

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-3

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Century Therapeutics, Inc.

(Exact name of Registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

84-2040295
(I.R.S. Employer
Identification No.)

**25 North 38th Street, 11th Floor
Philadelphia, Pennsylvania 19104
(267) 817-5790**

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

**Brent Pfeiffenberger, Pharm.D.
President and Chief Executive Officer
Century Therapeutics, Inc.
25 North 38th Street, 11th Floor
Philadelphia, Pennsylvania 19104
(267) 817-5790**

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

Copies to:

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Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this Registration Statement.

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, 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
Non-accelerated filer

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 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.



7,868,666 Shares of Common Stock

This prospectus of Century Therapeutics, Inc. a Delaware corporation, or the Company, we, or us, relates to the offer and resale from time to time by the selling stockholders identified in this prospectus, or collectively the selling stockholders, of up to 7,868,666 shares of our common stock, par value \$0.0001 per share, or the common stock. The shares offered by the selling stockholders consist of: (i) 3,741,646 shares that were privately issued pursuant to an Agreement and Plan of Merger, dated as of April 11, 2024, or the Merger Agreement, by and among the Company, Clarent Intermediate Sub, Inc., or Intermediate Sub, a wholly owned subsidiary of Company, Clarent Merger Sub, Inc., or Merger Sub, a wholly owned subsidiary of Intermediate Sub, Clade Therapeutics, Inc., or Clade, and Fortis Advisors LLC, solely in its capacity as securityholders' agent, in connection with our acquisition of Clade, or the Merger, (ii) 793,687 shares that were withheld at the closing of the Merger as recourse to satisfy certain indemnification obligations of the Clade securityholders under the Merger Agreement, and (iii) 3,333,333 shares of common stock that may be issued to the selling stockholders upon the potential achievement of a clinical development milestone, or collectively clauses (i), (ii) and (iii), the Merger Shares.

The shares of common stock described in this prospectus or in any supplement to this prospectus may be sold from time to time pursuant to this prospectus by the selling stockholders in ordinary brokerage transactions, in transactions in which brokers solicit purchases, in negotiated transactions, or in a combination of such methods of sale, at market prices prevailing at the time of sale, at prices related to such prevailing market prices, at fixed prices or prices subject to change, or at negotiated prices. See "Plan of Distribution" for more information about how the selling stockholders may sell or dispose of their shares of common stock. We cannot predict when or in what amounts the selling stockholders may sell any of the shares offered by this prospectus.

We are not selling any shares of our common stock, and we will not receive any of the proceeds from the sale of shares by the selling stockholders. The selling stockholders will pay all brokerage fees and commissions and similar sale-related expenses.

Our common stock is listed on the Nasdaq Global Select Market, or Nasdaq, under the symbol "IPSC." On June 13, 2024, the last reported sale price of our common stock on Nasdaq was \$3.26 per share.

We are an emerging growth company and a smaller reporting company as defined under federal securities laws and, as such, may elect to comply with certain reduced public company reporting requirements for future filings.

INVESTING IN OUR SECURITIES INVOLVES RISKS. SEE THE "RISK FACTORS" ON PAGE 7 OF THIS PROSPECTUS AND ANY SIMILAR SECTION CONTAINED IN ANY APPLICABLE PROSPECTUS SUPPLEMENT OR IN ANY DOCUMENTS INCORPORATED BY REFERENCE HEREIN AND THEREIN CONCERNING FACTORS 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 passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is _____, 2024.

The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or the SEC, pursuant to which the selling stockholders named herein may, from time to time, offer and sell or otherwise dispose of the shares of our common stock covered by this prospectus. If required, each time a selling stockholder offers common stock, in addition to this prospectus, we may provide you with a prospectus supplement that will contain specific information about the terms of that offering. We may also 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 a prospectus supplement and 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.

You should not assume that the information contained in this prospectus is accurate on any date subsequent to the date set forth on the front cover of this prospectus or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus is delivered or shares of common stock are sold or otherwise disposed of on a later date. It is important for you to read and consider all information contained in this prospectus, including the documents incorporated by reference therein, in making your investment decision. You should also read and consider the information in the documents to which we have referred you under the captions "Where You Can Find Additional Information" and "Information Incorporated by Reference" in this prospectus.

Neither we nor the selling stockholders have authorized any dealer, agent or other person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus and any accompanying prospectus supplement or related free writing prospectus. You must not rely upon any information or representation not contained or incorporated by reference in this prospectus or an accompanying prospectus supplement or related free writing prospectus. This prospectus and any accompanying prospectus supplement or related free writing prospectus, if any, do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the registered securities to which they relate, nor does this prospectus and any accompanying prospectus supplement or related free writing prospectus, if any, constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction.

This prospectus incorporates by reference, and any prospectus supplement or free writing prospectus may contain and incorporate by reference, market data and industry statistics and forecasts that are based on independent industry publications and other publicly available information. Although we believe these sources are reliable, we do not guarantee the accuracy or completeness of this information and we have not independently verified this information. In addition, the market and industry data and forecasts that may be included or incorporated by reference in this prospectus, any prospectus supplement or any applicable free writing prospectus may involve estimates, assumptions and other risks and uncertainties and are subject to change based on various factors, including those discussed under the heading "Risk Factors" contained in this prospectus, the applicable prospectus supplement and any applicable free writing prospectus, and under similar headings in other documents that are incorporated by reference into this prospectus. Accordingly, investors should not place undue reliance on this information.

Unless otherwise indicated or the context otherwise requires, when we refer to "Century," "we," "our," "us" and the "Company" in this prospectus, we mean Century Therapeutics, Inc., and its wholly owned subsidiaries unless otherwise specified. When we refer to "you," we mean the potential holders of the applicable series of securities.

"Century Therapeutics" the "Century Therapeutics" logo, and other trademarks, trade names, or service marks of Century Therapeutics, Inc. appearing in this prospectus, any prospectus supplement and any free writing prospectus are the property of Century Therapeutics, Inc. All other trademarks, trade names, and service marks appearing in this prospectus, any prospectus supplement and any free writing prospectus are the property of their respective owners. Solely for convenience, the trademarks and trade names in this prospectus may be referred to without the ® and ™ symbols, but such references should not be construed as any indicator that their respective owners will not assert their rights thereto.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, any applicable prospectus supplement and the documents incorporated by reference may contain forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act, about us and our subsidiary. These forward-looking statements are intended to be covered by the safe harbor for forward-looking statements provided by the Private Securities Litigation Reform Act of 1995. Forward-looking statements, including those regarding our strategy, future operations, future financial position, future revenues, projected costs, prospects, plans and objectives of management, are not statements of historical fact, and can be identified by the use of forward-looking terminology such as “anticipate,” “believe,” “estimate,” “expect,” “intend,” “may,” “plan,” “predict,” “project,” “will,” “would,” “could,” “should,” “potential,” “seek,” “evaluate,” “pursue,” “continue,” “design,” “impact,” “affect,” “forecast,” “target,” “outlook,” “initiative,” “objective,” “designed,” “priorities,” “goal,” or the negative of such terms and similar expressions are intended to identify forward looking statements, although not all forward looking statements contain these identifying words. Such statements are based on assumptions and expectations that may not be realized and are inherently subject to risks, uncertainties and other factors, many of which cannot be predicted with accuracy and some of which might not even be anticipated. Forward-looking statements include, but are not limited to, statements concerning:

- our ability to raise additional capital to fund our operations and continue the development of our current and future product candidates;
- the preclinical and early clinical nature of our business and our ability to successfully advance our current and future product candidates, through development activities, preclinical studies, and clinical trials;
- our ability to generate revenue from future product sales and our ability to achieve and maintain profitability;
- the accuracy of our projections and estimates regarding our expenses, capital requirements, cash utilization, and need for additional financing;
- our dependence on the success of our lead product candidate, CNTY-101;
- the novelty of our approach to immuno-oncology and autoimmune treatment of cancer, utilizing iPSC-derived natural killer cells, or iNK cells, and iPSC-derived T cells, or iT cells, and the challenges we will face due to the novel nature of such technology;
- the success of competing therapies that are or may become available;
- our reliance on the maintenance of our collaborative relationship with FUJIFILM Cellular Dynamics Inc., or FCDI, for access to key differentiation and reprogramming technology for the manufacturing and development of our product candidates;
- the initiation, progress, success, cost, and timing of our development activities, preclinical studies and clinical trials;
- the timing of future investigational new drug, or IND, applications and the likelihood of, and our ability to obtain and maintain, regulatory clearance of IND applications for our product candidates;
- the timing, scope and likelihood of regulatory filings and approvals, including final regulatory approval of our product candidates;
- our reliance on FCDI to be the exclusive manufacturer of certain product candidates, and our ability to manufacture our own product candidates in the future, and the timing and costs of such manufacturing activities;
- our reliance on the maintenance of our collaborative relationship with Bristol-Myers Squibb Company, or Bristol-Myers Squibb, in connection with the furtherance of our collaboration programs;
- our ability to successfully integrate with the operations of Clade following the acquisition and achieve the anticipated benefits of the acquisition;
- the performance of third parties in connection with the development of our product candidates, including third parties conducting our current and future clinical trials as well as third-party suppliers and manufacturers;
- our ability to attract and retain strategic collaborators with development, regulatory, and commercialization expertise;

- the public opinion and scrutiny of cell-based therapies and its potential impact on public perception of our company and product candidates;
- our ability to successfully commercialize our product candidates and develop sales and marketing capabilities, if our product candidates are approved;
- the size and growth of the potential markets for our product candidates and our ability to serve those markets;
- regulatory developments and approval pathways in the United States and foreign countries for our product candidates;
- the potential scope and value of our intellectual property and proprietary rights;
- our ability, and the ability of our licensors, to obtain, maintain, defend, and enforce intellectual property and proprietary rights protecting our product candidates, and our ability to develop and commercialize our product candidates without infringing, misappropriating, or otherwise violating the intellectual property or proprietary rights of third parties;
- our ability to recruit and retain key members of management and other clinical and scientific personnel;
- the volatility of capital markets and other macroeconomic factors, including due to inflationary pressures, banking instability, geopolitical tensions or the outbreak of hostilities or war;
- the extent to which pandemics, such as the COVID-19 pandemic, or any other global health crises may impact our business, including development activities, preclinical studies, clinical trials, supply chain and labor force;
- developments relating to our competitors and our industry; and
- other risks and uncertainties, including those described under the caption “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2023, as such risk factors may be amended, supplemented or superseded from time to time by our subsequent periodic reports we file with the SEC.

We have based these forward-looking statements largely on our current expectations, estimates, forecasts, and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy, and financial needs. In light of the significant uncertainties in these forward-looking statements, you should not rely upon forward-looking statements as predictions of future events. Although we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus, we cannot guarantee that the future results, levels of activity, performance, or events and circumstances reflected in the forward-looking statements will be achieved or occur at all. You should refer to the section titled “Risk factors” this prospectus, any applicable prospectus supplement and the documents we incorporate by reference herein and therein for a discussion of important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. Except as required by law, we undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise.

You should read this prospectus, any applicable prospectus supplement and the documents incorporated by reference herein and therein completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements in this prospectus by these cautionary statements.

ABOUT THE COMPANY

This summary description about us and our business highlights selected information contained elsewhere in this prospectus or incorporated by reference into this prospectus. It does not contain all the information you should consider before investing in our securities. You should carefully read the entire prospectus, any applicable prospectus supplement 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, any applicable prospectus supplement 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.

The Company

We are an innovative biotechnology company harnessing the power of adult stem cells to develop curative cell therapy products for cancer and autoimmune diseases that we believe will allow us to overcome the limitations of first-generation cell therapies. We have created a comprehensive, genetically engineered allogeneic cell therapy platform that includes:

- Industry-leading induced pluripotent stem cells, or iPSCs, and differentiated know-how to generate immune effector cells from iPSCs, or iPSC-derived cells;
- Clustered regularly interspaced short palindromic repeats, or CRISPR, mediated precision gene editing that allows us to incorporate multiple transgenes and remove target genes intended to optimize cell product performance;
- Sophisticated protein engineering capabilities to develop proprietary next generation chimeric antigen receptors, or CARs;
- Our proprietary Allo-Evasion™ technology intended to prevent rejection of our cell products by the host immune system; and
- Cutting edge manufacturing capabilities intended to minimize product development risk and supply risk.

We are leveraging our expertise in cellular reprogramming, genetic engineering, and manufacturing to develop therapies with the potential to overcome many of the challenges inherent to cell therapy and provide a significant advantage over existing cell therapy technologies. We believe that these vertically integrated capabilities will allow us to further expand our existing pipeline and develop therapeutics from iNK cells and iT cells that may provide enhanced clinical outcomes compared to available therapeutic options. We believe our commitment to developing off-the-shelf cell therapies will expand patient access and provide an unparalleled opportunity to advance the course of treatment. Our vision is to become a premier fully integrated biotechnology company by developing and ultimately commercializing off-the-shelf allogeneic cell therapies that dramatically and positively transform the lives of patients suffering from life-threatening cancers, as well as autoimmune diseases. To achieve our vision, we have assembled a world-class team whose members collectively have decades of experience in cell therapy and drug development, manufacturing, and commercialization.

The field of cell therapy is rapidly evolving, with autologous and allogeneic technologies demonstrating the strong potential of this therapeutic modality. We believe that our industry leading, end-to-end iPSC-derived allogeneic cell therapy platform will allow us to overcome technical and biological limitations of other donor-derived cell therapies. The unlimited replication capacity of iPSCs allows us to incorporate multiple genetic modifications at precise sites, or loci, in the genome of iPSCs that are designed to improve cell function using a CRISPR-mediated approach targeting a DNA repair pathway called homology directed repair, or HDR. The precision of our CRISPR-HDR gene editing technology and clonal selection eliminates random integration events and allows more controlled expression of transgenes of interest compared to other gene editing methodologies. The self-renewal capacity of iPSCs also enables the generation of master cell banks derived from single genetically engineered clones thus allowing the implementation of cost-efficient manufacturing of drug product that can be made available on demand at any clinical site. We have assembled a unique and powerful combination

of technologies that bring together a preeminent iPSC-derived allogeneic cell therapy platform with highly advanced cell engineering and manufacturing capabilities. We believe this unique combination puts us in a position to change the oncology and autoimmune and inflammatory treatment paradigm and market.

The Merger

On April 11, 2024, we entered into the Merger Agreement, pursuant to which Merger Sub merged with and into Clade, with Clade continuing as the surviving corporation in the Merger and our wholly owned indirect subsidiary. Pursuant to the terms of the Merger Agreement, the aggregate upfront consideration was approximately \$35 million, consisting of (i) approximately \$15 million in cash and (ii) 4,535,333 shares of common stock. 793,687 shares of common stock, representing approximately 10% of the aggregate purchase price, were held back at the closing of the Merger as recourse to satisfy certain indemnification obligations of the Clade securityholders under the Merger Agreement and, subject to any forfeiture of Merger Shares as a result of indemnification claims made prior to the 18-month anniversary of the closing of the Merger, will be issued pursuant to the terms of the Merger Agreement following the 18-month anniversary of the closing of the Merger.

Following the closing of the Merger, the Merger Agreement provides for one potential clinical development milestone payment of \$10 million (which may be paid by us in cash, shares of its common stock or a combination thereof) to be made to Clade securityholders upon the achievement of the milestone.

Pursuant to the Merger Agreement, we agreed to file a registration statement on Form S-3 to register for resale the Merger Shares no later than 90 days following the closing of the Merger. We agreed to use commercially reasonable efforts to have the registration statement declared effective as soon as practicable after the filing. This prospectus is part of that registration statement.

Under the Merger Agreement, we also agreed to maintain the effectiveness of the registration statement until the earliest to occur of: (i) April 11, 2029, and (ii) the date that all Merger Shares covered by the registration statement are sold or are able to be sold by the holders thereof by relying on Rule 144 under the Securities Act without any restriction, including volume limitation.

The description of the Merger Agreement is qualified in its entirety by reference to the Merger Agreement, which has been filed as an exhibit to our Current Report on Form 8-K filed on April 11, 2024. See “Where You Can Find More Information” and “Information Incorporated by Reference.” The representations, warranties and covenants made by us in the Merger Agreement were made solely for the benefit of the parties to such agreements, including, in some cases, for the purpose of allocating risk among the parties thereto, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were made as of an earlier date. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

Corporate Information

Our primary executive offices are located at 25 North 38th Street, 11th Floor, Philadelphia, Pennsylvania 19104, and our telephone number is (267) 817-5790. Our corporate website is www.centurytx.com. The information contained on, or accessible through, our website is not incorporated by reference into this prospectus, and you should not consider any information contained in, or that can be accessed through, our website as part of this prospectus or in deciding whether to purchase our common stock.

Implications of Being an Emerging Growth Company and Smaller Reporting Company

We are an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act of 2012, or the Jobs Act. We will remain an emerging growth company until the earliest of (1) December 31, 2026, (2) the beginning of the first fiscal year after our annual gross revenue is \$1.235 billion or more, (3) the date on which we have, during the previous three-year period, issued more than \$1.0 billion in non-convertible debt securities and (4) as of the end of any fiscal year in which the market value of our common stock held by non-affiliates exceeded \$700 million as of the end of the second quarter of that fiscal year.

For as long as we remain an “emerging growth company,” we may take advantage of certain exemptions from various reporting requirements that are applicable to public companies that are not “emerging growth companies” including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation and financial statements in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote to approve executive compensation and shareholder approval of any golden parachute payments not previously approved. We will take advantage of these reporting exemptions until we are no longer an “emerging growth company.”

The JOBS Act provides that an “emerging growth company” can take advantage of an extended transition period for complying with new or revised accounting standards. We have irrevocably elected not to avail ourselves of this exemption and, therefore, we are subject to the same new or revised accounting standards as other public companies that are not “emerging growth companies.”

We are also a “smaller reporting company,” as defined in Item 10(f)(1) of Regulation S-K. We will remain a smaller reporting company until the last day of the fiscal year in which (i) the market value of our common stock held by non-affiliates exceeds \$250 million as of the end of that year’s second fiscal quarter, or (ii) our annual revenues exceeded \$100 million during such completed fiscal year and the market value of our common stock held by non-affiliates exceeds \$700 million as of the end of that year’s second fiscal quarter. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and, similar to emerging growth companies, smaller reporting companies have reduced disclosure obligations regarding executive compensation.

RISK FACTORS

Investing in our common stock involves a high degree of risk. Before making a decision to invest in our common stock, in addition to the other information contained in this prospectus, in any accompanying prospectus supplement or incorporated by reference herein or therein, you should carefully consider the risks set forth below and the risks described under “Risk Factors” contained in our [Annual Report on Form 10-K for the year ended December 31, 2023](#), and our subsequent Quarterly Reports, as well as any amendments thereto, which are incorporated by reference into this prospectus in their entirety, together with other information in this prospectus and any applicable prospectus supplement, the documents incorporated by reference, and any free writing prospectus that we may authorize for use in connection with a specific offering. See the section titled “Where You Can Find More Information.”

Future sales of our common stock by the Selling Stockholders could cause our stock price to decline.

Sales of a substantial number of shares of our common stock by the selling stockholders in the public market, or the perception that these sales might occur, could depress the market price of our common stock and could impair our ability to raise capital through the sale of additional equity securities or other securities convertible into or exchangeable for equity securities, regardless of whether there is any relationship between such sales and the performance of our business.

USE OF PROCEEDS

We will not receive any of the proceeds from the sale of our common stock by the selling stockholders named in this prospectus. All proceeds from the resale of the shares of our common stock offered by this prospectus will belong to the selling stockholders identified in this prospectus under “Selling Stockholders.”

We will pay all expenses associated with this prospectus and any amendments or supplements thereto, and any actions or filings necessary to maintain the effectiveness of this prospectus, including filing and printing fees, the fees and expenses of our counsel and accounting fees and expenses, costs associated with clearing the shares for sale under applicable state securities laws and listing fees, but excluding discounts, commissions, fees of underwriters, selling brokers, dealer managers or similar securities industry professionals with respect to the shares being sold.

SELLING STOCKHOLDERS

This prospectus relates to the sale or other disposition of up to 7,868,666 shares of our common stock by the selling stockholders named below, and their donees, pledgees, transferees or other successors-in-interest selling shares of common stock or interests in shares of common stock received after the date of this prospectus from a selling stockholder as a gift, pledge, partnership distribution or other transfer, which are collectively referred to herein as the selling stockholders. These shares consist of the Merger Shares. See “About the Company—The Merger”.

The table below sets forth information as of the date of this prospectus, to our knowledge, the selling stockholders and other information regarding the beneficial ownership (as determined under Section 13(d) of the Exchange Act and the rules and regulations thereunder) of the shares of common stock held by the selling stockholders. The second column lists the number of shares of common stock beneficially owned by the selling stockholders, as of June 13, 2024. The third column lists the maximum number of shares of common stock that may be sold or otherwise disposed of by the selling stockholders pursuant to the registration statement of which this prospectus forms a part. The selling stockholders may sell or otherwise dispose of some, all or none of their shares. Pursuant to Rules 13d-3 and 13d-5 of the Exchange Act, beneficial ownership includes any shares of our common stock as to which a stockholder has sole or shared voting power or investment power, and also any shares of our common stock which the stockholder has the right to acquire within 60 days of June 13, 2024. The percent of beneficial ownership for the selling stockholders is based on 84,500,780 shares of our common stock outstanding as of June 13, 2024. Except as described below, to our knowledge, none of the selling stockholders have been an officer or director of ours or of our affiliates within the past three years or had any material relationship with us or our affiliates within the past three years. Our knowledge is based on information provided by the selling stockholders in investor questionnaires in connection with the Merger, as well as information obtained from relevant Schedule 13D and 13G filings.

The shares of common stock being covered hereby may be sold or otherwise disposed of from time to time during the period the registration statement of which this prospectus is a part remains effective, by or for the account of the selling stockholders. After the date of effectiveness, the selling stockholders may have sold or transferred, in transactions covered by this prospectus or in transactions exempt from the registration requirements of the Securities Act, some or all of their common stock.

Unless otherwise indicated below, the address of each beneficial owner listed in the tables below is c/o Century Therapeutics, Inc., 25 North 38th Street, 11th Floor, Philadelphia, Pennsylvania 19104.

Information about the selling stockholders may change over time. Any changed information will be set forth in an amendment to the registration statement or supplement to this prospectus, to the extent required by law.

| Name of Selling Stockholder | Number of Shares of Common Stock Owned Prior to Offering | | Maximum Number of Shares of Common Stock to be Sold Pursuant to this Prospectus | Number of Shares of Common Stock Owned After Offering(1) | |
|---|--|---------|---|--|---------|
| | Number | Percent | | Number | Percent |
| Syncona Portfolio Limited(2) | 2,042,471 | 2.4% | 2,042,471 | 0 | * |
| ECI Health Fund 3, LLC(3) | 1,021,235 | 1.2% | 1,021,235 | 0 | * |
| LifeSci Venture SPV XIII, LLC(4) | 953,152 | 1.1% | 953,152 | 0 | * |
| Bristol-Myers Squibb Company(5) | 510,617 | * | 510,617 | 0 | * |
| James and Ashley Harmon 2012 Long-Term Trust dated November 27, 2012(6) | 413,513 | * | 413,513 | 0 | * |
| LifeSci Venture Partners II, LP(7) | 408,494 | * | 408,494 | 0 | * |
| Index Ventures Life VI (Jersey) LP(8) | 378,438 | * | 378,438 | 0 | * |
| Alexandria Venture Investments, LLC(9) | 241,647 | * | 241,647 | 0 | * |

| Name of Selling Stockholder | Number of Shares of Common Stock Owned Prior to Offering | | Maximum Number of Shares of Common Stock to be Sold Pursuant to this Prospectus | Number of Shares of Common Stock Owned After Offering(1) | |
|---|--|---------|---|--|---------|
| | Number | Percent | | Number | Percent |
| Sami Busch | 194,780 | * | 194,780 | 0 | * |
| Daniel Vasella(10) | 110,039 | * | 110,039 | 0 | * |
| Janet Burrows James Revocable Trust(11) | 83,559 | * | 83,559 | 0 | * |
| John Whitehead | 80,378 | * | 80,378 | 0 | * |
| George F. McCabe Trust(12) | 70,167 | * | 70,167 | 0 | * |
| Walter C. Donovan | 69,507 | * | 69,507 | 0 | * |
| John N. Irwin III | 68,525 | * | 68,525 | 0 | * |
| Samambaia Investments Limited(13) | 59,684 | * | 59,684 | 0 | * |
| SRB Investments, LLC(14) | 42,292 | * | 42,292 | 0 | * |
| James W. Westphal | 34,754 | * | 34,754 | 0 | * |
| Peter J. Smail | 27,780 | * | 27,780 | 0 | * |
| 1970 Delaware Trust FBO John N. Irwin III(15) | 27,233 | * | 27,233 | 0 | * |
| The Cowan Investment Nominee Trust(16) | 21,831 | * | 21,831 | 0 | * |
| David J. Watson | 21,145 | * | 21,145 | 0 | * |
| Peter S. Lynch Revocable Trust(17) | 20,968 | * | 20,968 | 0 | * |
| The Lynch Foundation(18) | 20,968 | * | 20,968 | 0 | * |
| 2012 Donovan Family Trust | 17,375 | * | 17,375 | 0 | * |
| Kite Pharma Inc.(19) | 9,675 | * | 9,675 | 0 | * |
| Peter & Carolyn Lynch CLUT Article II Trust(20) | 6,345 | * | 6,345 | 0 | * |
| Mary Witkowski Revocable Trust(21) | 5,523 | * | 5,523 | 0 | * |
| Yucca (Jersey) SLP(22) | 5,763 | * | 5,763 | 0 | * |
| GC&H Investments LP(23) | 3,403 | * | 3,403 | 0 | * |
| GC&H Investments, L.P.(24) | 3,403 | * | 3,403 | 0 | * |
| Gadeta Founders B.V.(25) | 5,090 | * | 5,090 | 0 | * |
| Peter & Carolyn Lynch Clat Article III Trust FBO A Lukowski(26) | 475 | * | 475 | 0 | * |
| Peter & Carolyn Lynch Clat Article III Trust FBO DE Montrichard(27) | 475 | * | 475 | 0 | * |
| Peter & Carolyn Lynch Clat Article III Trust FBO M Witkowski(28) | 475 | * | 475 | 0 | * |
| Chad Cowan(29) | 377,181 | * | 377,181 | 0 | * |
| James Glasheen(30) | 377,181 | * | 377,181 | 0 | * |
| Derek Hei(31) | 44,374 | * | 44,374 | 0 | * |
| Leandro Vetcher(32) | 44,374 | * | 44,374 | 0 | * |
| Ritikesh Kumar | 22,186 | * | 22,186 | 0 | * |
| Howard Young | 22,186 | * | 22,186 | 0 | * |

* Less than 1%

- (1) Assumes the sale of all shares offered pursuant to this prospectus.
- (2) Syncona Portfolio Limited is a controlled subsidiary of Syncona Holdings Limited, which in turn is a controlled subsidiary of Syncona Limited. Each of Syncona Holdings Limited and Syncona Limited may be deemed to have voting and investment power over the shares held by Syncona Portfolio Limited. Voting and investment decisions with respect to these shares are made by Syncona Portfolio Limited acting upon the recommendation of an investment committee of Syncona Investment Management Limited, also a subsidiary of Syncona Holdings Limited. The members of this investment committee consist of Nigel Keen, Martin Murphy and Chris Hollowood. The address for Syncona Portfolio Limited is Arnold House, PO Box 273, St Julian's Avenue, St Peter Port, Guernsey, GY1 3RD, Channel Islands.
- (3) Steve McDermid has voting and investment power over the shares held by ECI Health Fund 3, LLC. The address of the principal business office of Steve McDermid and ECI Health Fund 3, LLC is 555 Bryant Street #259, Palo Alto, CA 94301.
- (4) Paul Yook as Managing Member of LifeSci Venture SPV XIII, LLC has voting and investment power over the shares held by LifeSci Venture SPV XIII, LLC. The business address of each of LifeSci Venture SPV XIII, LLC and Mr. Yook is 250 West 55th Street, 34th Floor, New York, NY 10019.
- (5) Bristol-Myers Squibb Company has sole voting and investment power over 303,263 shares of common stock. The address of Bristol-Myers Squibb Company is Route 206 & Province Line Road, Princeton, New Jersey 08543.
- (6) The trustee of James and Ashley Harmon 2012 Long-Term Trust dated November 27, 2012 is Ashley Harmon. This individual may be deemed to have voting and investment power of the securities held by James and Ashley Harmon 2012 Long-Term Trust dated November 27, 2012. Ashley Harmon will disclaim beneficial ownership of such securities, except to the extent of her pecuniary interest therein. The address of James and Ashley Harmon 2012 Long-Term Trust dated November 27, 2012 is 130 Warren Street, Brookline, MA 02445.
- (7) Paul Yook as Managing Member of LifeSci Venture Partners II, LP has voting and investment power over the shares held by LifeSci Venture Partners II, LP. The business address of each of LifeSci Venture Partners II, LP and Mr. Yook is 250 West 55th Street, 34th Floor, New York, NY 10019.
- (8) Index Venture Life Associates VI Limited, a Jersey limited liability company ("Index Venture Life VI GP"), is the managing general partner of Index Ventures Life VI (Jersey) LP ("Index Venture Life VI"). Yucca (Jersey) SLP, a Jersey separate limited partnership ("Yucca") administers the Index Ventures Life VI co-investment vehicle that is contractually required to mirror the investment in the shares by Index Ventures Life VI. Index Venture Life VI GP may be deemed to have voting and dispositive power over the shares held by Index Ventures Life VI and Yucca. David Hall, Phil Balderson, Brendan Boyle and Luke Aubert are members of the board of directors of Index Venture Life VI GP, and investment and voting decisions with respect to the shares held by Index Ventures Life VI are made by such directors collectively and investment and voting decisions with respect to the shares held by Yucca are deemed to be made by such directors collectively. Medicxi Ventures (UK) LLP and Medicxi Ventures (Jersey) Limited act as sub-advisers to Index Ventures Life VI (Jersey) Limited, which acts as the adviser to Index Ventures Life VI, and as such the Medicxi Funds, Index Ventures Life VI and Yucca may be deemed to be members of a "group" as defined in Rule 13d-5 of the Exchange Act. The share ownership reported by Index Ventures Life VI and Yucca does not include any shares beneficially owned by the Medicxi Funds, and each of Index Ventures Life VI and Yucca and their affiliates disclaim beneficial ownership of the securities beneficially owned by the Medicxi Funds and their affiliates. The address of the principal business office of Index Ventures Life VI is c/o Intertrust Fund Services (Jersey) Limited, 44 Esplanade, St. Helier, Jersey JE4 9WG. The address of the principal business office of Yucca is c/o Intertrust Employee Benefit Services Limited, 44 Esplanade, St Helier, Jersey, JE4 9WG.
- (9) Alexandria Venture Investments LLC and Alexandria Real Estate Equities Inc. have shared voting and dispositive power over the 143,518 shares of common stock owned by Alexandria Venture Investments LLC. Joel S. Marcus is the Executive Chairman of ARE-QRS Corp., the general

partner of Alexandria Real Estate Equities Inc., which is the managing member of ARE-Special Services, LLC, which is the managing member of Alexandria Venture Investments LLC. The address of Alexandria Venture Investments LLC is 26 N. Euclid Avenue, Pasadena, CA 91101.

- (10) Dr. Vasella served as a member of the board of directors of Clade until the Merger.
- (11) The trustee of Janet Burrows James Revocable Trust is Janet Burrows James. This individual may be deemed to have voting and investment power of the securities held by Janet Burrows James Revocable Trust. Janet Burrows James will disclaim beneficial ownership of such securities, except to the extent of her pecuniary interest therein. The address of Janet Burrows James Revocable Trust is 10 Golfview Road, Palm Beach, FL 33480.
- (12) The trustee of George F. McCabe Trust is George McCabe. This individual may be deemed to have voting and investment power of the securities held by George F. McCabe Trust. George McCabe will disclaim beneficial ownership of such securities, except to the extent of his pecuniary interest therein. The address of George F. McCabe Trust is 2 International Place, Suite 2630, Boston, MA 02110.
- (13) The principal business address of Samambaia Investments Limited is The Lake Building, Suite 120, Wickhams Cay 1, Road Town, VG.
- (14) Thomas P. Salice as Manager has voting and investment power over the shares held by SRB Investments, LLC. The address of the principal business office of Thomas P. Salice and SRB Investments, LLC is 4 Lakeside Drive, Rye, NY 10580.
- (15) The trustee of The 1970 Delaware Trust FBO John N. Irwin III is the U.S. Trust Company of Delaware and the Investment Advisor is John Irwin III. This individual may be deemed to have voting and investment power over the securities held by The 1970 Delaware Trust FBO John N. Irwin III. The U.S. Trust Company of Delaware will disclaim beneficial ownership of such securities, except to the extent of his pecuniary interest therein. The address of The 1970 Delaware Trust FBO John N. Irwin III is U.S. Trust Company of Delaware, Trustee, 2951 Centerville Road, Suite 200, Wilmington, DE 19808, c/o : The 1970 Delaware Trust for John N. Irwin III.
- (16) The trustee of The Cowan Investment Nominee Trust is Chad Cowan. This individual may be deemed to have voting and investment power of the securities held by The Cowan Investment Nominee Trust. Chad Cowan will disclaim beneficial ownership of such securities, except to the extent of his pecuniary interest therein. The address of The Cowan Investment Nominee Trust is 722 Washington Street, Gloucester, MA 01930.
- (17) The trustee of Peter S. Lynch Revocable Trust is Peter S. Lynch. This individual may be deemed to have voting and investment power over the securities held by Peter S. Lynch Revocable Trust. Peter S. Lynch will disclaim beneficial ownership of such securities, except to the extent of his pecuniary interest therein. The address of Peter S. Lynch Revocable Trust is 429 Ocean Avenue, Marblehead, MA 01945.
- (18) Peter S. Lynch has sole voting and sole dispositive power over the shares of stock owned by The Lynch Foundation. Peter S. Lynch will disclaim beneficial ownership of such securities, except to the extent of his pecuniary interest therein. The address of The Lynch Foundation is 429 Ocean Avenue, Marblehead, MA 01945.
- (19) The principal business address of Kite Pharma Inc. is 333 Lakeside Drive, Foster City, CA 94404.
- (20) The address of Peter & Carolyn Lynch CLUT Article II Trust is 429 Ocean Avenue, Marblehead, MA 01945.
- (21) The address of Mary Witkowski Revocable Trust is 429 Ocean Avenue, Marblehead, MA 01945.
- (22) Index Venture Life Associates VI Limited, a Jersey limited liability company ("Index Venture Life VI GP"), is the managing general partner of Index Ventures Life VI (Jersey) LP ("Index Venture Life VI"). Yucca (Jersey) SLP, a Jersey separate limited partnership ("Yucca") administers the Index Ventures Life VI co-investment vehicle that is contractually required to mirror the investment in the shares by Index Ventures Life VI. Index Venture Life VI GP may be deemed to have voting and dispositive power over the shares held by Index Ventures Life VI and Yucca. David Hall, Phil Balderson, Brendan Boyle and Luke Aubert are members of the board of directors of Index Venture Life VI GP, and investment and voting decisions with respect to the shares held by Index Ventures Life VI

are made by such directors collectively and investment and voting decisions with respect to the shares held by Yucca are deemed to be made by such directors collectively. Medicxi Ventures (UK) LLP and Medicxi Ventures (Jersey) Limited act as sub-advisers to Index Ventures Life VI (Jersey) Limited, which acts as the adviser to Index Ventures Life VI, and as such the Medicxi Funds, Index Ventures Life VI and Yucca may be deemed to be members of a “group” as defined in Rule 13d-5 of the Exchange Act. The share ownership reported by Index Ventures Life VI and Yucca does not include any shares beneficially owned by the Medicxi Funds, and each of Index Ventures Life VI and Yucca and their affiliates disclaim beneficial ownership of the securities beneficially owned by the Medicxi Funds and their affiliates. The address of the principal business office of Index Ventures Life VI is c/o Intertrust Fund Services (Jersey) Limited, 44 Esplanade, St. Helier, Jersey JE4 9WG. The address of the principal business office of Yucca is c/o Intertrust Employee Benefit Services Limited, 44 Esplanade, St Helier, Jersey, JE4 9WG.

- (23) The authorized signatory of GC&H Investments LP is Melissa Roque. This individual may be deemed to have voting and investment power of the securities held by GC&H Investments LP. Melissa Roque will disclaim beneficial ownership of such securities, except to the extent of her pecuniary interest therein. The address of the principal business office of GC&H Investments LP is 3 Embarcadero Center, 20th Floor, San Francisco, CA 94111.
- (24) The authorized signatory of GC&H Investments, L.P. is Melissa Roque. This individual may be deemed to have voting and investment power of the securities held by GC&H Investments LP. Melissa Roque will disclaim beneficial ownership of such securities, except to the extent of her pecuniary interest therein. The address of the principal business office of GC&H Investments, L.P. is 3 Embarcadero Center, 20th Floor, San Francisco, CA 94111.
- (25) Mark De Boer has voting and investment power over the shares held by Gadeta Founders B.V. The address of the principal business office of Mark de Boer and Gadeta Founders B.V. is Yalelaan 46, 3584CM Utrecht, Utrecht, the Netherlands.
- (26) The address of Peter & Carolyn Lynch Clat Article III Trust FBO A Lukowski is 429 Ocean Avenue, Marblehead, MA 01945.
- (27) The address of Peter & Carolyn Lynch Clat Article III Trust FBO DE Montrichard is 429 Ocean Avenue, Marblehead, MA 01945.
- (28) The address of Peter & Carolyn Lynch Clat Article III Trust FBO M Witkowski is 429 Ocean Avenue, Marblehead, MA 01945.
- (29) Dr. Cowan served as a member of the board of directors and the Chief Executive Officer of Clade until the Merger.
- (30) Dr. Glasheen served as a member of the board of directors and the Chief Business Officer of Clade until the Merger.
- (31) Dr. Hei served as the Chief Technology Officer of Clade until the Merger.
- (32) Mr. Vetcher served as the Chief Operating Officer of Clade until the Merger.

PLAN OF DISTRIBUTION

The selling stockholders, which as used herein includes donees, pledgees, transferees or other successors-in-interest selling shares of common stock or interests in shares of common stock received after the date of this prospectus from a selling stockholder as a gift, pledge, partnership distribution or other transfer, may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of common stock or interests in shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

The selling stockholders may use any one or more of the following methods when disposing of shares or interests therein:

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

The selling stockholders may, from time to time, pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock, from time to time, under this prospectus, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act of 1933, as amended, or the Securities Act, amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

In connection with the sale of our common stock 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 common stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of our common stock short and deliver these securities to close out their short positions, or loan or pledge the common stock 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 the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The aggregate proceeds to the selling stockholders from the sale of the common stock offered by them will be the purchase price of the common stock less discounts or commissions, if any. Each of the selling stockholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of common stock to be made directly or through agents. We will not receive any of the proceeds from this offering.

The selling stockholders also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act of 1933, provided that they meet the criteria and conform to the requirements of that rule.

The selling stockholders and any underwriters, broker-dealers or agents that participate in the sale of the common stock or interests therein may be “underwriters” within the meaning of Section 2(11) of the Securities Act. Any discounts, commissions, concessions or profit they earn on any resale of the shares may be underwriting discounts and commissions under the Securities Act. Selling stockholders who are deemed “underwriters” within the meaning of Section 2(11) of the Securities Act will be subject to the prospectus delivery requirements of the Securities Act.

To the extent required, the shares of our common stock to be sold, the names of the selling stockholders, the respective purchase prices and public offering prices, the names of any agents, dealers or underwriters, and any applicable commissions or discounts with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus.

In order to comply with the securities laws of some states, if applicable, the common stock may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the common stock may not be sold unless it has been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

We have advised the selling stockholders that the anti-manipulation rules of Regulation M under the Securities Exchange Act of 1934, as amended, may apply to sales of shares in the market and to the activities of the selling stockholders and their affiliates. In addition, to the extent applicable, we will make copies of this prospectus (as it may be supplemented or amended from time to time) available to the selling stockholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The selling stockholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

We have agreed to indemnify the selling stockholders against liabilities, including liabilities under the Securities Act and state securities laws, relating to the registration of the shares offered by this prospectus.

We have agreed with the selling stockholders to use commercially reasonable efforts to cause the registration statement of which this prospectus constitutes a part to remain continuously effective until the earlier of (1) such time as all of the shares covered by this prospectus have been disposed of pursuant to and in accordance with such registration statement or (2) the date on which all of the shares may be sold without restriction pursuant to Rule 144 of the Securities Act.

DESCRIPTION OF CAPITAL STOCK

The following description of our capital stock is not complete and may not contain all the information you should consider before investing in our capital stock. This description is summarized from, and qualified in its entirety by reference to, our second amended and restated certificate of incorporation, which has been publicly filed with the SEC. See “Where You Can Find More Information.” For a complete description, you should refer to our second amended and restated certificate of incorporation, as amended from time to time, and second amended and restated bylaws, as amended from time to time, copies of which are incorporated by reference as exhibits to the registration statement of which this prospectus is a part.

Common Stock

Under our second amended and restated certificate of incorporation, or the Certificate of Incorporation, our authorized capital stock consists of 300,000,000 shares of common stock, par value \$0.0001 per share, and 10,000,000 shares of preferred stock, par value \$0.0001 per share. As of June 13, 2024, we had 84,500,780 shares of common stock outstanding.

Voting. Each holder of common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders, including the election of directors. Our stockholders do not have cumulative voting rights in the election of directors. Accordingly, holders of a majority of the voting shares are able to elect all of the directors. In addition, the affirmative vote of holders of two-thirds of the voting power of all of the then outstanding voting stock will be required to take certain actions, including amending certain provisions of our Certificate of Incorporation, such as the provisions relating to amending our second amended and restated bylaws, or the Bylaws, procedures for our stockholder meetings, the classified board, director liability, and exclusive forum for proceedings.

Dividends. Subject to preferences that may be applicable to any then outstanding preferred stock, holders of our common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds.

Liquidation and Dissolution. In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then outstanding shares of preferred stock.

Other Rights and Restrictions. Holders of our common stock have no preemptive, conversion, subscription or other rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights, preferences and privileges of the holders of our common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of our preferred stock that we may designate in the future.

Listing. Our common stock is listed on the Nasdaq Global Select Market under the symbol “IPSC.”

Transfer Agent and Registrar. The transfer agent and registrar for our common stock is Equiniti Trust Company, LLC.

Preferred Stock

The authorized shares of preferred stock are available for issuance without further action by our stockholders unless required by law or by the rules and regulations of any stock exchange on which our common stock may be listed. Our Certificate of Incorporation authorizes our board of directors to establish, from time to time, the number of shares to be included in each series of preferred stock, and to fix the designation, powers, privileges, preferences, and relative participating, optional or other rights, if any, of the shares of each series of preferred stock, and any of its qualifications, limitations or restrictions. Our board of directors is authorized to increase or decrease the number of shares of any series of preferred stock, but not below the number of shares of that series of preferred stock then outstanding, without any further vote or action by the stockholders.

The issuance of preferred stock 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. In addition, the existence of unissued and unreserved common stock or preferred stock may enable our board of directors to issue shares to persons friendly to current management, which could render more difficult or discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise, and could thereby protect the continuity of our management and possibly deprive stockholders of opportunities to sell their shares of common stock at prices higher than prevailing market prices.

As of June 13, 2024, we had no shares of preferred stock outstanding.

Anti-Takeover Provisions of Delaware Law and Our Charter Documents

Some provisions of Delaware law and our Certificate of Incorporation and our Bylaws contain provisions that could make the following transactions more difficult: acquisition of us by means of a tender offer; acquisition of us by means of a proxy contest or otherwise; or removal of our incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in our best interests, including transactions that might result in a premium over the market price for our shares.

These provisions, summarized below, are expected to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors. 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 these proposals because negotiation of these proposals could result in an improvement of their terms.

Section 203 of the Delaware General Corporation Law. We are subject to Section 203 of the Delaware General Corporation Law, or the DGCL, which prohibits persons deemed “interested stockholders” from engaging in a “business combination” with a publicly-held Delaware corporation for three years following the date these persons become interested stockholders unless the business combination is, or the transaction in which the person became an interested stockholder was, approved in a prescribed manner or another prescribed exception applies. Generally, an “interested stockholder” is a person who, together with affiliates and associates, owns, or within three years prior to the determination of interested stockholder status did own, 15% or more of a corporation’s voting stock. Generally, a “business combination” includes a merger, asset, or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. The existence of this provision may have an anti-takeover effect with respect to transactions not approved in advance by the board of directors, such as discouraging takeover attempts that might result in a premium over the market price of our common stock.

Elimination of Stockholder Action by Written Consent. Our Certificate of Incorporation provides that all stockholder actions must be effected at a duly called meeting of stockholders and not by consent in writing. A special meeting of stockholders may be called only by a majority of our board of directors, the chair of our board of directors, or our chief executive officer.

Undesignated Preferred Stock. The ability to authorize undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change control of us. These and other provisions may have the effect of deterring hostile takeovers or delaying changes in control or management of our company.

Amendment of Charter Provisions. Our Certificate of Incorporation provides that the affirmative vote of holders of at least 66 $\frac{2}{3}$ % of the voting power of all of the then outstanding shares of voting stock, voting as a single class, will be required to amend certain provisions of our Certificate of Incorporation, including provisions relating to the size of the board, removal of directors, special meetings, actions by written consent, and cumulative voting. The affirmative vote of holders of at least 66 $\frac{2}{3}$ % of the voting power of all of the then outstanding shares of voting stock, voting as a single class, will be required to amend or repeal our Bylaws unless such action is recommended by our board of directors at an annual or special meeting of stockholders, which would then require the affirmative vote of a majority

of the voting power of all of the then outstanding shares of voting stock, voting as a single class. Additionally, our Bylaws may be amended by a simple majority vote of our board of directors.

Classified Board; Election and Removal of Directors. Our Certificate of Incorporation provides that our board of directors is divided into three classes, Class I, Class II, and Class III, with each class serving staggered terms, and will give our board of directors the exclusive right to expand the size of our board of directors and to elect directors to fill a vacancy created by the expansion of the board of directors or the resignation, death, or removal of a director.

Choice of Forum. Our Certificate of Incorporation provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if the Court of Chancery does not have jurisdiction, another state court located within the State of Delaware or, if no state court located within the State of Delaware has jurisdiction, the federal district court for the District of Delaware) will be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of us, (ii) any action asserting a claim of breach of a fiduciary duty owed by any current or former director, officer, stockholder, employee, or agent of ours to us or our stockholders, (iii) any action asserting a claim arising pursuant to any provision of the DGCL, our Certificate of Incorporation or our Bylaws (in each case, as may be amended from time to time), (iv) any action asserting a claim governed by the internal affairs doctrine of the State of Delaware, or (v) any other action asserting an “internal corporate claim,” as defined in Section 115 of the DGCL, in all cases subject to the court having personal jurisdiction over all indispensable parties named as defendants.

Section 27 of the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder. As a result, the exclusive forum provision will not apply to suits brought to enforce any duty or liability created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. In addition, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. As a result, the exclusive forum provision will not apply to suits brought to enforce any duty or liability created by the Securities Act or any other claim for which the federal and state courts have concurrent jurisdiction.

LEGAL MATTERS

The validity of the shares of common stock being offered hereby will be passed upon for us by Goodwin Procter LLP, Philadelphia, Pennsylvania.

EXPERTS

The consolidated financial statements of Century Therapeutics, Inc. appearing in Century Therapeutics, Inc.'s [Annual Report \(Form 10-K\) for the year ended December 31, 2023](#), have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon, included therein and incorporated herein by reference. Such consolidated financial statements are incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of the registration statement on Form S-3 filed with the SEC under the Securities Act and does not contain all the information set forth in the registration statement. Whenever a reference is made in this prospectus to any of our contracts, agreements or other documents, the reference may not be complete and you should refer to the exhibits that are a part of the registration statement or the exhibits to the reports or other documents incorporated herein by reference for a copy of such contract, agreement or other document.

We are currently subject to the reporting requirements of the Securities Exchange Act of 1934, as amended, or the Exchange Act, and in accordance therewith file periodic reports, proxy statements and other information with the SEC. Our SEC filings are available to you on the SEC's website at <http://www.sec.gov> and in the "Investors" section of our website at www.centurytx.com. Our website and the information contained on that site, or connected to that site, are not incorporated into and are not a part of this prospectus.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" information from other documents that we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus, while information that we file later with the SEC will automatically update and supersede the information in this prospectus. We incorporate by reference into this prospectus and the registration statement of which this prospectus is a part the information or documents listed below that we have filed with the SEC:

- [Our Annual Report on Form 10-K for the year ended December 31, 2023 filed with the SEC on March 14, 2024;](#)
- [Our Quarterly Report on Form 10-Q for the quarter ended March 31, 2024, filed with the SEC on May 9, 2024;](#)
- The information specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2023 from our [Definitive Proxy Statement on Form DEF 14-A](#), filed on April 26, 2024;
- Our Current Reports on Form 8-K filed with the SEC on [January 19, 2024](#), [April 9, 2024](#), [April 11, 2024 \(two filings\)](#), [May 9, 2024](#), and [June 3, 2024](#); and
- The description of our common stock contained in our registration statement on [Form 8-A](#) (File No. 001-40498) filed with the SEC on June 14, 2021, under the Exchange Act, including any amendment or report filed for the purpose of updating such description.

We also incorporate by reference any future filings (other than any filings or portions of such reports that are not deemed "filed" under the Exchange Act in accordance with the Exchange Act and applicable SEC rules, including current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits furnished on such form that are related to such items unless such Form 8-K expressly provides to the contrary) made with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, including those made after the date of the initial filing of the registration statement of which this prospectus is a part and prior to the effectiveness of the registration statement, until we file a post-effective amendment that indicates the termination of the offering of the securities made by this prospectus, and will become a part of this prospectus from the date that such documents are filed with the SEC. Information in such future filings updates and supplements the information provided in this prospectus. Any statements in any such future filings will automatically be deemed to modify and supersede any information in any document we previously filed with the SEC that is incorporated or deemed to be incorporated herein by reference to the extent that statements in the later filed document modify or replace such earlier statements.

We will furnish without charge to you, on written or oral request, a copy of any or all of the documents incorporated by reference in this prospectus, including exhibits to these documents. You should direct any requests for documents to Century Therapeutics, Inc., Attn: Corporate Secretary, 25 North 38th Street, 11th Floor, Philadelphia, Pennsylvania 19104.

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth an estimate of the fees and expenses payable by us in connection with the issuance and distribution of the shares of common stock being registered by this registration statement. None of the expenses listed below are to be borne by any of the selling stockholders named in the prospectus that forms a part of this registration statement. All the amounts shown are estimates, except for the SEC registration fee.

| | |
|------------------------------|-----------------|
| SEC registration fee | \$ 3,717 |
| Printing expenses | \$ 5,000 |
| Legal fees and expenses | \$60,000 |
| Accounting fees and expenses | \$20,000 |
| Miscellaneous | \$ — |
| Total | <u>\$88,717</u> |

Item 15. Indemnification of Directors and Officers.

As permitted by Section 102 of the DGCL, our Certificate of Incorporation and Bylaws limit or eliminate the personal liability of our directors for a breach of their fiduciary duty of care as a director. The duty of care generally requires that, when acting on behalf of the corporation, directors exercise an informed business judgment based on all material information reasonably available to them. Consequently, a director will not be personally liable to the Company or our stockholders for monetary damages for breach of fiduciary duty as a director, except for liability for:

- any breach of the director's duty of loyalty to the Company or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- any act related to unlawful stock repurchases, redemptions, or other distributions or payment of dividends; or
- any transaction from which the director derived an improper personal benefit.

These limitations of liability do not affect the availability of equitable remedies such as injunctive relief or rescission. Our Certificate of Incorporation authorizes us to indemnify our officers, directors and other agents to the fullest extent permitted under Delaware law.

As permitted by Section 145 of the DGCL, our Bylaws provide that:

- we may indemnify our directors, officers, and employees to the fullest extent permitted by the DGCL, subject to limited exceptions;
- we may advance expenses to our directors, officers, and employees in connection with a legal proceeding to the fullest extent permitted by the DGCL, subject to limited exceptions; and
- the rights provided in our Bylaws are not exclusive.

Our Certificate of Incorporation and our Bylaws provide for the indemnification provisions described above and elsewhere herein. We have entered into indemnification agreements with our directors and officers that may be broader than the specific indemnification provisions contained in the DGCL. These indemnification agreements generally require us, among other things, to indemnify our officers and directors against certain liabilities that may arise by reason of their status or service as directors or officers, other than liabilities arising from willful misconduct. These indemnification agreements also generally require us to advance any expenses incurred by the directors or officers as a result of any proceeding against them as to which they could be indemnified. These indemnification provisions and the indemnification agreements may be sufficiently broad to permit indemnification of our officers and directors for liabilities, including reimbursement of expenses incurred, arising under the Securities Act.

We have purchased and we currently intend to maintain insurance on behalf of each and every person who is or was our director or officer against any loss arising from any claim asserted against him or her and incurred by him or her in any such capacity, subject to certain exclusions.

In any underwriting agreement we enter into in connection with the sale of securities being registered hereby, the underwriters will agree to indemnify, under certain conditions, the Company, our directors and officers and persons who control the Company within the meaning of the Securities Act against certain liabilities.

Item 16. Exhibits.

(a) *Exhibits*

EXHIBIT INDEX

| Exhibit Number | Description of Exhibit |
|-------------------|--|
| 2.1* [^] | Agreement and Plan of Merger, dated April 11, 2024, by and among the Company and the other parties thereto (incorporated by reference to Exhibit 2.1 of the Company's Current Report on Form 8-K (File No. 001-40498) filed on April 11, 2024). |
| 3.1 | Second Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K (File No. 001-40498) filed on June 25, 2021). |
| 3.2 | Second Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2 of the Company's Annual Report on Form 10-K (File No. 001-40498) filed on March 16, 2023). |
| 4.1 | Specimen Common Stock Certificate of Company (incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-1/A (File No. 333-256648), dated June 14, 2021). |
| 4.2 | Investors' Rights Agreement, by and among the Company and each of the investors listed on Schedule A thereto, dated February 25, 2021 (incorporated by reference to Exhibit 4.2 to the Company's Registration Statement on Form S-1 (File No. 333-256648), dated May 28, 2021). |
| 4.3 | Warrant to Purchase Units of Century Therapeutics, LLC, in favor of Hercules Technology Management Co II, Inc., dated September 14, 2020 (incorporated by reference to Exhibit 4.3 to the Company's Registration Statement on Form S-1 (File No. 333-256648), dated May 28, 2021). |
| 5.1 | Opinion of Goodwin Procter LLP (filed herewith). |
| 23.1 | Consent of Ernst & Young, LLP, independent registered public accounting firm (filed herewith). |
| 23.2 | Consent of Goodwin Procter LLP (included in Exhibit 5.1). |
| 24.1 | Powers of Attorney (incorporated by reference to the signature page hereto). |
| 107 | Filing Fee Table. |

* Certain schedules, annexes or exhibits have been omitted pursuant to Item 601(a)(5) of Regulation S-K, but will be furnished supplementally to the SEC upon request.

[^] Certain portions of this Exhibit have been redacted pursuant to Item 601(b)(10)(iv) of Regulation S-K. The Company hereby agrees to furnish supplementally an unredacted copy of the exhibit to the SEC upon its request.

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;

- (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 the 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 SEC 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; and
- (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 SEC by the registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the registration statement or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

- (2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (4) That, for the purpose of determining liability under the Securities Act 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 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.
- (b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a)

or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) 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 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. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act, as amended, the Company 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 Philadelphia, Commonwealth of Pennsylvania, on the 18th day of June, 2024.

Century Therapeutics, Inc.

By: /s/ Brent Pfeiffenberger, Pharm.D.

Name: Brent Pfeiffenberger, Pharm.D.

Title: President, Chief Executive Officer and Director

POWER OF ATTORNEY

We, the undersigned officers and directors of Century Therapeutics, Inc., hereby severally constitute and appoint each of Brent Pfeifferberger, Pharm.D. and Douglas Carr our true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution in her or him 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 (including post-effective 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 attorney-in-fact and agent 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 attorney-in-fact and agent, 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, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

| Signature | Title | Date |
|---|--|---------------|
| <u>/s/ Brent Pfeifferberger, Pharm.D.,</u> Brent Pfeifferberger, Pharm.D., | Chief Executive Officer and Director (principal executive officer) | June 18, 2024 |
| <u>/s/ Douglas Carr</u> Douglas Carr | Senior Vice President, Finance and Operations (principal financial officer and principal accounting officer) | June 18, 2024 |
| <u>/s/ Kimberly Blackwell, M.D.</u> Kimberly Blackwell, M.D. | Director | June 18, 2024 |
| <u>/s/ Cynthia Butitta</u> Cynthia Butitta | Director | June 18, 2024 |
| <u>/s/ Joseph Jimenez</u> Joseph Jimenez | Director, Chairman of the Board | June 18, 2024 |
| <u>/s/ Alessandro Riva, M.D.</u> Alessandro Riva, M.D. | Director | June 18, 2024 |
| <u>/s/ Carlo Rizzuto, Ph.D.</u> Carlo Rizzuto, Ph.D. | Director | June 18, 2024 |
| <u>/s/ Timothy Walbert</u> Timothy Walbert | Director | June 18, 2024 |
| <u>/s/ Daphne Quimi</u> Daphne Quimi | Director | June 18, 2024 |

June 18, 2024

Century Therapeutics, Inc.
25 North 38th Street
11th Floor
Philadelphia, PA 19104

Re: Securities Registered under Registration Statement on Form S-3

We have acted as counsel to you in connection with your filing of a Registration Statement on Form S-3 (as amended or supplemented, the “**Registration Statement**”) filed on June 18, 2024 with the Securities and Exchange Commission (the “**Commission**”) pursuant to the Securities Act of 1933, as amended (the “**Securities Act**”), relating to the registration of the offering by Century Therapeutics, Inc., a Delaware corporation (the “**Company**”), of up to an aggregate of 7,868,666 shares of the Company’s common stock, par value \$0.0001 per share (“**Common Stock**”), consisting of (i) 3,741,646 shares that were privately issued pursuant to an Agreement and Plan of Merger, dated as of April 11, 2024 (the “**Merger Agreement**”), by and among the Company, Clarent Intermediate Sub, Inc., a wholly owned subsidiary of Company, Clarent Merger Sub, Inc., a wholly owned subsidiary of Intermediate Sub, Inc., Clade Therapeutics, Inc. (“**Clade**”), and Fortis Advisors LLC, solely in its capacity as securityholders’ agent, in connection with the Company’s acquisition of Clade (the “**Merger**”) (the “**Selling Stockholder Shares**”), (ii) 793,687 shares that were withheld at the closing of the Merger as recourse to satisfy certain indemnification obligations of the Clade securityholders under the Merger Agreement (the “**Indemnification Shares**”), and (iii) 3,333,333 shares that may be issued to the Clade securityholders upon the potential achievement of a clinical development milestone (the “**Milestone Shares**” and together with the Indemnification Shares, the “**Future Shares**”).

We have reviewed such documents and made such examination of law as we have deemed appropriate to give the opinions set forth below. We have relied, without independent verification, on certificates of public officials and, as to matters of fact material to the opinions set forth below, on certificates of officers of the Company.

The opinion set forth below is limited to the Delaware General Corporation Law.

Based on the foregoing, we are of the opinion that the Selling Stockholder Shares have been duly authorized and validly issued and are fully paid and non-assessable.

Assuming the Future Shares were issued today in accordance with the terms of the Merger Agreement, the Future Shares would be validly issued, fully paid and non-assessable.

This opinion letter and the opinion it contains shall be interpreted in accordance with the Core Opinion Principles as published in *74 Business Lawyer* 815 (Summer 2019).

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the Registration Statement and to the references to our firm under the caption “Legal Matters” in the Registration Statement. In giving our consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours,

/s/ Goodwin Procter LLP

GOODWIN PROCTER LLP

Consent of Independent Registered Public Accounting Firm

We consent to the reference of our firm under the caption “Experts” in the Registration Statement (Form S-3) and related Prospectus of Century Therapeutics, Inc. for the registration of 7,868,666 shares of its common stock and to the incorporation by reference therein of our report dated March 14, 2024, with respect to the consolidated financial statements of Century Therapeutics, Inc., included in its Annual Report (Form 10-K) for the year ended December 31, 2023, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Philadelphia, Pennsylvania
June 18, 2024

Calculation of Filing Fee Tables

Form S-3
(Form Type)Century Therapeutics, 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 (1) | Proposed Maximum Offering Price Per Share (2) | Maximum Aggregate Offering Price | Fee Rate | Amount of Registration Fee (2) | Carry Forward Form Type | Carry Forward File Number | Carry Forward Initial Effective Date | Filing Fee Previously Paid In Connection with Unsold Securities to be Carried Forward |
|----------------------------|--|---------------------------------------|-----------------------|---|----------------------------------|-----------|--------------------------------|-------------------------|---------------------------|--------------------------------------|---|
| Equity | Common Stock, \$0.0001 par value per share | Other | 7,868,666 shares | \$3.20 | \$25,179,731.20 | 0.0001476 | \$3,716.53 | | | | |
| Total Offering Amounts | | | | | \$25,179,731.20 | | — | | | | |
| Total Fees Previously Paid | | | | | | | — | | | | |
| Total Fee Offsets | | | | | | | — | | | | |
| Net Fee Due | | | | | | | \$3,716.53 | | | | |

(1) Pursuant to Rule 416(a) of the Securities Act of 1933, as amended, this registration statement also covers such additional shares as may hereafter be offered or issued to prevent dilution resulting from stock splits, stock dividends, recapitalizations or certain other capital adjustments.

(2) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(c) under the Securities Act of 1933, as amended. The price per share and aggregate offering price are based on the average of the high and low prices of the registrant's common stock on June 14, 2024 as reported on Nasdaq.