

PROSPECTUS



SENTI BIOSCIENCES, INC.

35,444,908 Shares of Common Stock

This prospectus relates to the issuance by us of up to 2,000,000 shares of our common stock, par value \$0.0001 per share (“Senti Common Shares”) that may be issued as Contingency Consideration from time to time upon achievement of certain stock price thresholds (the “Earn-out Shares”).

In addition, this prospectus relates to the offer and sale from time to time by the selling securityholders named in this prospectus (collectively, the “Selling Securityholders”), or their permitted transferees, of up to (i) 15,168,616 Senti Common Shares originally issued to certain of our affiliates as consideration in connection with the Business Combination at a per share value of \$10.00 per share, (ii) up to 6,233,292 Senti Common Shares issuable upon the exercise of stock options at exercise prices ranging from \$2.66 to \$9.92 per share, issued to certain of our affiliates upon the conversion of stock options in Senti Sub I, Inc. (formerly Senti Biosciences, Inc.) in connection with the Business Combination, (iii) 4,878,972 Senti Common Shares distributed by Dynamics Sponsor LLC (“Sponsor”) to certain of its members who were affiliates of our predecessor, Dynamics Special Purpose Corp. (“DYNS”) prior to the completion of the Business Combination, which shares were originally issued to Sponsor at a price per share of \$0.004, (iv) 715,500 Senti Common Shares distributed by Sponsor to certain of its members who were affiliates of DYNS prior to the completion of the Business Combination, which shares were originally issued to Sponsor at a price per share of \$10.00 in a private placement transaction completed concurrently with the initial public offering of DYNS, (v) 871,028 Senti Common Shares issued to certain of the Selling Securityholders (the “Anchor Investors”) in consideration for their agreement not to redeem their shares of Class A Common Stock of DYNS in connection with the Business Combination, (vi) 5,060,000 Senti Common Shares originally purchased at a purchase price of \$10.00 per share at the closing of the Business Combination by a number of subscribers pursuant to separate PIPE subscription agreements (the “PIPE Shares”), and (vii) 517,500 Senti Common Shares issued to Bayer Healthcare LLC at an effective exchange price of \$10.00 per share at the closing of the Business Combination upon the cancellation and exchange of the Convertible Note. Sales of any of the foregoing Senti Common Shares, which comprise a significant portion of our public float, by the Selling Securityholders, or the perception that such sales may occur, could have a significant negative impact on the trading price of Senti Common Stock.

This prospectus provides you with a general description of such securities and the general manner in which the Selling Securityholders may offer or sell the securities. More specific terms of any securities that the Selling Securityholders may offer or sell may be provided in a prospectus supplement that describes, among other things, the specific amounts and prices of the securities being offered and the terms of the offering. The prospectus supplement may also add, update or change information contained in this prospectus.

We will not receive any proceeds from the sale of Senti Common Shares by the Selling Securityholders pursuant to this prospectus. However, we will pay the expenses, other than any underwriting discounts and commissions, associated with the sale of securities pursuant to this prospectus. We are registering certain of the securities for resale pursuant to the Selling Securityholders’ registration rights under certain agreements between us and the Selling Securityholders. Our registration of the securities covered by this prospectus does not mean that either we or the Selling Securityholders will issue, offer or sell, as applicable, any of the securities. The Selling Securityholders may offer and sell the securities covered by this prospectus in a number of different ways and at varying prices. We provide more information about how the Selling Securityholders may sell the shares in the section entitled “[Plan of Distribution](#).”

You should read this prospectus and any prospectus supplement or amendment carefully before you invest in our securities.

Our common stock is listed on The Nasdaq Global Market (“Nasdaq”) under the symbol “SNTI”. On November 2, 2023 the last quoted sale price for the Senti Common Shares as reported on Nasdaq was \$0.28 per share.

We are an “emerging growth company” under applicable federal securities laws and will be subject to reduced public company reporting requirements.

Investing in our securities involves a high degree of risk. Before buying any securities, you should carefully read the discussion of the risks of investing in our securities in “[Risk Factors](#)” beginning on page 8 of this prospectus and any other risk factors contained in any applicable prospectus supplement and in the documents incorporated by reference herein and therein.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the securities to be issued under this prospectus or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is November 3, 2023.

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SELECTED DEFINITIONS

As used in this prospectus, unless otherwise noted or the context otherwise requires, references to the following capitalized terms have the meanings set forth below:

“Business Combination” means the transactions contemplated by the Business Combination Agreement, including the merger between Merger Sub and Senti.

“Business Combination Agreement” means the Business Combination Agreement, dated as of December 19, 2021, as amended or modified from time to time, including as amended by Amendment No. 1 to Business Combination Agreement, dated as of February 12, 2022 and Amendment No. 2, dated as of May 19, 2022, in each case, by and among DYNS, Merger Sub and Senti.

“Board” means the board of directors of Senti.

“Bylaws” means the Amended and Restated Bylaws of Senti.

“Contingency Consideration” means the aggregate of 2,000,000 Senti Common Shares that certain of the Selling Securityholders may be eligible to receive based on the share price of Senti Common Shares following the Business Combination or, in some circumstances, upon a change of control of Senti, as described in the Business Combination Agreement.

“Convertible Note” means the unsecured convertible promissory note in the principal amount of \$5,175,000 issued by Senti Sub I, Inc. (formerly Senti Biosciences, Inc.), to Bayer Healthcare LLC on May 19, 2022.

“Certificate of Incorporation” or “Charter” means the Second Amended and Restated Certificate of Incorporation of Senti.

“DGCL” means the Delaware General Corporation Law, as may be amended from time to time.

“DYNS” means Dynamics Special Purpose Corp., a Delaware corporation.

“Exchange Act” means the Securities Exchange Act of 1934, as amended.

“JOBS Act” means the Jumpstart Our Business Startups Act of 2012.

“Merger Sub” means Explore Merger Sub, Inc., a Delaware corporation and wholly-owned subsidiary of DYNS.

“SEC” means the U.S. Securities and Exchange Commission.

“Securities Act” means the Securities Act of 1933, as amended.

“Senti” means Senti Biosciences, Inc., a Delaware corporation (which, prior to the consummation of the Business Combination, was known as DYNS).

“Senti Common Shares” means the common stock, par value \$0.0001 per share, of Senti.

“Sponsor” means Dynamics Sponsor LLC, a Delaware limited liability company.

FORWARD-LOOKING STATEMENTS

This prospectus and some of the information incorporated by reference, includes forward-looking statements regarding, among other things, the plans, strategies, and prospects, both business and financial, of Senti. These statements are based on the beliefs and assumptions of the management of Senti. Although Senti believes that their respective plans, intentions, and expectations reflected in or suggested by these forward-looking statements are reasonable, it cannot assure you that it will achieve or realize these plans, intentions, or expectations. Forward-looking statements are inherently subject to risks, uncertainties, and assumptions. Generally, statements that are not historical facts, including statements concerning possible or assumed future actions, business strategies, events or results of operations, and any statements that refer to projections, forecasts, or other characterizations of future events or circumstances, including any underlying assumptions, are forward-looking statements. These statements may be preceded by, followed by or include the words “believes”, “estimates”, “expects”, “projects”, “forecasts”, “may”, “might”, “will”, “should”, “seeks”, “plans”, “scheduled”, “possible”, “anticipates”, “intends”, “aims”, “works”, “focuses”, “aspires”, “strives” or “sets out” or similar expressions. Forward-looking statements are not guarantees of performance. You should not put undue reliance on these statements which speak only as of the date hereof. Forward-looking statements contained in this prospectus include, for example, statements about:

- our ability to realize the benefits expected from the Business Combination and from the Framework Agreement, dated August 7, 2023, by and among Senti, GeneFab, LLC and Valere Bio, Inc. and the transactions contemplated thereunder;
- the projected financial information, anticipated growth rate, and market opportunities of Senti;
- our ability to maintain the listing of Senti Common Shares on Nasdaq, and the potential liquidity and trading of such securities;
- the accuracy of our estimates and projections of financial information, including expenses, capital requirements, cash utilization, need for additional financing and market opportunities;
- our ability to execute and realize potential benefits from our strategic plans, including our plan to focus internal resources on SENTI-202, SENTI-401, and with potential partners, to develop gene circuits for other programs, as announced in January 2023;
- our ability to file and obtain clearance for any investigational new drug application, or IND, for SENTI-202 and any other product candidates we may identify, and to initiate and successfully complete our planned Phase 1 clinical trial for SENTI-202 and any other product candidates;
- our ability to grow and effectively manage the growth of our operations;
- our ability to raise financing to fund our operations, if and when needed;
- our success in retaining or recruiting, or adapting to changes in, our officers, key employees, or directors;
- the initiation, cost, timing, progress and results of research and development activities, preclinical studies or clinical trials with respect to our current and potential future product candidates;
- our ability to develop and advance our gene circuit platform technologies;
- our ability to identify product candidates using our gene circuit platform technologies;
- our ability to develop and commercialize product candidates that we identify;
- our ability to advance our current and potential future product candidates into, and successfully complete, preclinical studies and clinical trials;
- our ability to obtain and maintain regulatory approval of our current and potential future product candidates, and any related restrictions, limitations and/or warnings in the label of an approved product candidate;

- our ability to obtain and maintain intellectual property protection for our technologies and any of our product candidates;
- our ability to successfully commercialize our current and any potential future product candidates;
- the rate and degree of market acceptance of our current and any potential future product candidates;
- regulatory developments in the United States and international jurisdictions;
- potential liability lawsuits and penalties related to our technologies, product candidates and current and future relationships with third parties;
- our ability to attract and retain key scientific and management personnel;
- our ability to contract with third-party suppliers and manufacturers and their ability to perform adequately under those arrangements;
- our ability to compete effectively with existing competitors and new market entrants;
- our future financial performance and capital requirements;
- our ability to implement and maintain effective internal controls;
- the impact of supply chain disruptions;
- the impact of the COVID-19 pandemic on our business, including our preclinical studies and potential future clinical trials;
- unfavorable global economic conditions, including inflationary pressures, market volatility, acts of war and civil and political unrest; and
- our ability to implement remediation plans to address the material weaknesses that are described in our Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2023.

These and other factors that could cause actual results to differ from those implied by the forward-looking statements in this prospectus described under the heading “*Risk Factors*” and elsewhere in this prospectus. The risks described under the heading “*Risk Factors*” are not exhaustive. New risk factors emerge from time to time and it is not possible to predict all such risk factors, nor can we assess the impact of all such risk factors on the business of Senti or the extent to which any factor or combination of factors may cause actual results to differ materially from those contained in any forward-looking statements. All forward-looking statements attributable to Senti or to persons acting on our behalf are expressly qualified in their entirety by the foregoing cautionary statements. We undertake no obligations to update or revise publicly any forward-looking statements, whether as a result of new information, future events, or otherwise, except as required by law.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the SEC using the “shelf” registration process. Under this shelf registration process, the Selling Securityholders may, from time to time, sell up to 35,444,908 shares of common stock in one or more offerings through any means described in the section entitled “*Plan of Distribution.*” We will not receive any proceeds from the sale by such Selling Securityholders of the securities offered by them described in this prospectus.

A prospectus supplement may add, update or change information included in this prospectus. Any statement contained in this prospectus will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in such prospectus supplement modifies or supersedes such statement. Any statement so modified will be deemed to constitute a part of this prospectus only as so modified, and any statement so superseded will be deemed not to constitute a part of this prospectus. You should rely only on the information contained in, or incorporated by reference into, this prospectus, and any applicable prospectus supplement. You should read both this prospectus and any applicable prospectus supplement or post-effective amendment to the registration statement together with the additional information to which we refer you in the sections of this prospectus entitled “*Where You Can Find More Information.*”

Neither we nor the Selling Securityholders have authorized anyone to provide you with any information or to make any representations other than those contained in this prospectus or any applicable prospectus supplement or any free writing prospectuses prepared by or on behalf of us or to which we have referred you. Neither we nor the Selling Securityholders take responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you.

This prospectus is an offer to sell only the securities offered hereby and only under circumstances and in jurisdictions where it is lawful to do so. No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus, any applicable prospectus supplement or any related free writing prospectus. This prospectus is not an offer to sell securities, and it is not soliciting an offer to buy securities, in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus or any prospectus supplement is accurate only as of the date on the front of those documents and any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus or any applicable prospectus supplement, or any sale of a security. Our business, financial condition, results of operations and prospects may have changed since those dates.

For investors outside the United States: neither we nor the Selling Securityholders have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of our securities and the distribution of this prospectus outside the United States.

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under “*Where You Can Find More Information.*”

This prospectus contains references to trademarks, trade names and service marks belonging to other entities. Solely for convenience, trademarks, trade names and service marks referred to in this prospectus may appear without the ® or TM symbols, but such references are not intended to indicate, in any way, that the applicable licensor will not assert, to the fullest extent under applicable law, its rights to these trademarks and trade names. We do not intend our use or display of other companies’ trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

PROSPECTUS SUMMARY

The following summary highlights information contained elsewhere in this prospectus. It does not contain all the information you should consider before investing in the Senti Common Shares. You should read this entire prospectus carefully, including the sections titled “Risk Factors,” “Business,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” “Where You Can Find More Information,” “Unaudited Pro Forma Condensed Combined Financial Information,” and our consolidated financial statements and related notes included elsewhere or incorporated by reference in this prospectus, before making an investment decision. In this prospectus, unless the context requires otherwise, all references to “we,” “our,” “us,” “Senti,” the “Registrant,” and the “Company” refer to Senti Biosciences, Inc. and its consolidated subsidiaries following the Business Combination.

Overview

We are a preclinical biotechnology company developing next-generation cell and gene therapies engineered with our gene circuit platform technologies to fight challenging diseases. Our mission is to create a new generation of smarter medicines that outmaneuver complex diseases using novel and unprecedented approaches. To accomplish this mission, we have built a synthetic biology platform that we believe may enable us to program next-generation cell and gene therapies with what we refer to as “gene circuits.” These gene circuits, which we created from novel and proprietary combinations of genetic parts, are designed to reprogram cells with biological logic to sense inputs, compute decisions and respond to their respective cellular environments. We aim to design and optimize gene circuits and to improve the “intelligence” of cell and gene therapies in order to enhance their therapeutic effectiveness against a broad range of diseases that conventional medicines are unable to address. Our gene circuit platform technologies are designed to be applied in a modality-agnostic manner, with applicability to natural killer (NK) cells, T cells, tumor infiltrating lymphocytes (TILs), stem cells including induced Pluripotent Stem Cells (iPSCs) Hematopoietic Stem Cells (HSCs), *in vivo* gene therapy, such as adeno associated virus (AAV), and messenger ribonucleic acid (mRNA).

Our internal pipeline is focused on using these gene circuits we engineer onto off-the-shelf healthy adult donor derived NK cells to create chimeric antigen receptor (CAR) NK cells to potentially address the high unmet need in multiple oncology indications. All of our current product candidates are in preclinical development. We expect to file an investigational new drug application, or IND, for our lead product candidate SENTI-202 in the second half of 2023.

Going Concern

We have incurred recurring losses and negative cash flows from operations, and have an accumulated deficit that raises substantial doubt about its ability to continue as a going concern. Similarly, our independent registered public accounting firm included an explanatory paragraph in its report on our consolidated financial statements as of and for the year ended December 31, 2022 with respect to this uncertainty.

Company Information

We were incorporated under the laws of the State of Delaware on June 9, 2016. Our principal executive offices are located at 2 Corporate Drive, First Floor, South San Francisco, CA 94080 and our telephone number is (650) 239-2030. Senti Common Stock is listed on the Nasdaq Capital Market under the symbol “SNTI”.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains an Internet website at www.sec.gov that contains reports, proxy and information statements and other information about issuers, like us, that file electronically with the SEC. We also maintain a website at <https://sentibio.com>. We make available, free of charge, on our investor relations website at <https://investors.sentibio.com>, our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to these reports as soon as reasonably practicable after electronically filing or furnishing those reports to the SEC. Information contained on our website is not a part of or incorporated by reference into this prospectus and the inclusion of our website and investor relations website addresses in this prospectus is an inactive textual reference only.

Implications of Being an Emerging Growth Company

We are an “emerging growth company” as defined in the JOBS Act. As such, we may take advantage of reduced disclosure and other requirements otherwise generally applicable to public companies, including:

- exemption from the requirement to have our registered independent public accounting firm attest to management’s assessment of our internal control over financial reporting;
- exemption from compliance with the requirement of the Public Company Accounting Oversight Board, or PCAOB, regarding the communication of critical audit matters in the auditor’s report on the financial statements;
- reduced disclosure about our executive compensation arrangements; and exemption from the requirement to hold non-binding advisory votes on executive compensation or golden parachute arrangements.

We will remain an emerging growth company until the earliest to occur of: (1) the last day of the fiscal year in which we have at least \$1.235 billion in annual revenue; (2) the date we qualify as a “large accelerated filer,” with at least \$700.0 million of equity securities held by non-affiliates and our net sales for the year exceed \$100 million; (3) the date on which we have issued more than \$1.0 billion in non-convertible debt securities during the prior three-year period; and (4) December 31, 2026, the last day of the fiscal year ending after the fifth anniversary of the initial public offering of DYNS.

As a result of this status, we have taken advantage of reduced reporting requirements in this prospectus and may elect to take advantage of other reduced reporting requirements in our future filings with the SEC. In particular, in this prospectus and our other SEC filings incorporated by reference herein, we have not included all of the executive compensation-related information that would be required if we were not an emerging growth company.

THE OFFERING

Issuance of Senti Common Shares

Senti Common Shares to be issued upon issuance of all Earn-out Shares	Up to 2,000,000 Senti Common Shares.
Senti Common Shares outstanding prior to the issuance of the Earn-out Shares (as of October 25, 2023)	44,545,186 Senti Common Shares.
Use of Proceeds	We do not expect to receive any proceeds from the issuance of the Earn-out Shares or the resale of the Earn-out Shares by the Selling Securityholders.

Resale of Senti Common Shares by Selling Securityholders

Senti Common Shares offered by the Selling Securityholder	33,444,908 Senti Common Shares.
Use of proceeds	We will not receive any proceeds from the sale of the Senti Common Shares to be offered by the Selling Securityholders.
Lock-up Agreements	The securities that are owned by certain of the Selling Securityholders, including the parties to the Registration Rights Agreement and some of the parties to the PIPE subscription agreements, are subject to lock-up provisions and/or Lock-up Agreements, which provide for certain restrictions on transfer until the termination of applicable lock-up periods.
Trading Symbol	“SNTI”.
Risk Factors	Any investment in the securities offered hereby is speculative and involves a high degree of risk. You should carefully consider the information set forth under “Risk Factors” and elsewhere in this prospectus.

RISK FACTORS

Investing in the Senti Common Shares involves a high degree of risk. You should carefully consider the risk factors incorporated by reference to our most recent Annual Report on Form 10-K, any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K, and all other information contained or incorporated by reference into this prospectus, as updated by our subsequent filings under the Exchange Act, and the risk factors and other information contained in any applicable prospectus supplement before making an investment decision. The risks described in these documents are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial also may impair our business operations. Past financial performance may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results or trends in future periods. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be materially adversely affected. This could cause the trading price of our securities to decline, resulting in a loss of all or part of your investment. Please also carefully read the section titled “Cautionary Note Regarding Forward-Looking Statements.”

USE OF PROCEEDS

All of the Senti Common Shares offered by the Selling Securityholders pursuant to this prospectus will be sold by the Selling Securityholders for their respective accounts. We will not receive any of the proceeds from the sale of the Senti Common Shares hereunder.

With respect to the registration of all Senti Common Shares offered by the Selling Securityholders pursuant to this prospectus, the Selling Securityholders will pay any underwriting discounts and commissions and expenses incurred by them for brokerage, accounting, tax or legal services or any other expenses incurred by them in disposing of the Securities. We will bear the costs, fees and expenses incurred in effecting the registration of the securities covered by this prospectus, including all registration and filing fees and fees and expenses of our counsel and our independent registered public accounting firm.

DETERMINATION OF OFFERING PRICE

We cannot currently determine the price or prices at which the Senti Common Shares may be sold by the Selling Securityholders under this prospectus. Senti Common Shares are listed on Nasdaq under the symbol "SNTL."

SELLING SECURITYHOLDERS

This prospectus relates to our issuance of up to 2,000,000 Senti Common Shares from time to time upon the achievement of certain stock price thresholds and the possible offer and resale by the Selling Securityholders of up to 33,444,908 Senti Common Shares, consisting of up to (i) 15,168,616 Senti Common Shares originally issued to certain of our affiliates as consideration in connection with the Business Combination at a per share value of \$10.00 per share, (ii) up to 6,233,292 Senti Common Shares issuable upon the exercise of stock options at exercise prices ranging from \$2.66 to \$9.92 per share, issued to certain of our affiliates upon the conversion of stock options in Senti Sub I, Inc. (formerly Senti Biosciences, Inc.) in connection with the Business Combination, (iii) 4,878,972 Senti Common Shares distributed by Sponsor to certain of its members who were affiliates of DYNS prior to the completion of the Business Combination, which shares were originally issued to Sponsor at a price per share of \$0.004, (iv) 715,500 Senti Common Shares distributed by Sponsor to certain of its members who were affiliates of DYNS prior to the completion of the Business Combination, which shares were originally issued to Sponsor at a price per share of \$10.00 in a private placement transaction completed concurrently with the initial public offering of DYNS, (v) 871,028 Senti Common Shares issued to the Anchor Investors in consideration for their agreement not to redeem their shares of Class A Common Stock of DYNS in connection with the Business Combination, (vi) 5,060,000 PIPE Shares originally purchased at a purchase price of \$10.00 per share at the closing of the Business Combination and (vii) 517,500 Senti Common Shares issued to Bayer Healthcare LLC at an effective exchange price of \$10.00 per share at the closing of the Business Combination upon the cancellation and exchange of the Convertible Note. Sales of the foregoing Senti Common Shares, which comprise a significant portion of our public float, by the Selling Securityholders, or the perception that such sales may occur, could have a significant negative impact on the trading price of Senti Common Stock.

The Selling Securityholders may from time to time offer and sell any or all of the Senti Common Shares set forth below pursuant to this prospectus. When we refer to the “*Selling Securityholders*” in this prospectus, we mean the persons listed in the table below, and the pledgees, donees, transferees, assignees, successors and others who later come to hold any of the Selling Securityholders’ interest in the Senti Common Shares after the date of this prospectus such that registration rights shall apply to those securities.

The following table is prepared based on information provided to us by the Selling Securityholders. It sets forth the name and address of the Selling Securityholders, the aggregate number of Senti Common Shares beneficially owned as of the date of the initial prospectus, the aggregate number of Senti Common Shares that the Selling Securityholders may offer pursuant to this prospectus, and the number of Senti Common Shares beneficially owned by the Selling Securityholders after the sale of the securities offered hereby. We have based percentage ownership after this offering on 44,545,186 shares of common stock outstanding as of October 25, 2023.

We cannot advise you as to whether the Selling Securityholders will in fact sell any or all of such Senti Common Shares. In addition, the Selling Securityholders may sell, transfer or otherwise dispose of, at any time and from time to time, the Senti Common Shares in transactions exempt from the registration requirements of the Securities Act after the date of this prospectus. For purposes of this table, we have assumed that the Selling Securityholders will have sold all of the securities covered by this prospectus upon the completion of the offering. Any changed or new information given to us by the Selling Securityholders, including regarding the identity of, and the securities held by, each Selling Securityholder, will be set forth in a prospectus supplement or amendments to the registration statement of which this prospectus is a part, if and when necessary.

Please see the section entitled “*Plan of Distribution*” for further information regarding the Selling Securityholders’ method of distributing these securities. For information regarding transactions between us and the Selling Securityholders, see the section entitled “*Certain Relationships and Related Person Transactions*.”

Unless otherwise indicated below, the address of each Selling Securityholder listed in the tables below is c/o Senti Biosciences, Inc., 2 Corporate Drive, First Floor, South San Francisco, CA 94080.

Name of Selling Securityholder	Common Stock Beneficially Owned Prior to this Offering	Common Stock to be Sold in this Offering	Common Stock Owned After this Offering	Percent
Entities Affiliated with 8VC ⁽¹⁾	2,537,558	2,537,558	—	—
Alexandria Venture Investments, LLC ⁽²⁾	338,263	100,000	238,263	*
Amgen Ventures LLC ⁽³⁾	923,032	500,000	423,032	*
Mark Afrasiabi ⁽⁴⁾	998,672	998,672	—	—
Bayer Healthcare LLC ⁽⁵⁾	5,878,488	5,878,488	—	—
Susan Berland ⁽⁶⁾	17,613	17,613	—	—
Caspian Capital LLC ⁽⁷⁾	100,000	100,000	—	—
Rowan Chapman ⁽⁸⁾	256,238	256,238	—	—
James J. Collins ⁽⁹⁾	179,652	179,652	—	—
Brenda Cooperstone ⁽¹⁰⁾	31,438	31,438	—	—
Dynamics Group LLC ⁽¹¹⁾	1,947,403	1,947,403	—	—
David Epstein	123,252	123,252	—	—
Jay Flatley ⁽¹²⁾	123,252	123,252	—	—
GPK Group, Inc. ⁽¹³⁾	300,000	300,000	—	—
Green Sands Fund Z, LLC ⁽¹⁴⁾	100,000	100,000	—	—
Curt A. Herbets III ⁽¹⁵⁾	1,747,070	1,747,070	—	—
Invus Public Equities, L.P. ⁽¹⁶⁾	1,055,555	555,555	500,000	1.12 %
KB Securities Co., Ltd. ⁽¹⁷⁾	40,000	40,000	—	—
Deborah Knobelman ⁽¹⁸⁾	1,094,483	1,094,483	—	—
Robert Langer ⁽¹⁹⁾	75,000	75,000	—	—
Philip J. Lee ⁽²⁰⁾	2,087,924	2,087,924	—	—
LifeSci Venture Partners II, LP ⁽²¹⁾	293,327	50,000	243,327	*
Timothy Lu ⁽²²⁾	4,574,128	4,574,128	—	—
Lux Ventures IV, L.P. ⁽²³⁾	828,454	10,000	818,454	1.84 %
Matrix Partners China VI Hong Kong Limited ⁽²⁴⁾	1,251,329	1,251,329	—	—
Entities Affiliated with Morgan Stanley Investment Management ⁽²⁵⁾	1,183,941	349,858	834,083	1.87 %
Entities Affiliated with NEA ⁽²⁶⁾	4,429,725	4,429,725	—	—
Dipchand (Deep) Nishar ⁽²⁷⁾	123,252	123,252	—	—
OCF 2014 Trust ⁽²⁸⁾	250,000	250,000	—	—
Parker Institute for Cancer Immunotherapy ⁽²⁹⁾	250,000	250,000	—	—
Mostafa Ronaghi ⁽³⁰⁾	2,197,403	2,197,403	—	—
Accounts Advised or Sub Advised by T. Rowe Price Associates ⁽³¹⁾	3,916,551	922,144	2,994,407	6.72 %
ARK Genomic Revolution ETF ⁽³²⁾	2,410,394	243,471	2,166,923	4.86 %

* Indicates beneficial ownership less than 1%.

(1) Consists of (i) 2,498,277 shares of common stock held by 8VC Fund I, L.P. ("8VC") and (ii) 39,281 shares of common stock held by 8VC Entrepreneurs Fund I, L.P. ("8VC Entrepreneurs" and, collectively with 8VC, the "8VC Entities"). 8VC GP I, LLC ("8VC GP I"), as general partner of each of the 8VC Entities, has sole voting and dispositive power with respect to the securities held by the 8VC Entities. Joe Lonsdale, in his capacity as the managing member of 8VC GP I, has sole voting and dispositive power with respect to the shares held by

- the 8VC Entities. Mr. Lonsdale and 8VC GP I disclaim beneficial ownership of the shares held by the 8VC Entities. The address of each of the 8VC Entities is 907 South Congress Avenue, Austin, Texas 78704.
- (2) The address for this entity is 26 North Euclid Avenue, Pasadena, CA 91101.
 - (3) Amgen Ventures LLC is a wholly-owned subsidiary of Amgen Inc. The address for these entities is One Amgen Center Drive, Thousand Oaks, CA 91320.
 - (4) The address for this individual is 711 El Medio Avenue, Pacific Palisades, CA 90272.
 - (5) Consists of 5,878,488 shares of common stock held by Bayer HealthCare LLC (“Bayer”). Bayer is an indirect wholly-owned subsidiary of Bayer AG, which may be deemed to be an indirect beneficial owner of the shares owned directly by Bayer. Kelly Gast, President of Bayer, and Brian Branca, Treasurer of Bayer, share voting and dispositive power over the shares held by Bayer. The address of Bayer is 100 Bayer Boulevard, Whippany, New Jersey 07981.
 - (6) Consists of 17,613 shares of common stock issuable upon the exercise of stock options.
 - (7) Jeffrey Huber and Angel Vossough Modarres exercise voting and dispositive power over these shares. The address for these individuals and this entity is 930 Tahoe Boulevard, Suite 802, #812, Incline Village, NV 89451.
 - (8) The address for this individual is 2875 El Camino Real, Redwood City, CA 94061.
 - (9) Consists of 176,130 shares of common stock held directly and 3,522 shares of common stock issuable upon the exercise of stock options.
 - (10) Consists of 31,438 shares of common stock issuable upon the exercise of stock options.
 - (11) Omid Farokhzad exercises voting and dispositive power over these shares. The address for this individual and this entity is 125 Yarmouth Road, Chestnut Hill, MA 02467.
 - (12) The address for this individual is 6725 Calle Ponte Bella, Rancho Santa Fe, CA 92091.
 - (13) S. Peter Lee exercises voting and dispositive power over these shares. The address for this individual and this entity is 17900 Ridgeway Road, Granada Hills, CA 91344.
 - (14) Reema Khan exercises voting and dispositive power over these shares. The address for this individual and this entity is 548 Palmer Lange, Menlo Park, CA 94025.
 - (15) Consists of 454,208 shares of common stock held by the C. and E. Herberts Revocable Trust dated July 17, 2013, over which Curt A. Herberts III and his spouse share voting and investment power as trustee, and 1,292,862 shares of common stock issuable upon the exercise of stock options.
 - (16) Invus Public Equities, L.P. (“Invus PE”) directly holds 1,055,555 shares of common stock. Invus Public Equities Advisors, LLC (“Invus PE Advisors”) controls Invus PE, as its general partner and accordingly, may be deemed to beneficially own the shares held by Invus PE. The Geneva branch of Artal International S.C.A. (“Artal International”) controls Invus PE Advisors, as its managing member and accordingly, may be deemed to beneficially own the shares held by Invus PE. Artal International Management S.A. (“Artal International Management”) as the managing partner of Artal International, controls Artal International and accordingly, may be deemed to beneficially own shares that Artal International may be deemed to beneficially own. Artal Group S.A., as the sole stockholder of Artal International Management, controls Artal International Management and accordingly, may be deemed to beneficially own the Shares that Artal International Management may be deemed to beneficially own. Westend S.A. (“Westend”), as the parent company of Artal Group S.A. (“Artal Group”) controls Artal Group and accordingly, may be deemed to beneficially own the shares that Artal Group may be deemed to beneficially own. Stichting Administratiekantoor Westend (the “Stichting”), as majority shareholder of Westend controls Westend and accordingly, may be deemed to beneficially own the shares that Westend may be deemed to beneficially own. As of June 8, 2022, Mr. Amaury Wittouck, as the sole member of the board of the Stichting, controls the Stichting and accordingly, may be deemed to beneficially own the shares that the Stichting may be deemed to beneficially own. The address for Invus PE and Invus PE Advisors is 750 Lexington Avenue, 30th Floor, New York, NY 10022. The address for Artal International, Artal International Management, Artal Group, Stichting and Mr. Amaury Wittouck is Valley Park, 44, Rue de la Vallée, L-2661, Luxembourg.
 - (17) Consists of (i) 20,000 shares of common stock held by KB Securities Co., Ltd. not in its corporate capacity but solely in its capacity as trustee on behalf of Smilegate Bamboo Fund 2 and (ii) 20,000 shares of common stock held by KB Securities Co., Ltd. not in its corporate capacity but solely in its capacity as trustee on behalf of Smilegate Bamboo Shoot Fund. The address for these entities is 50, Yeouinaru-ro, Yeongdeungpo-gu, Seoul 07328, Korea.
 - (18) Consists of 1,094,483 shares of common stock issuable upon the exercise of stock options.
 - (19) The address for this individual is 98 Montvale Road, Newton, MA 02459.
 - (20) Consists of 936,424 shares of common stock held directly and 1,151,500 shares of common stock issuable upon the exercise of stock options.
 - (21) Paul Yook, as managing member of LifeSci Venture Partners II, LP exercises voting and dispositive power over the shares. The address for this entity and individual is 250 West 55th Street, Suite 3401, New York, NY 10019.
 - (22) Consists of (i) 559,496 shares of common stock held directly, (ii) 528,390 shares of common stock held by the individual’s spouse, (iii) 528,390 shares of common stock held by Luminen Services, LLC, as trustee of the Luminen Trust, of which Timothy Lu is the settlor (and over which Dr. Lu disclaims beneficial ownership of, except to the extent of his pecuniary interest therein), and (iv) 2,957,852 shares of common stock issuable upon the exercise of stock options.
 - (23) Lux Venture Partners IV, LLC (“LVP4”) is the general partner of Lux Ventures IV, L.P. (“LV4”) and exercises voting and dispositive power over the shares held by LV4. Peter James Hebert (“PH”) and Joshua Howard Wolfe (“JW”) are the sole managing members of LVP4 and may be deemed to share voting and dispositive power over the shares held by LV4. PH and JW disclaim beneficial ownership of the shares held by LV4 except to the extent of their pecuniary interests therein. The address for these entities and individuals is 920 Broadway, 11th Floor, New York, NY, 10010.
 - (24) Matrix Partners China VI Hong Kong Limited is owned by Matrix Partners China VI, L.P. (“MPCVI”) and Matrix Partners China VI-A, L.P. (“MPCVI-A”). The general partner of MPCVI and MPCVI-A is Matrix China Management VI, L.P. (“MCM”). The general partner of MCM is Matrix China VI GP, Ltd. (“MCVI”). Timothy A. Barrows, David Ying Zhang, David Su and Harry Ho Kee Man are directors of MCVI and are deemed to have shared investment voting power over the shares held by MPCVI and MPCVI-A. The address of these entities is Flat 2807, 28/F, AIA Central, No.1 Connaught Road, Central, Hong Kong. The address of Timothy A. Barrows is 101 Main St., 17th Floor, Cambridge, MA 02142. The address of David Ying Zhang, Harry Ho Kee Man and David Su is c/o Matrix China Advisors, Suite 2601, Taikang Financial Tower, No. 38, East 3rd Ring Road North, Chaoyang District, Beijing, 100026, China.

- (25) Consists of (i) 697,602 shares of common stock held by Morgan Stanley Institutional Fund, Inc. — Inception Portfolio, (ii) 329,210 shares of common stock held by Inception Trust, (iii) 1,414 shares of common stock held by Morgan Stanley Institutional Fund, Inc. — Counterpoint Global Portfolio, (iv) 744 shares of common stock held by Morgan Stanley Investment Fund — Counterpoint Global Fund and (v) 154,971 shares of common stock held by EQ Advisors Trust — EQ/Morgan Stanley. The address for these entities is 522 Fifth Avenue, New York, NY 10036.
- (26) Consists of (i) 4,426,151 shares of common stock held by New Enterprise Associates 15, L.P. (“NEA 15”) and (ii) 3,574 shares of common stock held by NEA Ventures 2018, L.P. (“Ven 2018”). The securities directly held by NEA 15 are indirectly held by NEA Partners 15, L.P. (“NEA Partners 15”), which is the sole general partner of NEA 15, NEA 15 GP, LLC (“NEA 15 LLC”), which is the sole general partner of NEA Partners 15, and each of the individual managers of NEA 15 LLC. The individual managers of NEA 15 LLC (collectively the “NEA 15 Managers”) are Forest Baskett, Anthony A. Florence, Mohamad Makhzoumi, Scott D. Sandell and Peter Sonsini. NEA 15, NEA Partners 15, NEA 15 LLC and the NEA 15 Managers share voting and dispositive power with regard to the shares directly held by NEA 15. The securities directly held by Ven 2018 are indirectly held by Karen P. Welsh, the general partner of Ven 2018. Mr. Edward Mathers, a member of the board of directors of the Combined Company, is a partner at New Enterprise Associates, Inc., which is affiliated with NEA 15 and Ven 2018, but does not have voting or investment power over the shares held by NEA 15 or Ven 2018. All indirect holders of the above referenced shares disclaim beneficial ownership of all applicable shares of Common Stock. The address for these entities and individuals is 1954 Greenspring Drive, Suite 600, Timonium, Maryland 21093.
- (27) The address for this individual is c/o ICONIQ Capital, 394 Pacific Avenue, 2nd Floor, San Francisco, CA 94111.
- (28) Leela Ghaffari is the investment advisor with respect to these shares of common stock, with an address of 15 Central Park West #37A, New York, NY 10023. The address of OCF 2014 Trust is 500 Stanton Christiana Road, Newark, DE 19713.
- (29) The address for this entity is 1 Letterman Drive, D3500, San Francisco, CA 94129.
- (30) Consists of 1,947,403 shares of common stock held by Mostafa Ronaghi and 250,000 shares held by Ronaghi Revocable Trust. The address for these stockholders is 95 Stern Lange, Atherton, CA 94027.
- (31) Consists of (i) 1,688,908 shares of common stock held by T. Rowe Price Health Sciences Fund, Inc., (ii) 75,977 shares of common stock held by T. Rowe Price Health Sciences Portfolio, (iii) 1,626,003 shares held by T. Rowe Price New Horizons Fund, Inc., (iv) 200,916 shares held by T. Rowe Price New Horizons Fund Trust, (v) 9,952 shares held by T. Rowe Price U.S. Equities Trust, (vi) 144,636 shares of common stock held by TD Mutual Funds—TD Health Sciences Fund, (vii) 1,761 shares of common stock held by Saint-Gobain Corporation, (viii) 38,709 shares of common stock held by New York City Deferred Compensation Plan, (ix) 16,675 shares of common stock held by Dow Retirement Group Trust, (x) 5,739 shares of common stock held by Master Trust Agreement Between Pfizer Inc. & The Northern Trust Company, (xi) 6,130 shares of common stock held by Bank of America Pension Plan, (xii) 6,069 shares of common stock held by MassMutual Select Funds — MassMutual Select T. Rowe Price Small and Mid Cap Blend Fund, (xiii) 31,062 shares of common stock held by Johnson & Johnson Pension and Savings Plans Master Trust, (xiv) 13,193 shares of common stock held by EQ Advisors Trust — EQ/T. Rowe Health Sciences Portfolio, (xv) 2,934 shares of common stock held by Swarthmore College, (xvi) 18,789 shares of common stock held by John Hancock Variable Insurance Trust — Health Sciences Trust, (xvii) 26,772 shares of common stock held by John Hancock Funds II — Health Sciences Fund, and (xviii) 2,326 shares of common stock held by Johnson and Johnson Pension and Savings Plan Master Trust. T. Rowe Price Associates, Inc. (“TRPA”) serves as investment adviser or subadviser with power to direct investments and/or sole power to vote the securities. For purposes of reporting requirements of the Securities Exchange Act of 1934, TRPA may be deemed to be the beneficial owner of all of these shares; however, TRPA expressly disclaims that it is, in fact, the beneficial owner of such securities. TRPA is the wholly owned subsidiary of T. Rowe Price Group, Inc., which is a publicly traded financial services holding company. The address of each of these entities is 100 East Pratt Street, Baltimore, MD 21202.
- (32) The address of this entity is 200 Central Avenue, Suite 1850, Saint Petersburg, FL 33701.

DESCRIPTION OF SECURITIES

The following description summarizes certain important terms of our capital stock as of the date of this prospectus as specified in our Charter and Bylaws. Because the following description is only a summary, it does not contain all the information that may be important to you. For a complete description of the matters set forth in this section titled "Description of Securities," you should refer to the Charter, the Bylaws and the Registration Rights Agreement, which are included as exhibits to the registration statement of which this prospectus is a part, and to the applicable provisions of Delaware law.

Authorized and Outstanding Stock

The Charter authorizes the issuance of 510,000,000 shares, consisting of 500,000,000 shares of common stock, \$0.0001 par value per share, and 10,000,000 shares of preferred stock, \$0.0001 par value. As of October 25, 2023, there were 44,545,186 shares of common stock outstanding. No shares of preferred stock are currently outstanding.

Common Stock

The Charter provides the following with respect to the rights, powers, preferences and privileges of the Senti Common Shares.

Voting Power

Except as otherwise required by law or as otherwise provided in any certificate of designation for any series of preferred stock, the holders of Senti Common Shares possess all voting power for the election of the directors and all other matters requiring stockholder action. Holders of Senti Common Shares are entitled to one vote per share on matters to be voted on by stockholders.

Dividends

Holders of Senti Common Shares will be entitled to receive such dividends, if any, as may be declared from time to time by our board of directors in its discretion out of funds legally available therefor. We have not historically paid any cash dividends on Senti Common Stock to date and do not intend to pay cash dividends in the foreseeable future. Any payment of cash dividends in the future will be dependent upon our revenues and earnings, if any, capital requirements and general financial conditions. In no event will any stock dividends or stock splits or combinations of stock be declared or made on Senti Common Shares unless the Senti Common Shares at the time outstanding are treated equally and identically.

Liquidation, Dissolution and Winding Up

In the event of our voluntary or involuntary liquidation, dissolution or winding-up, the net assets of Senti will be distributed pro rata to the holders of Senti Common Shares, subject to the rights of the holders of the preferred stock, if any.

Preemptive or Other Rights

There are no sinking fund provisions applicable to the Senti Common Shares.

Preferred Stock

The Charter provides that shares of preferred stock may be issued from time to time in one or more series. Our board of directors will be authorized to fix designations, powers, including voting powers, full or limited, or no voting powers, preferences and the relative, participating, optional or other special rights of the shares of each series of preferred stock and any qualifications, limitations and restrictions thereof. Our board of directors will be able to, without stockholder approval, issue preferred stock with voting and other rights that could adversely affect the voting power and other rights of the holders of the Senti Common Shares and could have anti-takeover effects. The ability of our board of directors to issue preferred stock without stockholder approval could have the effect of

delaying, deferring or preventing a change of control of Senti or the removal of existing management. We have no preferred stock currently outstanding.

Registration Rights

We, DYNs, and certain of our stockholders entered into the Investor Rights and Lock-Up Agreement, dated June 8, 2022, pursuant to which, among other things, such stockholders were granted certain registration rights with respect to certain shares of securities held by them. A copy of the Investor Rights and Lock-Up Agreement is attached as an exhibit hereto and incorporated herein by reference.

We and Chardan Capital Markets LLC (“Chardan”) entered into a Registration Rights Agreement, dated August 31, 2022, pursuant to which, among other things, we agreed to file a registration statement registering the resale by Chardan of shares of Senti Common Stock issued to it by us pursuant to the Common Stock Purchase Agreement, dated August 31, 2022, by and between us and Chardan and to maintain the effectiveness of such resale registration statement. A copy of the Registration Rights Agreement is attached as an exhibit hereto and incorporated herein by reference.

We and GeneFab, LLC (“GeneFab”) entered into a letter agreement (the “Option Agreement”), pursuant to which GeneFab has the right to invest up to approximately \$20 million to purchase up to 19,633,444 shares of Senti Common Stock, subject to approval by our stockholders to the extent required pursuant to applicable Nasdaq rules, at a price of \$1.01867 per share in private placements in up to ten installments. Pursuant to the Option Agreement, we also agreed to register all of the shares of common stock purchased by GeneFab under the Option Agreement for resale by filing up to four registration statements, subject to certain conditions and restrictions contained in the Option Agreement, is attached as an exhibit hereto and incorporated herein by reference.

Anti-Takeover Provisions

Charter and Bylaws

Among other things, the Charter and Bylaws (as amended from time to time):

- permit our board of directors to issue up to 10,000,000 shares of preferred stock, with any rights, preferences and privileges as they may designate, including the right to approve an acquisition or other change of control;
- provide that our number of directors may be changed only by resolution of our board of directors;
- provide that, subject to the rights of any series of preferred stock to elect directors, directors may be removed only with cause by the holders of at least 75% of all of our then-outstanding shares of the capital stock entitled to vote generally at an election of directors;
- provide that all vacancies, subject to the rights of any series of preferred stock, including newly created directorships, may, except as otherwise required by law, be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum;
- provide that stockholders seeking to present proposals before a meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide advance notice in writing, and also specify requirements as to the form and content of a stockholder’s notice;
- provide that special meetings of our stockholders may be called by our board of directors pursuant to a resolution adopted by a majority of the board;
- provide that our board of directors will be divided into three classes of directors, with the directors serving three-year terms, therefore making it more difficult for stockholders to change the composition of the board of directors; and

- not provide for cumulative voting rights, therefore allowing the holders of a majority of the Senti Common Shares entitled to vote in any election of directors to elect all of the directors standing for election, if they should so choose.

The combination of these provisions make it more difficult for the existing stockholders to replace our board of directors as well as for another party to obtain control of us by replacing our board of directors. Because our board of directors will have the power to retain and discharge its officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management. In addition, the authorization of undesignated preferred stock will make 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 the control of Senti.

These provisions are intended to enhance the likelihood of continued stability in the composition of our board of directors and its policies and to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to reduce our vulnerability to hostile takeovers and to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and may have the effect of delaying changes in our control or management. As a consequence, these provisions may also inhibit fluctuations in the market price of the our stock.

Certain Anti-Takeover Provisions of Delaware Law

We are subject to the provisions of Section 203 of the DGCL. This statute prevents certain Delaware corporations, under certain circumstances, from engaging in a “business combination” with:

- a stockholder who owns 15% or more of our outstanding voting stock (otherwise known as an “interested stockholder”);
- an affiliate of an interested stockholder; or
- an associate of an interested stockholder, for three years following the date that the stockholder became an interested stockholder.

A “business combination” includes a merger or sale of more than 10% of a corporation’s assets. However, the above provisions of Section 203 would not apply if:

- the relevant board of directors approves the transaction that made the stockholder an “interested stockholder,” prior to the date of the transaction;
- after the completion of the transaction that resulted in the stockholder becoming an interested stockholder, that stockholder owned at least 85% of the corporation’s voting stock outstanding at the time the transaction commenced, other than statutorily excluded shares of common stock; or
- on or subsequent to the date of the transaction, the initial business combination is approved by the board of directors and authorized at a meeting of the corporation’s stockholders, and not by written consent, by an affirmative vote of at least two-thirds of the outstanding voting stock not owned by the interested stockholder.

These provisions may have the effect of delaying, deferring, or preventing changes in control of Senti.

Transfer Agent

Continental Stock Transfer & Trust Company is the transfer agent for the Senti Common Shares.

Trading Symbol and Market

Senti Common Shares are listed on Nasdaq under the symbol “SNTI”.

PLAN OF DISTRIBUTION

We are registering the issuance by us of 2,000,000 Senti Common Shares that may be issued from time to time upon achievement of certain stock price thresholds (the “Earn-Out Shares”). We are also registering the resale by the Selling Securityholders of up to 33,444,908 additional Senti Common Shares.

Once issued and upon effectiveness of the registration statement of which this prospectus forms a part, the securities beneficially owned by the Selling Securityholders covered by this prospectus may be offered and sold from time to time by the Selling Securityholders. The term “Selling Securityholders” includes donees, pledgees, transferees or other successors in interest selling securities received after the date of this prospectus from a Selling Securityholder as a gift, pledge, partnership distribution or other transfer. The Selling Securityholders will act independently of us in making decisions with respect to the timing, manner and size of each sale. Such sales may be made on one or more exchanges or in the over-the-counter market or otherwise, at prices and under terms then prevailing or at prices related to the then current market price or in negotiated transactions. Each Selling Securityholder reserves the right to accept and, together with its respective agents, to reject, any proposed purchase of securities to be made directly or through agents. The Selling Securityholders and any of their permitted transferees may sell their securities offered by this prospectus on any stock exchange, market or trading facility on which the securities are traded or in private transactions.

Subject to any limitations set forth in any applicable agreement that provides for registration rights, the Selling Securityholders may use any one or more of the following methods when selling the securities offered by this prospectus:

- purchases by a broker-dealer as principal and resale by such broker-dealer for its own account pursuant to this prospectus;
- ordinary brokerage transactions and transactions in which the broker solicits purchasers;
- one or more underwritten offerings;
- block trades in which the broker-dealer so engaged will attempt to sell the securities as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- an exchange distribution in accordance with the rules of the applicable exchange;
- in market transactions, including transactions on a national securities exchange or quotations service or over-the-counter market;
- distributions to their members, partners or stockholders;
- settlement of short sales entered into after the date of the registration statement of which this prospectus is a part is declared effective by the SEC;
- agreements with broker-dealers to sell a specified number of the securities at a stipulated price per share;
- in “at the market” offerings, as defined in Rule 415 under the Securities Act, at negotiated prices, at prices prevailing at the time of sale or at prices related to such prevailing market prices, including sales made directly on a national securities exchange or sales made through a market maker other than on an exchange or other similar offerings through sales agents;
- directly to purchasers, including through a specific bidding, auction or other process or in privately negotiated transactions;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- through a combination of any of the above methods of sale; or

- any other method permitted pursuant to applicable law.

In addition, a Selling Securityholder that is an entity may elect to make an in-kind distribution of securities to its members, partners, stockholders or other equityholders pursuant to the registration statement of which this prospectus is a part by delivering a prospectus. Such members, partners, stockholders or other equityholders that are not affiliates of ours would thereby receive freely tradeable securities pursuant to the distribution through a registration statement. To the extent a distributee is an affiliate of ours (or to the extent otherwise required by law), we may file a prospectus supplement in order to permit the distributees to use the prospectus to resell the securities acquired in the distribution.

The Selling Securityholders also may transfer the securities 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. Upon being notified by a Selling Securityholder that a donee, pledgee, transferee, other successor-in-interest intends to sell our securities, we will, to the extent required, promptly file a supplement to this prospectus to name specifically such person as a Selling Securityholder.

To the extent required, the Senti Common Shares to be sold, the names of the Selling Securityholders, the respective purchase prices and public offering prices, the names of any agents, dealer or underwriter, 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.

The Selling Securityholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the Senti Common Shares in the course of hedging the positions they assume. The Selling Securityholders may also sell the Senti Common Shares short and deliver these securities to close out their short positions, or loan or pledge the Senti Common Shares to broker-dealers that in turn may sell these shares. The Selling Securityholders 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 Selling Securityholders also may in the future resell a portion or all of the Senti Common Shares in open market transactions in reliance upon Rule 144 under the Securities Act, provided that they meet the criteria and conform to the requirements of that rule, or pursuant to other available exemptions from the registration requirements of the Securities Act.

Selling Securityholders may use this prospectus in connection with resales of the Senti Common Shares. This prospectus and any accompanying prospectus supplement will identify the Selling Securityholders, the terms of the Senti Common Shares and any material relationships between us and the Selling Securityholders. In offering the securities covered by this prospectus, the Selling Securityholders and any underwriters, broker-dealers or agents who execute sales for the Selling Securityholders may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. Any discounts, commissions, concessions or profit they earn on any resale of those securities may be underwriting discounts and commissions under the Securities Act. Unless otherwise set forth in a prospectus supplement, the Selling Securityholders will receive all the net proceeds from the resale of the Senti Common Shares. If any Selling Securityholder is an “underwriter” within the meaning of Section 2(11) of the Securities Act, then the Selling Securityholder will be subject to the prospectus delivery requirements of the Securities Act. Underwriters and their controlling persons, dealers and agents may be entitled, under agreements entered into with us and the Selling Securityholder, to indemnification against and contribution toward specific civil liabilities, including liabilities under the Securities Act.

In order to comply with the securities laws of certain states, if applicable, the securities must be sold in such jurisdictions only through registered or licensed brokers or dealers. In addition, in certain states the securities may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

We have advised the Selling Securityholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares in the market and to the activities of the Selling Securityholders 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 Securityholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The Selling Securityholders may indemnify any broker-dealer that participates in transactions involving the sale of the Senti Common Shares against certain liabilities, including liabilities arising under the Securities Act.

We are required to pay all fees and expenses incident to the registration of shares of the Senti Common Shares to be offered and sold pursuant to this prospectus.

LEGAL MATTERS

Goodwin Procter LLP has passed upon the validity of the Senti Common Shares offered by this prospectus and certain other legal matters related to this prospectus.

EXPERTS

The consolidated financial statements of Senti Biosciences, Inc. and its subsidiaries as of December 31, 2022 and 2021, and for each of the years in the two-year period ended December 31, 2022, have been incorporated by reference herein and in the registration statement in reliance upon the report of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon authority of said firm as experts in accounting and auditing. The audit report covering the December 31, 2022 consolidated financial statements contains an explanatory paragraph that states that Senti Biosciences, Inc. and its subsidiaries' have incurred recurring losses and negative cash flows from operations and has an accumulated deficit that raises substantial doubt about the entity's ability to continue as a going concern. The consolidated financial statements do not include any adjustments that might result from the outcome of that uncertainty.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of a registration statement on Form S-3 we filed with the SEC under the Securities Act and does not contain all the information set forth or incorporated by reference 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 by reference into this prospectus for a copy of such contract, agreement or other document. You may obtain copies of the registration statement and its exhibits via the SEC's EDGAR database. We have also filed a registration statement on Form S-1, including exhibits, under the Securities Act, with respect to the common stock offered by this prospectus.

In addition, we file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public on a website maintained by the SEC located at www.sec.gov. We also maintain a website at <https://sentibio.com/>. Through our website, we make available, free of charge, annual, quarterly and current reports, proxy statements and other information as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. The information contained on, or that may be accessed through, our website is not part of, and is not incorporated into, this prospectus. Information contained on our website is not a part of or incorporated by reference into this prospectus and the inclusion of our website and investor relations website addresses in this prospectus is an inactive textual reference only.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

This registration statement incorporates by reference important business and financial information about us that is not included in or delivered with this document. The information incorporated by reference is considered to be part of this prospectus, and the SEC allows us to “incorporate by reference” the information we file with it, which means that we can disclose important information to you by referring you to those documents instead of having to repeat the information in this prospectus. Any statement contained in this prospectus or a document incorporated or deemed to be incorporated by reference herein or therein shall be deemed to be modified or superseded for the purposes of this prospectus to the extent that a statement contained herein or in any subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes that prior statement. The modifying or superseding statement need not state that it has modified or superseded a prior statement or include any other information set forth in the document that it modifies or supersedes. The making of a modifying or superseding statement shall not be deemed an admission for any purposes that the modified or superseded statement, when made, constituted a misrepresentation, an untrue statement of a material fact or an omission to state a material fact that is required to be stated or that is necessary to make a statement not misleading in light of the circumstances in which it was made. Any statement so modified or superseded shall not be considered in its unmodified or superseded form to constitute a part of this prospectus, except as so modified or superseded.

We hereby incorporate by reference into this prospectus the following documents that we have filed with the SEC under the Exchange Act:

- Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2022, filed with the SEC on March 22, 2023;
- The information specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2022, from our definitive proxy statement on [Schedule 14A](#) (other than information furnished rather than filed), which was filed with the SEC on May 1, 2023;
- Quarterly Reports on Form 10-Q for the quarters ended [March 31, 2023](#) and [June 30, 2023](#), filed with the SEC on May 9, 2023 and August 11, 2023, respectively;
- Current Reports on Form 8-K filed with the SEC on [January 9, 2023](#), [January 27, 2023](#), [March 22, 2023](#), [April 28, 2023](#), [May 9, 2023](#), [June 23, 2023](#), [August 10, 2023](#), [August 11, 2023](#) and [August 11, 2023](#) (excluding information furnished pursuant to Items 2.02 or 7.01, or corresponding information furnished under Item 9.01 or included as an exhibit); and
- The description of our securities contained in our Annual Report on [Form 10-K](#) filed with the SEC on March 22, 2023, including any amendments or reports filed for the purpose of updating such description.

All documents that we file pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act (other than any such documents or portions thereof that are deemed to have been furnished and not filed in accordance with the rules of the SEC), after the date hereof and prior to the termination of an offering of securities under this prospectus shall be deemed to be incorporated by reference into this prospectus and will automatically update and supersede the information in this prospectus, the applicable prospectus supplement and any previously filed documents.

We will furnish without charge to each person, including any beneficial owner, to whom a prospectus is delivered, upon written or oral request, a copy of any or all of the documents incorporated by reference, including exhibits to these documents. Any such request may be made by writing or calling us at the following address or phone number:

Senti Biosciences, Inc.
2 Corporate Drive, First Floor
South San Francisco, CA 94080
Telephone: (650) 239-2030
Attention: Investor Relations

35,444,908 Shares of Common Stock



PROSPECTUS

November 3, 2023

You should rely only on the information contained in this prospectus or any supplement or amendment hereto. We have not authorized anyone to provide you with different information. You should not assume that the information contained in this prospectus or any supplement or amendment hereto is accurate as of any date other than the date of this prospectus or any such supplement or amendment. Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.
