warrants and pre-funded warrants held by the selling stockholders on that date. The third column lists the shares of common stock being offered by this prospectus by the selling stockholders.

In accordance with the terms of a registration rights agreement with the selling stockholders, this prospectus generally covers the resale of the maximum number of shares of common stock issuable upon exercise of the Warrants, determined as if the Warrants were exercised in full as of the trading day immediately preceding the date this registration statement was initially filed with the SEC, each as of the trading day immediately preceding the applicable date of determination and all subject to adjustment as provided in the registration right agreement, without regard to any limitations on the exercise of the Warrants. The fourth column assumes the sale of all of the shares offered by the selling stockholders pursuant to this prospectus.

Under the terms of all of the warrants and the pre-funded warrants, a selling stockholder may not exercise the warrants or pre-funded to the extent such exercise would cause such selling stockholder, together with its affiliates and attribution parties, to beneficially own a number of shares of common stock which would exceed the applicable 4.99% (or at the election of the selling stockholder, 9.99%) of our then outstanding common stock following such conversion, excluding for purposes of such determination shares of common stock issuable upon conversion of the preferred stock which have not been converted. The number of shares in the second column does not reflect this limitation. The selling stockholder may sell all, some or none of their shares in this offering. See "Plan of Distribution".

Selling Stockholder	Number of Shares of Common Stock Beneficially Owned Prior to Offering(1)	Maximum Number of Shares of Common Stock to be Sold Pursuant to this Prospectus	Number of Shares of Common Stock Beneficially Owned After Offering	Percentage of Shares Beneficially Owned After Offering(2)
Entities affiliated with AIGH Capital Management LLC(3)	2,645,508(14)	1,640,614(25)	1,004,894	6.12%
AuGC BioFund LP(4)	143,884(15)	71,942	71,942	*
Boothbay Absolute Return Strategies LP (5)	68,146(16)	68,146	0	*
Boothbay Diversified Alpha Master Fund LP(6)	34,731(17)	34,731	0	*
CVI Investments, Inc.(7)	702,438(18)	300,000	402,438	2.45%
District 2 Capital Fund LP(8)	373,708(19)	239,808	133,900	*
Laurence W. Lytton(9)	1,419,394(20)	603,997	815,397	4.97%
Lincoln Park Capital Fund, LLC(10)	1,977,343(21)	911,294	1,066,049	6.50%
Lytton-Kambara Foundation(11)	710,470(22)	710,470	0	*
Investor Company ITF Rosalind Master Fund L.P.(12)	2,874,610(23)	2,158,272	716,338	4.36%
The Hewlett Fund LP (13)	575,538(24)	287,769	287,769	1.75%

\*Less than 1%

- (1) "Beneficial ownership" is a term broadly defined in Rule 13d-3 under the Exchange Act, and includes more than the typical form of stock ownership, that is, stock held in a person's name. The term also includes what is referred to as "indirect ownership," meaning ownership of shares as to which a person has or shares investment power. For purposes of this column, a person or group of persons is deemed to have "beneficial ownership" of any shares that such person or group of persons has the right to acquire within 60 days after November 22, 2022, including through the exercise of a warrant or the conversion of a security.
- (2) Based on 16,412,315 shares of Common Stock outstanding, which assumes the issuance of all the Warrant Shares upon exercise of the Warrants and does not take into account the date of, or any limitations on, the exercise of the Warrants.
- (3) Mr. Orin Hirschman is the managing member of AIGH Capital Management, LLC, a Maryland limited liability company ("AIGH CM"), who is an advisor with respect to the securities held by AIGH Investment Partners, L.P. ("AIGH LP"). Mr. Hirschman has voting and investment control over the securities indirectly held by AIGH CM, directly held by AIGH IP and directly held by Mr. Hirschman and his family. The address for AIGH CM, AIGH LP and Mr. Hirschman is 6006 Berkeley Avenue, Baltimore, Maryland 21209.  
  
Mr. Orin Hirschman is the managing member of AIGH Capital Management, LLC, a Maryland limited liability company ("AIGH CM"), who is a sub-advisor with respect to the securities held by WVP Emerging Manager Onshore Fund, LLC - AIGH Series. Mr. Hirschman has voting and investment control over the securities indirectly held by AIGH CM and directly held by Mr. Hirschman and his family directly. The address for AIGH CM and Mr. Hirschman is 6006 Berkeley Avenue, Baltimore, Maryland 21209.  
  
Mr. Orin Hirschman is the managing member of AIGH CM, who is a sub-advisor with respect to the securities held by WVP Emerging Manager Onshore Fund, LLC - Optimized Equity Series. Mr. Hirschman has voting and investment control over the securities indirectly held by AIGH CM and directly held by Mr. Hirschman and his family directly. The address for AIGH CM and Mr. Hirschman is 6006 Berkeley Avenue, Baltimore, Maryland 21209.
- (4) Evan Markegard has voting or investment control over the shares held by AuGC BioFund LP. The address of the foregoing entity is 8559 Pagoda Way, San Diego, CA 92126.
- (5) Boothbay Absolute Return Strategies, LP, a Delaware limited partnership ("BBARS"), is managed by Boothbay Fund Management, LLC, a Delaware limited liability company ("Boothbay"). Boothbay, in its capacity as the investment manager of BBARS, has the power to vote and the power to direct the disposition of all securities held by BBARS. Ari Glass is the Managing Member of Boothbay. Each of BBARS, Boothbay and Mr. Glass disclaim beneficial ownership of these securities, except to the extent of any pecuniary interest therein.
- (6) Boothbay Diversified Alpha Master Fund LP, a Cayman Islands limited partnership ("BBDAMF"), is managed by Boothbay Fund Management, LLC, a Delaware limited liability company ("Boothbay"). Boothbay, in its capacity as the investment manager of BBDAMF, has the power to vote and the power to direct the disposition of all securities held by BBDAMF. Ari Glass is the Managing Member of Boothbay. Each of BBDAMF, Boothbay and Mr. Glass disclaim beneficial ownership of these securities, except to the extent of any pecuniary interest therein.
- (7) Heights Capital Management, Inc., the authorized agent of CVI Investments, Inc. ("CVI"), has discretionary authority to vote and dispose of the shares held by CVI and may be deemed to be the beneficial owner of these shares. Martin Kobinger, in his capacity as Investment Manager of Heights Capital Management, Inc., may also be deemed to have investment discretion and voting power over the shares held by CVI. Mr. Kobinger disclaims any such beneficial ownership of the shares. CVI Investments, Inc. is affiliated with one or more FINRA member, none of whom are currently expected to participate in the sale pursuant to the prospectus contained in this registration statement. The address of the foregoing entity is c/o Heights Capital Management, Inc., 101 California Street, Suite 3250, San Francisco, CA 94111.
- (8) Michael Bigger, the managing member of the general partner of District 2 Capital Fund LP, has sole voting and dispositive power over the securities held by District 2 Capital Fund LP. The address of District 2 Capital Fund LP is 14 Wall Street, 2nd Floor, Huntington, NY 11743.
- (9) The principal business office address of Laurence W. Lytton is 467 Central Park West, New York, New York 10025.
- (10) Joshua Scheinfeld and Jonathan Cope, principals of Lincoln Park Capital Fund LLC are deemed to be beneficial owners of all the common stock owned by Lincoln Park Capital Fund LLC. Messrs. Scheinfeld and Cope have shared voting and dispositive power. The address of Lincoln Park Capital Fund LLC is 440 N. Wells St. Suite 410, Chicago, IL 60654. Lincoln Park Capital Fund LLC has rights, under various warrants, to acquire an aggregate number of shares of the Company except for the contractual caps in the warrants on the amount of outstanding shares of the Company's Common Stock that Lincoln Park Capital Fund LLC may own, when combined with the shares of Common Stock owned, would exceed such a cap. The ownership cap in the warrants is 9.99%.

- (11) Laurence Lytton has the voting and investment control over the securities held by Lytton-Kambara Foundation. The address of Lytton-Kambara Foundation is 467 Central Park West, 17-A, New York, NY 10025.
- (12) Steven Salamon, President of Rosalind Advisors, Inc., advisor to Rosalind Master Fund L.P. has voting and dispositive power. Rosalind Master Fund L.P. holds the common stock through Investor Company ITF Rosalind Master Fund L.P. The address of Rosalind Master Fund L.P. is c/o TD Waterhouse, 77 Bloor St W. 3RD Floor, Toronto, Ontario M5S 1M2. Investor Company ITF Rosalind Master Fund L.P. has rights, under various warrants, to acquire an aggregate number of shares of the Company except for the contractual caps in the warrants on the amount of outstanding shares of the Company's Common Stock that Investor Company ITF Rosalind Master Fund L.P. may own, when combined with the shares of Common Stock owned, would exceed such a cap. The ownership cap in the warrants is 9.99%.
- (13) Martin Chopp, the General Partner of The Hewlett Fund LP, has voting and dispositive power. The address of The Hewlett Fund LP is 100 Merrick Rd. – Suite 400W, Rockville Centre, NY 11570.
- (14) Includes: (a) 1,640,614 shares of common stock that may be purchased pursuant to the Warrants issued in the Private Placements; and (b) 73,006 shares of Common Stock that may be purchased pursuant to the exercise of other existing warrants, in each case, within 60 days of November 22, 2022.
- (15) Includes 71,942 shares of common stock that may be purchased pursuant to the Warrants issued in the Private Placements, within 60 days of November 22, 2022.
- (16) Consists of 68,146 shares of common stock that may be purchased pursuant to the Warrants issued in the Private Placements, within 60 days of November 22, 2022.
- (17) Consists of 34,731 shares of common stock that may be purchased pursuant to the Warrants issued in the Private Placements, within 60 days of November 22, 2022.
- (18) Includes: (a) 300,000 shares of common stock that may be purchased pursuant to the Warrants issued in the Private Placements; and (b) 138,126 shares of Common Stock that may be purchased pursuant to the exercise of other existing warrants, in each case, within 60 days of November 22, 2022.
- (19) Includes 239,808 shares of common stock that may be purchased pursuant to the Warrants issued in the Private Placements, within 60 days of November 22, 2022.
- (20) Includes: (a) 603,997 shares of common stock that may be purchased pursuant to the Warrants issued in the Private Placements; and (b) 211,400 shares of Common Stock that may be purchased pursuant to the exercise of other existing warrants, in each case, within 60 days of November 22, 2022.
- (21) Includes: (a) 911,294 shares of common stock that may be purchased pursuant to the Warrants issued in the Private Placements; and (b) 154,755 shares of Common Stock that may be purchased pursuant to the exercise of other existing warrants, in each case, within 60 days of November 22, 2022.
- (22) Consists of 710,470 shares of common stock that may be purchased pursuant to the Warrants issued in the Private Placements, within 60 days of November 22, 2022.
- (23) Includes (a) 2,158,272 shares of common stock that may be purchased pursuant to the Warrants issued in the Private Placements; and (b) 111,110 shares of Common Stock that may be issued upon conversion of Series D Preferred Shares, in each case, within 60 days of November 22, 2022.
- (24) Includes 287,769 shares of common stock that may be purchased pursuant to the Warrants issued in the Private Placements, within 60 days of November 22, 2022.
- (25) Consists of: (i) 1,345,650 shares of common stock held by AIGH Investment Partners, LP; (ii) 229,772 shares of common stock held by WVP Emerging Manager Onshore Fund, LLC – AIGH Series; and (iii) 65,192 shares of common stock held by WVP Emerging Manager Onshore Fund LLC – AIGH Series. AIGH Investment Partners, LP, WVP Emerging Manager Onshore Fund, LLC – AIGH Series and WVP Emerging Manager Onshore Fund, LLC – Optimized Equity Series are managed by AIGH Capital Management LLC.

#### PLAN OF DISTRIBUTION

Each selling stockholder of the securities and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their securities covered hereby on the Nasdaq Stock Market or any other stock exchange, market or trading facility on which the securities are traded or in private transactions. These sales may be at fixed or negotiated prices. A selling stockholder may use any one or more of the following methods when selling securities:

- ordinary brokerage transactions and transactions in which the broker dealer solicits purchasers;
- block trades in which the broker dealer will attempt to sell the securities as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker dealer as principal and resale by the broker dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- settlement of short sales;
- in transactions through broker dealers that agree with the selling stockholders to sell a specified number of such securities at a stipulated price per security;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The selling stockholders may also sell securities under Rule 144 or any other exemption from registration under the Securities Act of 1933, as amended (the “Securities Act”), if available, rather than under this prospectus.

Broker dealers engaged by the selling stockholders may arrange for other broker dealers to participate in sales. Broker dealers may receive commissions or discounts from the selling stockholders (or, if any broker dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this Prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2121.

In connection with the sale of the securities or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the securities in the course of hedging the positions they assume. The selling stockholders may also sell securities short and deliver these securities to close out their short positions, or loan or pledge the securities to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities which require the delivery to such broker-dealer or other financial institution of securities offered by this prospectus, which securities such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The selling stockholders and any broker-dealers or agents that are involved in selling the securities may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the securities purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each selling stockholder has informed the Company that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the securities.

The Company is required to pay certain fees and expenses incurred by the Company incident to the registration of the securities. The Company has agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

We agreed to keep this prospectus effective until the earlier of (i) the date on which the securities may be resold by the selling stockholders without registration and without regard to any volume or manner-of-sale limitations by reason of Rule 144, without the requirement for the Company to be in compliance with the current public information under Rule 144 under the Securities Act or any other rule of similar effect, or (ii) all of the securities have been sold pursuant to this prospectus or Rule 144 under the Securities Act or any other rule of similar effect. The resale securities will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws.

In addition, in certain states, the resale securities covered hereby may not be sold 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.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale securities may not simultaneously engage in market making activities with respect to the common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the selling stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of the common stock by the selling stockholders or any other person. We will make copies of this prospectus available to the selling stockholders and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

#### WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of common stock being offered by this prospectus. This prospectus does not contain all of the information in the registration statement and its exhibits. For further information with respect to us and the common stock offered by this prospectus, we refer you to the registration statement and its exhibits. Statements contained in this prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference.

You can read our Securities and Exchange Commission filings, including the registration statement, over the Internet at the SEC's website at [www.sec.gov](http://www.sec.gov). You may also request a copy of these filings, at no cost, by writing us at 100 Campus Drive Florham Park, New Jersey 07932 or telephoning us at (608) 441-8120.

We are subject to the information and periodic reporting requirements of the Exchange Act, and we file periodic reports, proxy statements and other information with the SEC. These periodic reports, proxy statements and other information are available for inspection and copying at the website of the Securities and Exchange Commission referred to above. We maintain a website at <https://www.collectar.com>. You may access our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the Securities and Exchange Commission free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the Securities and Exchange Commission. The information contained in, or that can be accessed through, our website is not incorporated by reference in, and is not part of, this prospectus.

#### LEGAL MATTERS

The validity of the securities being offered by this prospectus has been passed upon for us by Sidley Austin LLP, New York, New York.

#### 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 Baker Tilly US, LLP, independent registered public accountants, upon the authority of said firm as experts in accounting and auditing.

#### INCORPORATION OF DOCUMENTS BY REFERENCE

The SEC 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 other information that is included in this prospectus.

We incorporate by reference into this prospectus the following document, which we have previously filed with the SEC:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2021, filed with the SEC on [March 21, 2022](#);
- our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2022, June 30, 2022 and September 30, 2022 filed with the SEC on [May 10, 2022](#), [August 5, 2022](#) and [November 3, 2022](#), respectively;
- our Definitive Proxy Statement on Schedule 14A for the annual meeting of stockholders, filed with the SEC on [April 29, 2022](#), [June 6, 2022](#) and [June 7, 2022](#);
- our Current Reports on Form 8-K, filed with the SEC on [February 25, 2022](#), [May 6, 2022](#), [June 7, 2022](#), [June 27, 2022](#), [July 21, 2022](#) (item 5.03 only), [September 13, 2022](#), [September 22, 2022](#) (Item 8.01 only) and [October 25, 2022](#) (Items 1.01 and 3.02, and the related exhibits under Item 9.01); and
- the description of our securities contained in our Registration Statement on Form 8-A filed on [April 18, 2016](#), including any amendment or report filed for the purpose of updating such description.

In addition, all documents subsequently filed by us pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the termination of the offering will be deemed to be incorporated by reference into this prospectus.

You should rely only on the information contained in this prospectus, as updated and supplemented by any prospectus supplement, or that information to which this prospectus or any prospectus supplement has referred you by reference. We have not authorized anyone to provide you with any additional information.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained herein modifies or supersedes such statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of 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:



PROSPECTUS



7,027,043 SHARES OF COMMON STOCK ISSUABLE UPON EXERCISE OF OUTSTANDING WARRANTS

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

We estimate that expenses in connection with the distribution described in this registration statement (other than brokerage commissions, discounts or other expenses relating to the sale of the shares by the selling stockholders) will be as set forth below. We will pay all of the expenses with respect to the distribution, and such amounts, with the exception of the SEC registration fee is an estimate:

SEC registration fee	\$	1,456
Accounting fees and expenses		10,000
Legal fees and expenses		30,000
Miscellaneous		4,000
Total	\$	45,456

Item 14. Indemnification of Directors and Officers

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 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 SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

Item 15. Recent Sales of Unregistered Securities

*2022 Private Placements*

On October 20, 2022, we entered into a Securities Purchase Agreement with certain purchasers named therein, pursuant to which we agreed to issue, in a private placement transaction, common warrants to purchase an aggregate of 3,275,153 shares of common stock at an exercise price of \$1.96 per share. In a separate concurrent private placement transaction, we entered into a Private Placement Securities Purchase Agreement with certain purchasers named therein, pursuant to which we agreed to issue pre-funded warrants to purchase an aggregate of up to 1,875,945 shares of common stock, and common warrants to purchase an aggregate of 1,875,945 shares of common stock at an exercise price of \$1.96 per share. The purchase price of each pre-funded warrant was \$2.08499 and they are exercisable at an exercise price of \$0.00001 per share. The proceeds to us in connection with sale of the warrants and pre-funded warrants were approximately \$3.9 million and we will receive an additional \$10.1 million if the warrants and the pre-funded warrants are exercised in full. The common warrants, pre-funded warrants and the shares of common stock issuable upon the exercise of the common warrants and the pre-funded warrants were offered pursuant to the exemption provided in Section 4(a)(2) under the Securities Act and Rule 506(b) promulgated thereunder.

*2020 Private Placements*

On December 23, 2020, we entered into a Securities Purchase Agreement with certain purchasers named therein, pursuant to which we agreed to issue and sell, 1,518,5180 shares of Series D convertible preferred stock (the "Preferred Shares"). The Preferred Shares were convertible into a number of shares of common stock equal to \$13,500 divided by \$13.50 (or 1,000 shares of common stock for each share of Series D Preferred Stock converted), at a price of \$13,500 per share of Series D Preferred Stock. The Preferred Shareholders and the shares of our common stock issuable upon the exercise of the Series D Preferred Stock issued were offered pursuant to the exemption provided in Section 4(a)(2) under the Securities Act of 1933, as amended (the "Securities Act") and Rule 506(b) promulgated thereunder. The proceeds to us in connection with this private placement were approximately \$18.7 million.

*2019 Private Placements*

On May 16, 2019, we entered into a Securities Purchase Agreement with certain purchasers named therein (the “2019 PIPE Purchasers”), pursuant to which issued and sold, in a registered offering directly to the 2019 PIPE Purchasers, an aggregate of 198,200 shares of Common Stock at an offering price of \$25.00 per share. In a concurrent private placement, we issued to the 2019 PIPE Purchasers who participated in the registered offering, Series F warrants to purchase an aggregate of 198,200 shares of Common Stock at an exercise price of \$24.00 per share (the “Series F Warrants”). In a separate concurrent private placement transaction, we entered into a Private Placement Securities Purchase Agreement with the 2019 PIPE Purchasers, pursuant to which we agreed to issue to the 2019 PIPE Purchasers an aggregate of 201,800 shares of Common Stock together with Series G warrants to purchase an aggregate of up to 201,800 shares of Common Stock at an exercise price of \$24.00 per share at an offering price of \$25.00 per share. The shares of common stock, warrants and the shares of Common Stock issuable upon the exercise of the warrants were offered pursuant to the exemption provided in Section 4(a)(2) under the Securities Act, and Rule 506(b) promulgated thereunder.

## Item 16. Exhibits.

(a) Exhibits.

### EXHIBIT INDEX

Exhibit No.	Description	Incorporated by Reference		Exhibit No.
		Form	Filing Date	
<a href="#">2.1</a>	<a href="#">Agreement and Plan of Merger by and among Novelos Therapeutics, Inc., Cell Acquisition Corp. and Collectar, Inc. dated April 8, 2011</a>	<a href="#">8-K</a>	<a href="#">April 11, 2011</a>	<a href="#">2.1</a>
<a href="#">3.1</a>	<a href="#">Second Amended and Restated Certificate of Incorporation</a>	<a href="#">8-K</a>	<a href="#">April 11, 2011</a>	<a href="#">3.1</a>
<a href="#">3.2</a>	<a href="#">Certificate of Ownership and Merger of Collectar Biosciences, Inc. with and into Novelos Therapeutics, Inc.</a>	<a href="#">8-K</a>	<a href="#">February 13, 2014</a>	<a href="#">3.1</a>
<a href="#">3.3</a>	<a href="#">Certificate of Amendment to Second Amended and Restated Certificate of Incorporation</a>	<a href="#">8-K</a>	<a href="#">June 13, 2014</a>	<a href="#">3.1</a>
<a href="#">3.4</a>	<a href="#">Certificate of Amendment to Second Amended and Restated Certificate of Incorporation</a>	<a href="#">8-K</a>	<a href="#">June 19, 2015</a>	<a href="#">3.2</a>
<a href="#">3.5</a>	<a href="#">Certificate of Amendment to Second Amended and Restated Certificate of Incorporation</a>	<a href="#">8-K</a>	<a href="#">March 4, 2016</a>	<a href="#">3.1</a>
<a href="#">3.6</a>	<a href="#">Certificate of Amendment to Second Amended and Restated Certificate of Incorporation</a>	<a href="#">8-K</a>	<a href="#">June 1, 2017</a>	<a href="#">3.2</a>
<a href="#">3.7</a>	<a href="#">Certificate of Amendment of Second Amended and Restated Certificate of Incorporation</a>	<a href="#">8-K</a>	<a href="#">July 13, 2018</a>	<a href="#">3.1</a>
<a href="#">3.8</a>	<a href="#">Certificate of Amendment of Second Amended and Restated Certificate of Incorporation</a>	<a href="#">8-K</a>	<a href="#">February 25, 2021</a>	<a href="#">3.1</a>
<a href="#">3.9</a>	<a href="#">Amended and Restated By-laws</a>	<a href="#">8-K</a>	<a href="#">June 1, 2011</a>	<a href="#">3.1</a>
<a href="#">3.10</a>	<a href="#">Form of Certificate of Designation of Series C Preferred Stock</a>	<a href="#">S-1/A</a>	<a href="#">July 18, 2018</a>	<a href="#">3.11</a>
<a href="#">3.11</a>	<a href="#">Form of Certificate of Designation of Series D Preferred Stock certificate</a>	<a href="#">8-K</a>	<a href="#">December 28, 2020</a>	<a href="#">3.1</a>
<a href="#">3.12</a>	<a href="#">Certificate of Correction of Certificate of Amendment of Second Amended and Restated Certificate of Incorporation</a>	<a href="#">10-Q</a>	<a href="#">May 10, 2022</a>	<a href="#">3.1</a>
<a href="#">3.13</a>	<a href="#">Certificate of Amendment to Second Amended and Restated Certificate of Incorporation of Collectar Biosciences, Inc.</a>	<a href="#">8-K</a>	<a href="#">July 21, 2022</a>	<a href="#">3.1</a>
<a href="#">4.1</a>	<a href="#">Form of common stock certificate</a>	<a href="#">S-1/A</a>	<a href="#">November 9, 2011</a>	<a href="#">4.1</a>
<a href="#">4.2</a>	<a href="#">Form of Series D Preferred Stock certificate</a>	<a href="#">8-K</a>	<a href="#">December 28, 2020</a>	<a href="#">4.1</a>
<a href="#">4.3</a>	<a href="#">Form of Common Warrant</a>	<a href="#">8-K</a>	<a href="#">October 25, 2022</a>	<a href="#">4.1</a>
<a href="#">4.4</a>	<a href="#">Form of Pre-Funded Warrant</a>	<a href="#">8-K</a>	<a href="#">October 25, 2022</a>	<a href="#">4.2</a>
<a href="#">5.1*</a>	<a href="#">Opinion of Sidley Austin LLP</a>			
<a href="#">10.1</a>	<a href="#">2006 Stock Incentive Plan, as amended **</a>	<a href="#">8-K</a>	<a href="#">December 18, 2013</a>	<a href="#">10.1</a>
<a href="#">10.2</a>	<a href="#">Form of Non-Statutory Stock Option under Novelos Therapeutics, Inc.’s 2006 Stock Incentive Plan**</a>	<a href="#">8-K</a>	<a href="#">December 15, 2006</a>	<a href="#">10.2</a>
<a href="#">10.3</a>	<a href="#">Registration Rights Agreement dated September 28, 2015</a>	<a href="#">8-K</a>	<a href="#">September 30, 2015</a>	<a href="#">10.2</a>
<a href="#">10.4</a>	<a href="#">Form of Restricted Common Stock Agreement**</a>	<a href="#">10-Q</a>	<a href="#">August 14, 2017</a>	<a href="#">10.1</a>
<a href="#">10.5</a>	<a href="#">Form of Series D Common Stock Purchase Warrant</a>	<a href="#">8-K</a>	<a href="#">October 11, 2017</a>	<a href="#">4.1</a>
<a href="#">10.6</a>	<a href="#">Registration Rights Agreement, dated as of October 10, 2017, by and among Collectar Biosciences, Inc. and the Purchasers</a>	<a href="#">8-K</a>	<a href="#">October 11, 2017</a>	<a href="#">10.2</a>
<a href="#">10.7</a>	<a href="#">Form of Non-Statutory Stock Option**</a>	<a href="#">S-8</a>	<a href="#">November 9, 2017</a>	<a href="#">10.2</a>
<a href="#">10.8</a>	<a href="#">Stock Option Agreement with James V. Caruso**</a>	<a href="#">S-8</a>	<a href="#">November 9, 2017</a>	<a href="#">10.4</a>
<a href="#">10.9</a>	<a href="#">Stock Option Agreement with Jarrod Longcor**</a>	<a href="#">S-8</a>	<a href="#">November 9, 2017</a>	<a href="#">10.5</a>
<a href="#">10.10</a>	<a href="#">Series E Common Stock Purchase Warrant</a>	<a href="#">S-1/A</a>	<a href="#">July 18, 2018</a>	<a href="#">4.5</a>
<a href="#">10.11</a>	<a href="#">Form of Warrant Agency Agreement</a>	<a href="#">S-1/A</a>	<a href="#">July 18, 2018</a>	<a href="#">4.7</a>
<a href="#">10.12</a>	<a href="#">Agreement of Lease between the Company and KBS II 100-200 Campus Drive, LLC</a>	<a href="#">S-1/A</a>	<a href="#">July 18, 2018</a>	<a href="#">10.35</a>
<a href="#">10.13</a>	<a href="#">Form of Non-Statutory Stock Option (Definitive/Contingent – Employees)**</a>	<a href="#">10-Q</a>	<a href="#">November 13, 2018</a>	<a href="#">10.3</a>
<a href="#">10.14</a>	<a href="#">Form of Non-Statutory Stock Option (Definitive/Contingent – Directors)**</a>	<a href="#">10-Q</a>	<a href="#">November 13, 2018</a>	<a href="#">10.4</a>
<a href="#">10.15</a>	<a href="#">Amended and Restated Employment Agreement between the Company and James Caruso, dated April 15, 2019**</a>	<a href="#">8-K</a>	<a href="#">April 19, 2019</a>	<a href="#">10.1</a>
<a href="#">10.16</a>	<a href="#">Amended and Restated Employment Agreement between the Company and Jarrod Longcor, dated April 15, 2019**</a>	<a href="#">8-K</a>	<a href="#">April 19, 2019</a>	<a href="#">10.2</a>
<a href="#">10.17</a>	<a href="#">Form of Series F Common Stock Purchase Warrant</a>	<a href="#">8-K</a>	<a href="#">May 20, 2019</a>	<a href="#">4.1</a>
<a href="#">10.18</a>	<a href="#">Form of Series G Common Stock Purchase Warrant</a>	<a href="#">8-K</a>	<a href="#">May 20, 2019</a>	<a href="#">4.2</a>
<a href="#">10.19</a>	<a href="#">Securities Purchase Agreement, dated as of May 16, 2019, by and among Collectar Biosciences, Inc. and the Purchasers</a>	<a href="#">8-K</a>	<a href="#">May 20, 2019</a>	<a href="#">10.1</a>
<a href="#">10.20</a>	<a href="#">Private Placement Securities Purchase Agreement, dated as of May 16, 2019, by and among Collectar Biosciences, Inc. and the Purchasers</a>	<a href="#">8-K</a>	<a href="#">May 20, 2019</a>	<a href="#">10.2</a>
<a href="#">10.21</a>	<a href="#">Registration Rights Agreement, dated as of May 16, 2019, by and among Collectar Biosciences, Inc. and the Purchasers</a>	<a href="#">8-K</a>	<a href="#">May 20, 2019</a>	<a href="#">10.3</a>
<a href="#">10.22</a>	<a href="#">Collectar Biosciences, Inc. Amended and Restated 2015 Stock Incentive Plan**</a>	<a href="#">8-K</a>	<a href="#">June 14, 2019</a>	<a href="#">10.1</a>

<a href="#">10.23</a>	<a href="#">Amendment to Amended and Restated Employment Agreement between the Company and Jarrod Longcor dated November 10, 2019**</a>	<a href="#">10-Q</a>	<a href="#">November 12, 2019</a>	<a href="#">10.2</a>
<a href="#">10.24</a>	<a href="#">Form of Underwriting Agreement</a>	<a href="#">S-1/A</a>	<a href="#">May 20, 2020</a>	<a href="#">1.1</a>
<a href="#">10.25</a>	<a href="#">Form of Series H Warrant</a>	<a href="#">S-1/A</a>	<a href="#">May 20, 2020</a>	<a href="#">4.3</a>
<a href="#">10.26</a>	<a href="#">Form of Warrant Agency Agreement</a>	<a href="#">8-K</a>	<a href="#">June 5, 2020</a>	<a href="#">4.3</a>
<a href="#">10.27</a>	<a href="#">Equity Distribution Agreement between Collectar Biosciences, Inc. and Oppenheimer &amp; Co. Inc., dated August 11, 2020</a>	<a href="#">8-K</a>	<a href="#">August 11, 2020</a>	<a href="#">10.1</a>
<a href="#">10.28</a>	<a href="#">Form of Securities Purchase Agreement</a>	<a href="#">8-K</a>	<a href="#">December 28, 2020</a>	<a href="#">10.1</a>
<a href="#">10.29</a>	<a href="#">Form of Registration Rights Agreement</a>	<a href="#">8-K</a>	<a href="#">December 28, 2020</a>	<a href="#">10.2</a>
<a href="#">10.30</a>	<a href="#">Employment Agreement between the Company and Chad Kolean dated February 23, 2022</a>	<a href="#">8-K</a>	<a href="#">February 25, 2022</a>	<a href="#">10.1</a>
<a href="#">10.31</a>	<a href="#">Amendment 1 to the 2021 Stock Incentive Plan</a>	<a href="#">8-K</a>	<a href="#">June 27, 2022</a>	<a href="#">10.1</a>
<a href="#">10.32</a>	<a href="#">Form of Hybrid Securities Purchase Agreement, dated as of October 20, 2022, by and between the Company and the purchasers named therein</a>	<a href="#">8-K</a>	<a href="#">October 25, 2022</a>	<a href="#">10.1</a>
<a href="#">10.33</a>	<a href="#">Form of PIPE Securities Purchase Agreement, dated as of October 20, 2022, by and between the Company and the purchasers named therein</a>	<a href="#">8-K</a>	<a href="#">October 25, 2022</a>	<a href="#">10.2</a>
<a href="#">10.34</a>	<a href="#">Form of Registration Rights Agreement, dated as of October 20, 2022, by and between the Company and the purchasers named therein</a>	<a href="#">8-K</a>	<a href="#">October 25, 2022</a>	<a href="#">10.3</a>
<a href="#">21.1*</a>	<a href="#">List of Subsidiaries</a>			
<a href="#">23.1*</a>	<a href="#">Consent of Sidley Austin LLP (included in Exhibit 5.1)</a>			
<a href="#">23.2*</a>	<a href="#">Consent of Baker Tilly US, LLP</a>			
<a href="#">24.1*</a>	<a href="#">Powers of Attorney (included on signature page)</a>			
<a href="#">107*</a>	<a href="#">Filing Fee Table</a>			

\* Filed herewith.

\*\* Compensatory contract or arrangement.

#### (b) Financial Statement Schedules.

Financial statement schedules have been omitted, as the information required to be set forth therein is included in the consolidated financial statements or notes thereto appearing in the prospectus made part of this registration statement.

#### 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.
- (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 the undertakings set forth in paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) above 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 Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), that are incorporated by reference in this registration statement or are contained in a form of prospectus filed pursuant to Rule 424(b) that is part of this 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, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

(b) The undersigned registrant hereby undertakes 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) 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 SEC 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.

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### 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-1 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Florham Park, State of New Jersey, on November 23, 2022.

### CELLECTAR BIOSCIENCES, INC.

By: /s/ James V. Caruso  
James V. Caruso  
Chief Executive Officer

### POWER OF ATTORNEY

We, the undersigned officers and directors of Cellectar Biosciences, Inc., hereby severally constitute and appoint James V. Caruso and Chad J. Kolean, 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 her or him and in her or his name, place and stead, and in any and all capacities, to sign any and all amendments to this registration statement, 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 she or 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 her 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 on the 23rd day of November 2022 by the following persons in the capacities indicated.

<u>Signature</u>	<u>Title</u>
<u>/s/ James V. Caruso</u> James V. Caruso	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/ Asher Alban Chanan-Khan</u> Asher Alban Chanan-Khan	Director
<u>/s/ Frederick W. Driscoll</u> Frederick W. Driscoll	Director
<u>/s/ Stefan D. Loren, Ph.D.</u> Stefan D. Loren, Ph.D.	Director
<u>/s/ John Neis</u> John Neis	Director
<u>/s/ Douglas J. Skirsky</u> Douglas J. Swirsky	Director

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# SIDLEY

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 BALTIMORE, MD 21209  
 +1 410 559 2880  
 +1 202 736 8711 FAX

AMERICA · ASIA PACIFIC · EUROPE

November 23, 2022

Collectar Biosciences, Inc.  
 100 Campus Drive  
 Florham Park, New Jersey 07932

Ladies and Gentlemen:

We refer to the Registration Statement on Form S-1 (the "Registration Statement") being filed by Collectar Biosciences, Inc., a Delaware corporation (the "Company"), with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "Securities Act"), relating to the registration under the Securities Act of 7,027,043 shares (the "Shares") of common stock, \$0.00001 par value per share (the "Common Stock"), of the Company, which are comprised of (i) 5,151,098 shares of Common Stock (the "Common Warrant Shares") issuable upon the exercise of common warrants (the "Common Warrants") and (ii) 1,875,945 shares of Common Stock (together with the Common Warrant Shares, the "Shares") issuable upon the exercise of pre-funded warrants (together with the Common Warrants, the "Warrants"). The Shares may be offered and sold by the selling stockholders named in the Registration Statement.

This opinion letter is being delivered in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act.

We have examined the Registration Statement, the Company's Amended and Restated Certificate of Incorporation, as amended to the date hereof (the "Certificate of Incorporation"), the Company's Amended and Restated Bylaws, the Warrants and the resolutions adopted by the board of directors of the Company relating to the Registration Statement and the issuance of the Shares by the Company. We have also examined originals, or copies of originals certified to our satisfaction, of such agreements, documents, certificates and statements of the Company and other corporate documents and instruments, and have examined such questions of law, as we have considered relevant and necessary as a basis for this opinion letter. We have assumed the authenticity of all documents submitted to us as originals, the genuineness of all signatures, the legal capacity of all persons and the conformity with the original documents of any copies thereof submitted to us for examination. As to facts relevant to the opinions expressed herein, we have relied without independent investigation or verification upon, and assumed the accuracy and completeness of, certificates, letters and oral and written statements and representations of public officials and officers and other representatives of the Company.

Sidley Austin (DC) LLP is a Delaware limited liability partnership doing business as Sidley Austin LLP and practicing in affiliation with other Sidley Austin partnerships.

# SIDLEY

Collectar Biosciences, Inc.  
 November 23, 2022  
 Page 2

Based on the foregoing, and subject to the other qualifications and limitations set forth herein, we are of the opinion that the Shares, when duly issued and delivered in accordance with the terms of the Warrants (including the payment of the applicable exercise price) will be validly issued, fully paid and non-assessable.

In rendering the opinion set forth above, we have assumed that, at the time of the issuance of any Shares upon exercise of any Warrant there will be a sufficient number of shares of Common Stock authorized and then available for issuance under the Company's Certificate of Incorporation as in effect at such time.

This opinion letter is limited to the General Corporation Law of the State of Delaware. We express no opinion as to the laws, rules or regulations of any other jurisdiction, including, without limitation, the federal laws of the United States of America or any state securities or blue sky laws.

We hereby consent to the filing of this opinion letter as an Exhibit to the Registration Statement and to all references to our Firm included in or made a part of the Registration Statement. 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 Securities Act.

Very truly yours,

/s/ Sidley Austin LLP

**CELLECTAR BIOSCIENCES, INC.  
LIST OF SUBSIDIARIES**

Set forth below is a list of the subsidiaries of Collectar Biosciences, Inc.:

<b>Subsidiary Name</b>	<b>Jurisdiction of Organization</b>
Collectar, Inc.	Wisconsin

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**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We hereby consent to the use in this Registration Statement on Form S-1 of Collectar Biosciences, Inc. of our report dated March 21, 2022 with respect to our audit of the consolidated financial statements of Collectar Biosciences, Inc. for the years ended December 31, 2021 and 2020 which are incorporated by reference in this Registration Statement. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ Baker Tilly US, LLP

Philadelphia, Pennsylvania  
November 23, 2022

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## Calculation of Filing Fee Tables

FORM S-1  
(Form Type)**Cellectar Biosciences, Inc.**  
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered and Carry Forward Securities

	Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered <sup>(1)</sup>	Proposed Maximum Offering Price Per Share <sup>(2)</sup>	Maximum Aggregate Offering Price <sup>(2)</sup>	Fee Rate	Amount of Registration Fee
Fees to Be Paid	Equity	Common Stock, par value \$0.00001 per share	457(c)	7,027,043	\$ 1.88	\$ 13,210,840.84	0.00011020	\$ 1,455.84

(1) Consists of an aggregate of 7,027,043 shares of the registrant's common stock issuable upon the exercise of warrants, all of which were sold to the selling stockholders in private placements. Pursuant to Rule 416 under the Securities Act of 1933, as amended, the shares of common stock being registered hereunder include such indeterminate number of shares of common stock as may be issuable with respect to the shares of common stock being registered hereunder as a result of stock splits, stock dividends or similar transactions.

(2) Pursuant to Rule 457(c), calculated on the basis of the average of the high and low prices per share of common stock reported on The Nasdaq Capital Market on November 22, 2022.