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

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**FORM S-1**  
REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

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**SONNET BIOTHERAPEUTICS HOLDINGS, INC.**

(Exact name of registrant as specified in its charter)

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**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**2834**  
(Primary Standard Industrial  
Classification Code Number)

**20-2932652**  
(I.R.S Employer  
Identification Number)

**100 Overlook Center, Suite 102  
Princeton, New Jersey 08540  
Telephone: 609-375-2227**  
(Address, including zip code, and telephone number,  
including area code, of registrant's principal executive offices)

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**Pankaj Mohan, Ph.D.  
CEO and Chairman  
Sonnet BioTherapeutics Holdings, Inc.  
100 Overlook Center, Suite 102  
Princeton, New Jersey 08540  
Telephone: (609) 375-2227**  
(Name, address, including zip code, and telephone number,  
including area code, of agent for service)

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**Approximate date of commencement of proposed sale to the public:  
As soon as practicable after the effective date of this registration statement.**

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

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

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

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

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

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

**The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment that 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.**

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

**SUBJECT TO COMPLETION, DATED SEPTEMBER 19, 2023**

**PRELIMINARY PROSPECTUS**



**Up to                      Shares of Common Stock**  
**Pre-Funded Warrants to Purchase up to                      Shares of Common Stock**  
**Common Warrants to Purchase up to                      Shares of Common Stock**  
**Underwriter Warrants to Purchase up to                      Shares of Common Stock**  
**Shares of Common Stock issuable upon exercise of the Pre-Funded Warrants and Common Warrants**  
**Shares of Common Stock issuable upon exercise of the Underwriter Warrants**

We are offering up to \_\_\_\_\_ shares of our common stock and common warrants to purchase an aggregate of \_\_\_\_\_ shares of our common stock (and the shares of common stock that are issuable from time to time upon exercise of the common warrants). We are also offering to certain purchasers whose purchase of shares of common stock in this offering would otherwise result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common stock immediately following the consummation of this offering, the opportunity to purchase, if any such purchaser so chooses, pre-funded warrants to purchase shares of our common stock, in lieu of shares of common stock that would otherwise result in such purchaser's beneficial ownership exceeding 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common stock. Each pre-funded warrant will be exercisable for one share of our common stock. The purchase price of each pre-funded warrant and accompanying common warrant will be equal to the price at which a share of common stock and accompanying common warrant are sold to the public in this offering, minus \$0.0001, and the exercise price of each pre-funded warrant will be \$0.0001 per share. The pre-funded warrants will be immediately exercisable and may be exercised at any time until all of the pre-funded warrants are exercised in full. This offering also relates to the shares of common stock issuable upon exercise of any pre-funded warrants sold in this offering. Each share of common stock and pre-funded warrant is being sold together with a common warrant to purchase \_\_\_\_\_ share of our common stock at an exercise price of \$ per share (representing % of the price at which a share of common stock and accompanying common warrant are sold to the public in this offering). The common warrants will be exercisable immediately and will expire \_\_\_\_\_ years from the date of issuance. For each pre-funded warrant we sell, the number of shares of common stock we are offering will be decreased on a one-for-one basis. Because we will issue common warrant for each share of our common stock and for each pre-funded warrant to purchase one share of our common stock sold in this offering, the number of common warrants sold in this offering will not change as a result of a change in the mix of the shares of our common stock and pre-funded warrants sold. The shares of common stock and pre-funded warrants, and the accompanying common warrants, can only be purchased together in this offering but will be issued separately and will be immediately separable upon issuance.

Our common stock is listed on The Nasdaq Capital Market under the symbol "SONN." On September 18, 2023 the last reported sale price of our common stock on The Nasdaq Capital Market was \$3.53 per share. There is no established public trading market for the pre-funded warrants, and we do not expect a market to develop. In addition, we do not intend to apply for a listing of the pre-funded warrants on any national securities exchange. Without an active trading market, the liquidity of the pre-funded warrants will be limited.

The public offering price per share of common stock and accompanying common warrant and any pre-funded warrant and accompanying common warrant, as the case may be, will be determined by us at the time of pricing, may be at a discount to the current market price, and the recent market price used throughout this prospectus may not be indicative of the final offering price.

You should read this prospectus, together with additional information described under the headings "Information Incorporated by Reference" and "Where You Can Find More Information," carefully before you invest in any of our securities.

**Investing in our securities involves a high degree of risk. See "Risk Factors" beginning on page 5 of this prospectus and in the documents incorporated by reference into this prospectus for a discussion of risks that should be considered in connection with an investment 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.**

	<b>Per Share</b>	<b>Per Pre-Funded Warrant</b>	<b>Per Common Warrant</b>	<b>Total</b>
Public offering price	\$	\$	\$	\$
Underwriting discounts and commissions (1)	\$	\$	\$	\$
Proceeds to us, before expenses	\$	\$	\$	\$

(1) See "Underwriting" for additional information regarding underwriting compensation.

We have granted the underwriters an option for a period of 30 days from the date of this prospectus to purchase up to an additional \_\_\_\_\_ shares of common stock and/or additional common warrants to purchase up to \_\_\_\_\_ shares of common stock from us, in any combination thereof, at the public offering price per share per common warrant, less the underwriting discounts and commissions.

The delivery of the securities offered hereby to purchasers is expected to be made on or about \_\_\_\_\_, 2023.

*Joint Book-Running Managers*

**Chardan**

**Ladenburg Thalmann**

The date of this prospectus is \_\_\_\_\_, 2023.

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### ABOUT THIS PROSPECTUS

We incorporate by reference important information into this prospectus. You may obtain the information incorporated by reference without charge by following the instructions under “Where You Can Find More Information.” You should carefully read this prospectus as well as additional information described under “Information Incorporated by Reference,” before deciding to invest in our securities.

Neither we nor the underwriters have authorized anyone to provide you with additional information or information different from that contained or incorporated by reference in this prospectus filed with the Securities and Exchange Commission (the “SEC”). We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. The underwriters are offering to sell, and seeking offers to buy, our securities only in jurisdictions where offers and sales are permitted. The information contained in this prospectus, or any document incorporated by reference in this prospectus, is accurate only as of the date of those respective documents, regardless of the time of delivery of this prospectus or any sale of our securities. Our business, financial condition, results of operations and prospects may have changed since that date.

The information incorporated by reference or provided in this prospectus contains statistical data and estimates, including those relating to market size and competitive position of the markets in which we participate, that we obtained from our own internal estimates and research, as well as from industry and general publications and research, surveys and studies conducted by third parties. Industry publications, studies and surveys generally state that they have been obtained from sources believed to be reliable. While we believe our internal company research is reliable and the definitions of our market and industry are appropriate, neither this research nor these definitions have been verified by any independent source.

For investors outside the United States (“U.S.”): We and the underwriters have not done anything that would permit this offering or the possession or distribution of this prospectus in any jurisdiction where action for those purposes is required, other than in the U.S. Persons outside the U.S. who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the securities and the distribution of this prospectus outside of the U.S.

### CAUTIONARY NOTE CONCERNING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements that involve substantial risks and uncertainties for purposes of the safe harbor provided by the Private Securities Litigation Reform Act of 1995. All statements contained in this prospectus other than statements of historical fact, including statements regarding our strategy, future operations, future financial position, liquidity, future revenue, projected expenses, results of operations, expectations concerning the timing and our ability to commence and subsequently report data from planned non-clinical studies and clinical trials, prospects, plans and objectives of management are forward-looking statements. The words “believe,” “may,” “will,” “estimate,” “continue,” “anticipate,” “intend,” “plan,” “expect,” “predict,” “potential,” “opportunity,” “goals,” or “should,” and similar expressions are intended to identify forward-looking statements. Such statements are based on management’s current expectations and involve risks and uncertainties. Actual results and performance could differ materially from those projected in the forward-looking statements as a result of many factors.

We based these forward-looking statements largely on our current expectations and projections about future events and trends that we believe may affect our financial condition, results of operations, business strategy, short-term and long-term business operations and objectives, and financial needs. These forward-looking statements are subject to a number of risks, uncertainties, and assumptions, including those described in “Risk Factors” in this prospectus, and under a similar heading in any other annual, periodic or current report incorporated by reference into this prospectus or that we may file with the SEC in the future. Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge quickly and from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the future events and trends discussed in this prospectus, may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements. We undertake no obligation to revise or publicly release the results of any revision to these forward-looking statements, except as required by law. Given these risks and uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements. All forward-looking statements are qualified in their entirety by this cautionary statement.

You should also read carefully the factors described in the “Risk Factors” section of this prospectus, and under a similar heading in any other annual, periodic or current report incorporated by reference into this prospectus, to better understand the risks and uncertainties inherent in our business and underlying any forward-looking statements. You are advised to consult any further disclosures we make on related subjects in our future public filings.

### PROSPECTUS SUMMARY

*This summary highlights information about our company, this offering and information contained in greater detail in other parts of this prospectus or incorporated by reference into this prospectus from our filings with the SEC listed in the section entitled “Information Incorporated by Reference.” Because it is only a summary, it does not contain all of the information that you should consider before purchasing our securities in this offering and it is qualified in its entirety by, and should be read in conjunction with, the more detailed information appearing elsewhere or incorporated by reference into this prospectus. You should read the entire prospectus, the registration statement of which this prospectus is a part, and the information incorporated by reference into this prospectus in their entirety, including the “Risk Factors” and our financial statements and the related notes incorporated by reference into this prospectus, before purchasing our securities in this offering.*

*Except as otherwise indicated herein or as the context otherwise requires, references in this prospectus to “the Company,” “we,” “us” and “our” refer to Sonnet*

On August 31, 2023, we effected a reverse stock split of our issued and outstanding common stock, par value \$0.0001 per share, at a ratio of 1-for-22 and on September 16, 2022, we effected a reverse stock split of our issued and outstanding common stock at a ratio of 1-for-14. All of our historical share and per share information related to issued and outstanding common stock and outstanding options and warrants exercisable for common stock included in this prospectus have been adjusted, on a retroactive basis, to reflect the reverse stock splits. The information dated before August 31, 2023 incorporated by reference into this prospectus has not been adjusted to reflect the reverse stock splits. See “Corporate Information.”

## Corporate Overview

Sonnet BioTherapeutics Holdings, Inc. (“we,” “us,” “our” or the “Company”), is a clinical stage, oncology-focused biotechnology company with a proprietary platform for innovating biologic medicines of single- or bi-specific action. Known as F<sub>H</sub>AB™ (Fully Human Albumin Binding), the technology utilizes a fully human single chain antibody fragment that binds to and “hitch-hikes” on human serum albumin for transport to target tissues. We designed the construct to improve drug accumulation in specific tissues, as well as to extend the duration of activity in the body. F<sub>H</sub>AB development candidates are produced in a mammalian cell culture, which enables glycosylation, thereby reducing the risk of immunogenicity. We believe our F<sub>H</sub>AB technology, for which we received a U.S. patent in June 2021, is a distinguishing feature of our biopharmaceutical platform that is well suited for future drug development across a range of human disease areas, including in oncology, autoimmune, pathogenic, inflammatory, and hematological conditions.

## Recent Developments

### Registered Direct Offering and Private Placement

On June 28, 2023, we entered into a securities purchase agreement with certain investors pursuant to which we agreed to sell and issue, in (i) a registered direct offering (the “RD Offering”), an aggregate of (a) 166,363 shares of common stock at a purchase price of \$9.90 per share and accompanying Private Warrant, and (b) 60,909 pre-funded warrants (the “Pre-Funded Warrants”) to purchase up to an aggregate of 60,909 shares of common stock (the “Pre-Funded Warrant Shares”) at a purchase price of \$9.8978 per Pre-Funded Warrant and accompanying Private Warrant and (ii) in a concurrent private placement (the “Private Placement” and together with the RD Offering, the “June 2023 Offering”), Private Warrants to purchase up to 227,272 shares of common stock. The Private Warrants will be exercisable as of December 30, 2023 at an exercise price of \$14.8478 per share and will expire three and one-half years from the date of issuance. The closing of the issuance and sale of these securities was consummated on June 30, 2023. The gross proceeds from the offering, prior to deducting offering expenses and placement agent fees and expenses payable by us, was approximately \$2.25 million.

Pursuant to a placement agency agreement dated as of June 28, 2023, we engaged Chardan Capital Markets, LLC (“Chardan”) to act as our exclusive placement agent in connection with the June 2023 Offering. We paid to Chardan (i) a cash fee equal to 8.0% of the aggregate gross proceeds of the June 2023 Offering, excluding the proceeds, if any, from the exercise of the Private Warrants and (ii) a non-accountable expense allowance of 0.5% of the aggregate gross proceeds of the June 2023 Offering, and (iii) reimbursed Chardan for certain expenses and legal fees up to \$35,000. In addition, we issued to Chardan or its designees, PA Warrants to purchase up to 6,818 shares of common stock. The PA Warrants will be exercisable as of December 30, 2023 and have a term of exercise equal to three and a half years from the date of issuance, with an exercise price of \$14.8478 per share.

## Corporate Information

We were organized on October 21, 1999, under the name Tulvine Systems, Inc., under the laws of the State of Delaware. On April 25, 2005, Tulvine Systems, Inc. formed a wholly owned subsidiary, Chanticleer Holdings, Inc., and on May 2, 2005, Tulvine Systems, Inc. merged with, and changed its name to, Chanticleer Holdings, Inc. On April 1, 2020, we completed our business combination with Sonnet BioTherapeutics, Inc. (“Sonnet”), in accordance with the terms of the Agreement and Plan of Merger, dated as of October 10, 2019, as amended, by and among us, Sonnet and Biosub Inc., a wholly-owned subsidiary of the Company (“Merger Sub”) (the “Merger Agreement”), pursuant to which Merger Sub merged with and into Sonnet, with Sonnet surviving as a wholly owned subsidiary of us (the “Merger”). Under the terms of the Merger Agreement, we issued shares of common stock to Sonnet’s stockholders at an exchange rate of 0.106572 shares for each share of Sonnet common stock outstanding immediately prior to the Merger. In connection with the Merger, we changed our name from “Chanticleer Holdings, Inc.” to “Sonnet BioTherapeutics Holdings, Inc.,” and the business conducted by us became the business conducted by Sonnet.

On August 31, 2023, we effected a reverse stock split of our issued and outstanding common stock, par value \$0.0001 per share, at a ratio of 1-for-22 (the “2023 Reverse Stock Split”), and on September 16, 2022, we effected a reverse stock split of our issued and outstanding common stock at a ratio of 1-for-14 (the “2022 Reverse Stock Split” and, together with the 2023 Reverse Stock Split, the “Reverse Stock Splits”). Shares of common stock underlying outstanding stock options and other equity instruments convertible into common stock were proportionately reduced and the respective exercise prices, if applicable, were proportionately increased in accordance with the terms of the agreements governing such securities in connection with the Reverse Stock Splits. No fractional shares were issued in connection with the Reverse Stock Splits. Stockholders who would otherwise be entitled to a fractional share of common stock instead receive a proportional cash payment. All of our historical share and per share information related to issued and outstanding common stock and outstanding options and warrants exercisable for common stock included in this prospectus have been adjusted, on a retroactive basis, to reflect the Reverse Stock Splits. The information dated before August 31, 2023 incorporated by reference into this prospectus has not been adjusted to reflect the 2023 Reverse Stock Split.

Our principal executive offices are located at 100 Overlook Center, Suite 102, Princeton, New Jersey 08540, and our telephone number is (609) 375-2227. Our website is www.sonnetbio.com. Our website and the information contained on, or that can be accessed through, our website shall not be deemed to be incorporated by reference in, and are not considered part of, this prospectus supplement or the accompanying prospectus. You should not rely on any such information in making your decision whether to purchase our common stock.

## The Offering

### Common Stock to be Offered

shares (or shares if the underwriters’ option to purchase additional shares is exercised in full), based on the sale of our common stock at an assumed combined public offering price of \$ per share of common stock and accompanying common warrant, which is the last reported sale price of our common stock on , 2023, and assuming no sale of any pre-funded warrants.

**Pre-funded Warrants to be Offered**

We are also offering to certain purchasers whose purchase of shares of common stock in this offering would otherwise result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common stock immediately following the consummation of this offering, the opportunity to purchase, if such purchasers so choose, pre-funded warrants to purchase shares of common stock, in lieu of shares of common stock that would otherwise result in any such purchaser's beneficial ownership exceeding 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common stock. Each pre-funded warrant will be exercisable for one share of our common stock. The purchase price of each pre-funded warrant and accompanying common warrant will equal the price at which the share of common stock and accompanying common warrant are being sold to the public in this offering, minus \$0.0001, and the exercise price of each pre-funded warrant will be \$0.0001 per share. The pre-funded warrants will be exercisable immediately and may be exercised at any time until all of the pre-funded warrants are exercised in full. This offering also relates to the shares of common stock issuable upon exercise of any pre-funded warrants sold in this offering. For each pre-funded warrant we sell, the number of shares of common stock we are offering will be decreased on a one-for-one basis. Because we will issue common warrant for each share of our common stock and for each pre-funded warrant to purchase one share of our common stock sold in this offering, the number of common warrants sold in this offering will not change as a result of a change in the mix of the shares of our common stock and pre-funded warrants sold.

**Common Warrants to be Offered**

Common warrants to purchase an aggregate of \_\_\_\_\_ shares of our common stock (or \_\_\_\_\_ shares if the underwriters' option to purchase additional common warrants is exercised in full), based on the sale of our common stock at an assumed combined public offering price of \$ \_\_\_\_\_ per share of common stock and accompanying common warrant, which is the last reported sale price of our common stock on The Nasdaq Capital Market on \_\_\_\_\_, 2023. Each share of our common stock and each pre-funded warrant to purchase one share of our common stock is being sold together with a common warrant to purchase \_\_\_\_\_ share of our common stock. Each common warrant will have an exercise price of \$ \_\_\_\_\_ per share (representing \_\_\_\_\_ % of the price at which a share of common stock and accompanying common warrant are sold to the public in this offering), will be immediately exercisable and will expire on the \_\_\_\_\_ anniversary of the original issuance date. The shares of common stock and pre-funded warrants, and the accompanying common warrants, as the case may be, can only be purchased together in this offering but will be issued separately and will be immediately separable upon issuance. This prospectus also relates to the offering of the shares of common stock issuable upon exercise of the common warrants.

**Common Stock to be Outstanding Immediately After this Offering (1)**

\_\_\_\_\_ shares (or \_\_\_\_\_ shares if the underwriters' option to purchase additional shares is exercised in full), assuming in each case none of the common warrants issued in this offering are exercised, and based on the sale of our common stock at an assumed combined public offering price of \$ \_\_\_\_\_ per share of common stock, which is the last reported sale price of our common stock on The Nasdaq Capital Market on \_\_\_\_\_, 2023, and no sale of any pre-funded warrants.

**Option to Purchase Additional Securities**

We have granted the underwriters an option, exercisable within 30 days after the closing of this offering, to acquire up to an additional \_\_\_\_\_ shares of common stock and/or additional common warrants to purchase up to \_\_\_\_\_ shares of common stock from us, in any combination thereof, at the public offering price per share, per common warrant, less the underwriting discounts and commissions, based on the sale of our common stock at an assumed combined public offering price of \$ \_\_\_\_\_ per share of common stock, which is the last reported sale price of our common stock on the Nasdaq Capital Market on \_\_\_\_\_, 2023, on the same terms as set forth in this prospectus.

**Underwriter Warrants to be Offered**

We have agreed to issue to the underwriters warrants (the "underwriter warrants") to purchase up to \_\_\_\_\_ shares of common stock (representing 3% of the aggregate number of shares sold in this offering, including upon any exercise of the underwriters' option to purchase additional shares of common stock, and including the number of shares of common stock underlying the pre-funded warrants), at an exercise price of \$ \_\_\_\_\_ per share (representing 125% of the price at which a share of common stock and accompanying common warrant are sold to the public in this offering). The underwriter warrants will be exercisable immediately and for five years from the date of commencement of sales in this offering. The issuance of the underwriter warrants and the shares issuable upon exercise of the underwriter warrants are registered on the registration statement of which this prospectus forms a part.

**Use of Proceeds**

We estimate that the net proceeds from this offering will be approximately \$ \_\_\_\_\_ million, or \$ \_\_\_\_\_ million if the underwriters exercise their option to purchase additional securities in full, based on an assumed combined public offering price of \$ \_\_\_\_\_ per share of common stock and accompanying common warrant, which was the last reported sales price of our common stock on The Nasdaq Capital Market on \_\_\_\_\_, 2023, and assuming no sale of any pre-funded warrants, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, and excluding the proceeds, if any, from the exercise of the common warrants in this offering.

We currently intend to use the net proceeds from this offering for research and development, including clinical trials, working capital and general corporate purposes. See "Use of Proceeds" for additional information.

**Risk Factors**

An investment in our securities involves a high degree of risk. See "Risk Factors" beginning on page 5 of this prospectus and the other information included and incorporated by reference in this prospectus for a discussion of the risk factors you should carefully consider before deciding to invest in our securities.

**National Securities Exchange Listing**

Our common stock is listed on The Nasdaq Capital Market under the symbol "SONN." There is no established public trading market for the pre-funded warrants or common warrants, and we do not expect a market to develop. In addition, we do not intend to apply to list the pre-funded warrants or common warrants on any national securities exchange or other nationally recognized trading system. Without an active trading market, the liquidity of the pre-funded warrants or common warrants will be limited.

(1) The number of shares of our common stock that will be outstanding immediately after this offering is based on 1,750,426 shares of common stock outstanding as of September 11, 2023, and assumes the sale and issuance by us of \_\_\_\_\_ shares of common stock (and no sale of any pre-funded warrants) in this offering and excludes:

- 2,326 shares of common stock underlying restricted stock units outstanding as of September 11, 2023;
- 14,480 shares of common stock reserved for future issuance under the 2020 Omnibus Equity Incentive Plan as of September 11, 2023;

- 730,333 shares of common stock issuable upon the exercise of warrants outstanding as of September 11, 2023, with a weighted average exercise price of \$115.60 per share;
- shares of common stock issuable upon the exercise of the pre-funded warrants issued in this offering, if any;
- up to \_\_\_\_\_ shares (or shares if the underwriters' option to purchase additional common warrants is exercised in full) of common stock issuable upon the exercise of the common warrants issued in this offering; and
- \_\_\_\_\_ shares of common stock issuable upon the exercise of the underwriter warrants issued in this offering.

Unless otherwise indicated, this prospectus reflects and assumes no issuances or exercises of any other outstanding shares, options or warrants after September 11, 2023 and no exercise by the underwriters of their option to purchase additional shares.

## RISK FACTORS

*Investing in our securities involves a high degree of risk. We urge you to carefully consider all of the information contained in this prospectus and other information which may be incorporated by reference in this prospectus as provided under "Information Incorporated by Reference." In particular, you should consider the risk factors below, together with those under the heading "Risk Factors" in our most recent Annual Report on Form 10-K, which is incorporated by reference into this prospectus, as those risk factors are amended or supplemented by our subsequent filings with the SEC. These risks and uncertainties are not the only risks and uncertainties we face. Additional risks and uncertainties not currently known to us, or that we currently view as immaterial, may also impair our business. If any of the risks or uncertainties described below or in our SEC filings or any additional risks and uncertainties actually occur, our business, financial condition, results of operations and cash flow could be materially and adversely affected. As a result, you could lose all or part of your investment.*

### RISKS RELATED TO THIS OFFERING

***If you purchase shares of common stock in this offering, you will experience immediate and substantial dilution in your investment. You will experience further dilution if we issue additional equity or equity-linked securities in the future.***

Because the price per share of our common stock being offered is substantially higher than the as adjusted net tangible book value per share of our common stock, you will suffer immediate and substantial dilution with respect to the net tangible book value of the common stock you purchase in this offering. Based on an assumed combined public offering price of \$ per share of common stock and accompanying common warrant being sold in this offering, and our as adjusted net tangible book value as of June 30, 2023 of \$ per share, if you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of \$ per share with respect to the as adjusted net tangible book value of the common stock. See the section entitled "Dilution" for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering.

If we issue additional shares of common stock, or securities convertible into or exchangeable or exercisable for shares of common stock, our stockholders, including investors who purchase shares of common stock and/or pre-funded warrants and accompanying common warrants in this offering, will experience additional dilution, and any such issuances may result in downward pressure on the price of our common stock. We also cannot assure you that we will be able to sell shares or other securities in any other offering at a price per share that is equal to or greater than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders.

***Future sales of substantial amounts of our common stock or securities convertible into or exchangeable or exercisable for shares of common stock, either by us or by our existing stockholders, or the possibility that such sales could occur, could adversely affect the market price of our common stock.***

Future sales in the public market of shares of our common stock or securities convertible into or exchangeable or exercisable for shares of common stock, including shares referred to in the foregoing risk factor, shares held by our existing stockholders or shares issued upon exercise of our outstanding stock options or warrants, or the perception by the market that these sales could occur, could lower the market price of our common stock or make it difficult for us to raise additional capital.

***There is no public market for the pre-funded warrants or common warrants being offered in this offering.***

There is no established public trading market for the pre-funded warrants or common warrants being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to apply to list the pre-funded warrants or common warrants on any securities exchange or nationally recognized trading system, including The Nasdaq Capital Market. Without an active market, the liquidity of the pre-funded warrants and common warrants will be limited.

***Holders of pre-funded warrants and common warrants purchased in this offering will have no rights as common stockholders until such holders exercise such warrants and acquire our common stock.***

Until holders of pre-funded warrants or common warrants acquire shares of our common stock upon exercise of such warrants, holders of pre-funded warrants or common warrants will have no rights with respect to the shares of our common stock underlying such warrants. Upon exercise of the pre-funded warrants or common warrants, the holders will be entitled to exercise the rights of a common stockholder only as to matters for which the record date occurs after the exercise date.

***We will have broad discretion in the use of our existing cash and cash equivalents, including the proceeds from this offering, and may invest or spend our cash in ways with which you do not agree and in ways that may not increase the value of your investment.***

We will have broad discretion over the use of our cash and cash equivalents, including the proceeds from this offering. You may not agree with our decisions, and our use of cash may not yield any return on your investment. We intend to use the net proceeds from this offering for research and development, including clinical trials, working capital and general corporate purposes. Our failure to apply the net proceeds from this offering effectively could compromise our ability to pursue our growth strategy and we might not be able to yield a significant return, if any, on our investment of these net proceeds. You will not have the opportunity to influence our decisions on how to use our net proceeds from this offering.

## USE OF PROCEEDS

We estimate that we will receive net proceeds of approximately \$ million from the sale of the securities offered by us in this offering, or approximately \$ million if the underwriters exercise their option to purchase additional securities in full, based on an assumed combined public offering price of \$ per share and accompanying common warrant, which was the last reported sales price of our common stock on The Nasdaq Capital Market on , 2023, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, excluding the proceeds, if any, from the exercise of the common warrants issued in this offering.

The foregoing discussion assumes no sale of pre-funded warrants, which if sold, would reduce the number of shares of common stock that we are offering on a one-for-one basis.

We currently intend to use the net proceeds from this offering for research and development, including clinical trials, working capital and general corporate purposes. See “Risk Factors” for a discussion of certain risks that may affect our intended use of the net proceeds from this offering.

Our expected use of net proceeds from this offering represents our current intentions based upon our present plans and business condition. As of the date of this prospectus, we cannot currently allocate specific percentages of the net proceeds that we may use for the purposes specified above, and we cannot predict with certainty all of the particular uses for the net proceeds to be received upon the completion of this offering, or the amounts that we will actually spend on the uses set forth above. The amounts and timing of our actual use of the net proceeds will vary depending on numerous factors, including our ability to obtain additional financing, the progress, cost and results of our preclinical and clinical development programs, and whether we are able to enter into future licensing or collaboration arrangements.

Pending the use of the net proceeds from this offering, we intend to invest the net proceeds in investment-grade, interest-bearing instruments, certificates of deposit or direct or guaranteed obligations of the U.S.

A \$0.50 increase or decrease in the assumed public offering price of \$ per share would increase or decrease the net proceeds to us from this offering by approximately \$ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Similarly, a 0.5 million share increase or decrease in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase or decrease the net proceeds to us by approximately \$ million, based on the assumed public offering price of \$ per share remaining the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

## DILUTION

If you invest in our securities, your ownership interest will be diluted to the extent of the difference between the public offering price per share of our common stock and the as adjusted net tangible book value per share of our common stock immediately after the closing of this offering.

Our historical net tangible book value as of June 30, 2023 was \$3.4 million, or \$1.959 per share of common stock. Our historical net tangible book value is the amount of our total tangible assets less our liabilities. Historical net tangible book value per common share is our historical net tangible book value divided by the number of shares of common stock outstanding as of June 30, 2023.

After giving effect to the sale of shares of common stock and the accompanying common warrants in this offering at an assumed combined public offering price of \$ per share and accompanying common warrant, which was the last reported sale price of our common stock on The Nasdaq Capital Market on , 2023, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, excluding the proceeds, if any, from the exercise of the common warrants issued in this offering, and assuming no sale of pre-funded warrants in this offering, our as adjusted net tangible book value as of June 30, 2023 would be \$ million, or \$ per share of common stock. This amount represents an immediate increase in net tangible book value of \$ per share to our existing stockholders and an immediate dilution of \$ per share to investors participating in this offering. We determine dilution per share to investors participating in this offering by subtracting as adjusted net tangible book value per share after this offering from the assumed combined public offering price per share paid by investors participating in this offering.

The following table illustrates this dilution on a per share basis to new investors:

Assumed combined public offering price per share and accompanying common warrant		\$
Historical net tangible book value per share as of June 30, 2023	\$	1.959
Increase in net tangible book value per share attributable to this offering		
Net tangible book value per share after giving effect to this offering		
Dilution per share to new investors in this offering		\$

Each \$0.50 increase or decrease in the assumed combined public offering price of \$ per share and accompanying common warrant, which was the last reported sale price of our common stock on The Nasdaq Capital Market on , 2023, would increase or decrease the as adjusted net tangible book value per share by \$ per share and the dilution per share to investors participating in this offering by \$ per share, respectively, assuming that the number of shares and/or pre-funded warrants offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

We may also increase or decrease the number of shares we are offering. An increase of 0.5 million in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase the as adjusted net tangible book value per share by approximately \$ and decrease the dilution per share to new investors participating in this offering by approximately \$ , based on an assumed combined public offering price of \$ per share and accompanying common warrant, which was the last reported sale price of our common stock on The Nasdaq Capital Market on , 2023, remaining the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. A reduction of 0.5 million in the number of shares offered by us, as set forth on the cover page of this prospectus, would decrease the as adjusted net tangible book value per share after this offering by approximately \$ and increase the dilution per share to new investors participating in this offering by approximately \$ , based on an assumed combined public offering price of \$ per share and accompanying common warrant, which was the last reported sale price of our common stock on The Nasdaq Capital Market on , 2023, remaining the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters exercise their option to purchase additional shares in full, the as adjusted net tangible book value per share after giving effect to this offering would be \$ per share, which amount represents an immediate increase in the net tangible book value of \$ per share of our common stock to existing stockholders and an immediate dilution in net tangible book value of \$ per share of our common stock to new investors purchasing shares and accompanying common warrants in this offering.

The table and discussion above is based on 1,744,984 shares of common stock outstanding as of June 30, 2023 and excludes:

- 2,326 shares of common stock underlying unvested restricted stock units outstanding as of June 30, 2023;
- 5,516 shares of common stock subject to restricted stock awards granted as of June 30, 2023 but not yet issued;
- 14,480 shares of common stock reserved for future issuance under the 2020 Omnibus Equity Incentive Plan as of June 30, 2023;
- 730,333 shares of common stock issuable upon the exercise of warrants outstanding as of June 30, 2023, with a weighted average exercise price of \$115.60 per share;
- shares of common stock issuable upon the exercise of the pre-funded warrants issued in this offering;
- shares of common stock issuable upon the exercise of the common warrants issued in this offering; and
- shares of common stock issuable upon the exercise of the underwriter warrants issued in this offering.

The information discussed above is illustrative only and will adjust based on the actual public offering price, the actual number of shares and common warrants that we offer in this offering, and other terms of this offering determined at pricing. Except as indicated otherwise, the discussion and table above assume (i) no sale of pre-funded warrants, which, if sold, would reduce the number of shares of common stock that we are offering on a one-for-one basis, (ii) no exercise of the underwriters' option to purchase additional shares and (iii) no exercise of common warrants accompanying the shares of common stock sold in this offering.

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## DESCRIPTION OF CAPITAL STOCK

Our authorized capital stock consists of:

- 125,000,000 shares of common stock, par value \$0.0001 per share; and
- 5,000,000 shares of preferred stock, par value \$0.0001 per share, of which, as of the date of this prospectus, none of which shares have been designated.

As of close of business on September 11, 2023, 1,750,426 shares of common stock were issued and outstanding and no shares of preferred stock were issued and outstanding.

The additional shares of our authorized stock available for issuance may be issued at times and under circumstances so as to have a dilutive effect on earnings per share and on the equity ownership of the holders of our common stock. The ability of our board of directors to issue additional shares of stock could enhance the board's ability to negotiate on behalf of the stockholders in a takeover situation but could also be used by the board to make a change-in-control more difficult, thereby denying stockholders the potential to sell their shares at a premium and entrenching current management. The following description is a summary of the material provisions of our capital stock. You should refer to our Certificate of Incorporation, as amended (the "Certificate of Incorporation") and Amended and Restated Bylaws (the "Bylaws"), both of which are on file with the SEC as exhibits to previous SEC filings, for additional information. The summary below is qualified by provisions of applicable law.

### Common Stock

Holders of our common stock are each entitled to cast one vote for each share held of record on all matters presented to stockholders. Cumulative voting is not allowed; the holders of a majority of our outstanding shares of common stock may elect all directors. Holders of our common stock are entitled to receive such dividends as may be declared by our board out of funds legally available and, in the event of liquidation, to share pro rata in any distribution of our assets after payment of liabilities. Our directors are not obligated to declare a dividend. It is not anticipated that we will pay dividends in the foreseeable future. Holders of our do not have preemptive rights to subscribe to any additional shares we may issue in the future. There are no conversion, redemption, sinking fund or similar provisions regarding the common stock. All outstanding shares of common stock are fully paid and nonassessable.

The rights, preferences and privileges of holders of common stock are subject to the rights of the holders of any outstanding shares of preferred stock.

### Preferred Stock

We are authorized to issue up to 5,000,000 shares of preferred stock, all of which are undesignated. Our board of directors has the authority to issue preferred stock in one or more classes or series and to fix the designations, powers, preferences and rights, and the qualifications, limitations or restrictions thereof, including dividend rights, conversion right, voting rights, terms of redemption, liquidation preferences and the number of shares constituting any class or series, without further vote or action by the stockholders. Although we have no present plans to issue any other shares of preferred stock, the issuance of shares of preferred stock, or the issuance of rights to purchase such shares, could decrease the amount of earnings and assets available for distribution to the holders of common stock, could adversely affect the rights and powers, including voting rights, of the common stock, and could have the effect of delaying, deterring or preventing a change of control of us or an unsolicited acquisition proposal. The preferred stock may provide for an adjustment of the conversion price in the event of an issuance or deemed issuance at a price less than the applicable conversion price, subject to certain exceptions.

If we offer a specific series of preferred stock under this prospectus, we will describe the terms of the preferred stock in the prospectus supplement for such offering and will file a copy of the certificate establishing the terms of the preferred stock with the SEC. To the extent required, this description will include:

- the title and stated value;

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- the number of shares offered, the liquidation preference per share and the purchase price;
  - the dividend rate(s), period(s) and/or payment date(s), or method(s) of calculation for such dividends;
  - whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;
  - the procedures for any auction and remarketing, if any;
  - the provisions for a sinking fund, if any;
  - the provisions for redemption, if applicable;
  - any listing of the preferred stock on any securities exchange or market;
  - whether the preferred stock will be convertible into our common stock, and, if applicable, the conversion price (or how it will be calculated) and conversion period;
  - whether the preferred stock will be exchangeable into debt securities, and, if applicable, the exchange price (or how it will be calculated) and exchange period;
  - voting rights, if any, of the preferred stock;
  - a discussion of any material and/or special U.S. federal income tax considerations applicable to the preferred stock;
  - the relative ranking and preferences of the preferred stock as to dividend rights and rights upon liquidation, dissolution or winding up of our affairs; and
  - any material limitations on issuance of any class or series of preferred stock ranking senior to or on a parity with the series of preferred stock as to dividend rights and rights upon liquidation, dissolution or winding up of our affairs.



## Anti-takeover Effects of Delaware Law and our Certificate of Incorporation and Bylaws

Our Certificate of Incorporation and Bylaws contain provisions that could have the effect of discouraging potential acquisition proposals or tender offers or delaying or preventing a change of control. These provisions are as follows:

- they provide that special meetings of stockholders may be called by the President, the board of directors or at the request by stockholders of record owning at least thirty-three and one-third (33 1/3%) percent of the issued and outstanding voting shares of our common stock;
- they do not include a provision for cumulative voting in the election of directors. Under cumulative voting, a minority stockholder holding a sufficient number of shares may be able to ensure the election of one or more directors. The absence of cumulative voting may have the effect of limiting the ability of minority stockholders to effect changes in our board of directors; and
- they allow us to issue, without stockholder approval, up to 5,000,000 shares of preferred stock that could adversely affect the rights and powers of the holders of our common stock.

We are subject to the provisions of Section 203 of the Delaware General Corporation Law, an anti-takeover law. Subject to certain exceptions, the statute prohibits a publicly held Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a period of three years after the date of the transaction in which the person became an interested stockholder unless:

- prior to such date, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;

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- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least eighty-five percent 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding those shares owned (1) by persons who are directors and also officers and (2) by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or

- on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least sixty-six and two-thirds percent 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

Generally, for purposes of Section 203, a “business combination” includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. An “interested stockholder” is a person who, together with affiliates and associates, owns or, within three (3) years prior to the determination of interested stockholder status, owned fifteen percent (15%) or more of a corporation’s outstanding voting securities.

## Potential Effects of Authorized but Unissued Stock

We have shares of common stock and preferred stock available for future issuance without stockholder approval. We may utilize these additional shares for a variety of corporate purposes, including future public offerings to raise additional capital, to facilitate corporate acquisitions or payment as a dividend on the capital stock.

The existence of unissued and unreserved common stock and preferred stock may enable our board of directors to issue shares to persons friendly to current management or to issue preferred stock with terms that could render more difficult or discourage a third-party attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise, thereby protecting the continuity of our management. In addition, the board of directors has the discretion to determine designations, rights, preferences, privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences of each series of preferred stock, all to the fullest extent permissible under the DGCL and subject to any limitations set forth in our Certificate of Incorporation. The purpose of authorizing the board of directors to issue preferred stock and to determine the rights and preferences applicable to such preferred stock is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of preferred stock, while providing desirable flexibility in connection with possible financings, acquisitions and other corporate purposes, could have the effect of making it more difficult for a third-party to acquire, or could discourage a third-party from acquiring, a majority of our outstanding voting stock.

## Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Securities Transfer Corporation. The transfer agent address is Securities Transfer Corporation, 2901 N Dallas Parkway, Suite 380, Plano, TX 75093, (469) 633-0101.

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## DESCRIPTION OF SECURITIES WE ARE OFFERING

We are offering (i) shares of our common stock or pre-funded warrants to purchase shares of our common stock and (ii) common warrants to purchase up to an aggregate of shares of our common stock. Each share of common stock or pre-funded warrant is being sold together with a common warrant to purchase share of our common stock. The shares of common stock or pre-funded warrants and accompanying common warrants will be issued separately. We are also registering the shares of common stock issuable from time to time upon exercise of the pre-funded warrants and common warrants offered hereby.

### Common Stock

The material terms and provisions of our common stock are described under the caption “Description of Capital Stock” in this prospectus.

### Pre-Funded Warrants

*The following summary of certain terms and provisions of pre-funded warrants that are being offered hereby is not complete and is subject to, and qualified in its entirety by, the provisions of the pre-funded warrant, the form of which will be filed as an exhibit to the registration statement of which this prospectus forms a part. Prospective investors should carefully review the terms and provisions of the form of pre-funded warrant for a complete description of the terms and conditions of the pre-funded warrants.*

*Duration and Exercise Price.* Each pre-funded warrant offered hereby will have an initial exercise price per share equal to \$0.0001. The pre-funded warrants will be immediately exercisable and may be exercised at any time until the pre-funded warrants are exercised in full. The exercise price and number of shares of common stock issuable upon exercise is subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting our common stock and the exercise price. The pre-funded warrants will be issued separately from the accompanying common warrants and may be transferred separately immediately thereafter.

*Exercisability.* The pre-funded warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by

payment in full for the number of shares of our common stock purchased upon such exercise (except in the case of a cashless exercise as discussed below). Purchasers of the pre-funded warrants in this offering may elect to deliver their exercise notice following the pricing of the offering and prior to the issuance of the pre-funded warrants at closing to have their pre-funded warrants exercised immediately upon issuance and receive shares of common stock underlying the pre-funded warrants upon closing of this offering. A holder (together with its affiliates) may not exercise any portion of the pre-funded warrant to the extent that the holder would own more than 4.99% of the outstanding common stock immediately after exercise, except that upon at least 61 days' prior notice from the holder to us, the holder may increase the amount of ownership of outstanding stock after exercising the holder's pre-funded warrants up to 9.99% of the number of shares of our common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the pre-funded warrants. Purchasers of pre-funded warrants in this offering may also elect prior to the issuance of the pre-funded warrants to have the initial exercise limitation set at 9.99% of our outstanding common stock. No fractional shares of common stock will be issued in connection with the exercise of a pre-funded warrant. In lieu of fractional shares, we will round down to the next whole share.

*Cashless Exercise.* If, at the time a holder exercises its pre-funded warrants, a registration statement registering the issuance of the shares of common stock underlying the pre-funded warrants under the Securities Act is not then effective or available, then in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may elect instead to receive upon such exercise (either in whole or in part) the net number of shares of common stock determined according to a formula set forth in the pre-funded warrants.

*Transferability.* Subject to applicable laws, a pre-funded warrant may be transferred at the option of the holder upon surrender of the pre-funded warrant to us together with the appropriate instruments of transfer.

*Exchange Listing.* There is no trading market available for the pre-funded warrants on any securities exchange or nationally recognized trading system. We do not intend to list the pre-funded warrants on any securities exchange or nationally recognized trading system.

*Right as a Stockholder.* Except as otherwise provided in the pre-funded warrants or by virtue of such holder's ownership of shares of our common stock, the holders of the pre-funded warrants do not have the rights or privileges of holders of our common stock, including any voting rights, until they exercise their pre-funded warrants.

*Fundamental Transaction.* In the event of a fundamental transaction, as described in the pre-funded warrants and generally including any reorganization, recapitalization or reclassification of our common stock, the sale, transfer or other disposition of all or substantially all of our properties or assets, our consolidation or merger with or into another person, the acquisition of more than 50% of our outstanding common stock, or any person or group becoming the beneficial owner of 50% of the voting power represented by our outstanding common stock, the holders of the pre-funded warrants will be entitled to receive upon exercise of the pre-funded warrants the kind and amount of securities, cash or other property that the holders would have received had they exercised the pre-funded warrants immediately prior to such fundamental transaction.

## **Common Warrants**

*The following summary of certain terms and provisions of common warrants that are being offered hereby is not complete and is subject to, and qualified in its entirety by, the provisions of the common warrants, the form of which will be filed as an exhibit to the registration statement of which this prospectus forms a part. Prospective investors should carefully review the terms and provisions of the form of common warrants for a complete description of the terms and conditions of the common warrants.*

*Duration and Exercise Price.* Each common warrant offered hereby will have an initial exercise price per share equal to \$ . The common warrants will be immediately exercisable and will expire on the anniversary of the original issuance date. The exercise price and number of shares of common stock issuable upon exercise is subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting our common stock and the exercise price. The common warrants will be issued separately from the common stock (or pre-funded warrants) and may be transferred separately immediately thereafter. A common warrant to purchase share of our common stock will be issued for every share of common stock (or pre-funded warrant to purchase a share of common stock) purchased in this offering.

*Exercisability.* The common warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of our common stock purchased upon such exercise (except in the case of a cashless exercise as discussed below). A holder (together with its affiliates) may not exercise any portion of the common warrant to the extent that the holder would own more than 4.99% of the outstanding common stock immediately after exercise, except that upon at least 61 days' prior notice from the holder to us, the holder may increase the amount of ownership of outstanding stock after exercising the holder's common warrants up to 9.99% of the number of shares of our common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the common warrants. No fractional shares of common stock will be issued in connection with the exercise of a common warrant. In lieu of fractional shares, we will round down to the next whole share.

*Cashless Exercise.* If, at the time a holder exercises its common warrants, a registration statement registering the issuance of the shares of common stock underlying the common warrants under the Securities Act is not then effective or available and an exemption from registration under the Securities Act is not available for the issuance of such shares, then in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may elect instead to receive upon such exercise (either in whole or in part) the net number of shares of common stock determined according to a formula set forth in the common warrants.

*Transferability.* Subject to applicable laws, a common warrant may be transferred at the option of the holder upon surrender of the common warrant to us together with the appropriate instruments of transfer.

*Exchange Listing.* There is no established public trading market for the common warrants, and we do not expect a market to develop. In addition, we do not intend to list the common warrants on any securities exchange or nationally recognized trading system. Without an active trading market, the liquidity of the common warrants will be limited.

*Right as a Stockholder.* Except as otherwise provided in the common warrants or by virtue of such holder's ownership of shares of our common stock, the holders of the common warrants do not have the rights or privileges of holders of our common stock, including any voting rights, until they exercise their common warrants.

*Fundamental Transaction.* In the event of a fundamental transaction, as described in the form of common warrant, and generally including any reorganization, recapitalization or reclassification of our common stock, the sale, transfer or other disposition of all or substantially all of our properties or assets, our consolidation or merger with or into another person, the acquisition of more than 50% of our outstanding common stock, or any person or group becoming the beneficial owner of 50% of the voting power represented by our outstanding common stock, the holders of the common warrants will be entitled to receive upon exercise of the common warrants the kind and amount of securities, cash or other property that the holders would have received had they exercised the common warrants immediately prior to such fundamental transaction.

## **UNDERWRITING**

We entered into an underwriting agreement with Chardan Capital Markets, LLC ("Chardan") and Ladenburg Thalmann & Co. Inc. ("Ladenburg"), as representatives of the several underwriters (the "Representatives"), relating to this offering. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to the underwriters and each of the underwriters has agreed to purchase, severally and not jointly, the number of shares, pre-funded warrants and common warrants set forth opposite its name in the following table:

	Number of Shares of Common Stock	Number of Pre-Funded Warrants	Number of Common Warrants
Chardan Capital Markets, LLC			
Ladenburg Thalmann & Co. Inc.			
<b>TOTAL</b>			

The underwriters have agreed to purchase all of the shares of common stock and/or pre-funded warrants and accompanying common warrants offered by us, other than those covered by the underwriter's option to purchase additional securities from us as described below, if any are purchased. The obligations of the underwriters may be terminated upon the occurrence of certain events specified in the underwriting agreement. Furthermore, pursuant to the underwriting agreement, the obligations of the underwriters are subject to customary conditions, representations and warranties contained in the underwriting agreement, such as receipt by the underwriters of officers' certificates and legal opinions.

The underwriters have advised us that they propose initially to offer the shares of common stock and/or pre-funded warrants and accompanying common warrants to purchase shares of common stock to the public at the public offering price set forth on the cover page of this prospectus and to dealers at a price less a concession not in excess of \$ per share and accompanying common warrant or \$ per pre-funded warrant and accompanying common warrant, based on the combined public offering price per share and accompanying common warrant or pre-funded warrant and accompanying common warrant. After the shares of common stock and/or pre-funded warrants and accompanying common warrants are released for sale to the public, the underwriters may change the offering price, the concession, and other selling terms at various times.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act and to contribute to payments the underwriters may be required to make in respect thereof.

The underwriters are offering the securities in this offering subject to prior sale, when, as and if issued to and accepted by them subject to approval of legal matters by their counsel and other conditions specified in the underwriting agreement. The underwriters reserve the right to withdraw, cancel or modify orders to the public, and to reject orders in whole or in part.

#### Over-Allotment Option

We have granted the underwriters an option, exercisable one or more times, in whole or in part, not later than 30 days from the date of this prospectus, to purchase from us up to an additional shares of common stock and/or additional common warrants to purchase up to shares of common stock, in any combination thereof, at the public offering price per share and public offering price per warrant, respectively, less the underwriting discounts and commissions solely to cover over-allotments, if any.

#### Discounts, Commissions and Reimbursement

The following table provides information regarding the amount of the discounts and commissions to be paid to the underwriters by us. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional securities.

	Per Share and Accompanying Common Warrant	Per Pre-Funded Warrant and Accompanying Common Warrant	Total Without Exercise of Option	Total With Full Exercise of Option
Public offering price	\$	\$	\$	\$
Underwriting discounts and commissions (1)	\$	\$	\$	\$
Proceeds to us, before expenses	\$	\$	\$	\$

(1) We have agreed to pay the underwriters a commission of 7% of the gross proceeds of this offering.

We have agreed to pay all reasonable out-of-pocket expenses of the underwriters relating to the offering, including (a) all filing fees and expenses relating to the registration of the shares of common stock, the pre-funded warrants and the common warrants with the SEC; (b) all fees and expenses relating to the listing of the shares of common stock (including shares issuable upon exercise of the common warrants and any pre-funded warrants on Nasdaq); (c) all fees, expenses and disbursements relating to the registration or qualification of the the shares of common stock, the pre-funded warrants and the common warrants offered hereby under the "blue sky" securities laws of such states and other jurisdictions as the Representatives may reasonably designate (including, without limitation, all filing and registration fees, and the reasonable fees and disbursements of the Company's "blue sky" counsel, which will be counsel to the underwriters) unless such registrations or qualifications are not required in connection with the Offering; (d) all fees, expenses and disbursements relating to the registration, qualification or exemption of the the shares of common stock, the pre-funded warrants and the common warrants offered hereby under the securities laws of such foreign jurisdictions as the Representatives may reasonably designate; (e) the costs of all mailing and printing of the offering documents (including the Underwriting Agreement, any Blue Sky Surveys and, if appropriate, any Agreement Among Underwriters, Selected Dealers' Agreement, Underwriters' Questionnaire and Power of Attorney), registration statements, prospectuses and all amendments, supplements and exhibits thereto and as many preliminary and final prospectuses as the Representatives may reasonably deem necessary; (f) transfer and/or stamp taxes, if any, payable upon the transfer of Company's securities from the Company to the underwriters; (g) the fees and expenses of our accountants; (h) all filing fees and communication expenses associated with the review of the offering by FINRA; (i) the expenses relating to "road show" marketing trips; (j) the fees of legal counsel to the underwriters, in an amount not to exceed \$65,000.

We have also agreed to pay the Representatives at closing a non-accountable expense allowance equal to 1.0% of the gross proceeds received by us from the sale of the shares, pre-funded warrants and common warrants.

We estimate that our total expenses of the offering, excluding the estimated underwriting discounts and commissions, will be approximately \$ , which includes the fees and expenses for which we have agreed to reimburse the underwriters, provided that any such fees and expenses will not exceed an aggregate of \$75,000.

#### Underwriter Warrants

We have agreed to issue to the underwriters warrants (the "underwriter warrants") to purchase up to shares of common stock (representing 3% of the aggregate number of shares sold in this offering, including upon any exercise of the underwriters' option to purchase additional shares of common stock, and including the number of shares of common stock underlying the pre-funded warrants), at an exercise price of \$ per share (representing 125% of the price at which a share of common stock and accompanying common warrant are sold to the public in this offering). The underwriter warrants will be exercisable immediately and for five years from the date of commencement of sales in this offering. The issuance of the underwriter warrants and the shares issuable upon exercise of the underwriter warrants are registered on the registration statement of which this prospectus forms a part. The underwriter warrants shall not be redeemable. The shares of common stock issuable upon exercise of the underwriter warrants may not be sold, transferred, assigned, pledged, or hypothecated, or be the subject of any hedging, short sale, derivative, put, or call transaction that would result in the effective economic disposition of the securities by any person for a period of 180 days following the commencement of sales under the registration statement of which this prospectus forms a part, except that they may be assigned, in whole or in part, to any officer or partner of the underwriters. The underwriter warrants may be exercised as to all or a lesser number of shares of common stock for a period of five (5) years after the commencement of sales under the registration statement of which this prospectus forms a part, will provide for

cashless exercise in the event an effective registration statement for the shares of common stock issuable upon exercise of the underwriter warrants is not available. The underwriter warrants shall further provide for anti-dilution protection (adjustment in the number and price of such warrants and the shares issuable upon exercise of such warrants) resulting from corporate events (which would include dividends, reorganizations, mergers, etc.) when the public stockholders have been proportionally affected and otherwise in compliance with FINRA Rule 5110(f)(2)(G)(vi).

### **Lock-Up Agreements**

We have agreed with the underwriters that we will not, without the prior written consent of the Representatives, for a period of 90 days after the date of this prospectus: (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any classes of our stocks or any securities convertible into or exercisable or exchangeable for any classes of our stocks, (ii) file or caused to be filed any registration statement with the SEC, relating to the offering of any classes of our stocks or any securities convertible into or exercisable or exchangeable for any classes of our stocks, (iii) complete any offering of debt securities, other than entering into a line of credit with a traditional bank, or (iv) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of any classes of our stocks, whether any such transaction described in clause (i), (ii), (iii) or (iv) above is to be settled by delivery of any classes of our stocks or such other securities, in cash or otherwise.

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### **Tail Period**

In the event that this offering is not consummated as contemplated herein, the underwriter will be entitled to receive a cash fee equal to (a) seven percent (7.0%) of the gross proceeds received by us from any financing or capital raising transaction and (b) warrants to purchase common stock equal to three percent (3%) of the number of shares of common stock sold in a subsequent offering, to the extent that such proceeds are provided to us by any investor directly introduced by the underwriters to us during the period beginning on August 28, 2023 and ending on the earlier of the closing of the Offering or the earlier termination of the engagement (the "Engagement Period") and the transaction is consummated at any time during the Engagement Period or within the one-month month period following the Engagement Period.

### **Discretionary Accounts**

The underwriters do not intend to confirm sales of the shares of common stock, the pre-funded warrants and the common warrants offered hereby to any accounts over which they have discretionary authority.

### **Electronic Offer, Sale, and Distribution of Securities**

A prospectus in electronic format may be made available on the websites maintained by the underwriter. The prospectus in electronic format will be identical to the paper version of such prospectus. The underwriter may agree to allocate a number of shares to underwriter and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the underwriter and selling group members that will make internet distributions on the same basis as other allocations. Other than the prospectus in electronic format, the information on these websites is not part of, nor incorporated by reference into, this prospectus or the registration statement of which this prospectus forms a part, has not been approved or endorsed by us, and should not be relied upon by investors.

### **Listing**

Our common stock is listed on The Nasdaq Capital Market under the symbol "SONN." On September 18, 2023, the last reported sale price of our common stock on The Nasdaq Capital Market was \$[ ] per share. There is no established public trading market for the pre-funded warrants, and we do not expect a market to develop. In addition, we do not intend to apply for a listing of the pre-funded warrants on any national securities exchange. Without an active trading market, the liquidity of the pre-funded warrants will be limited.

### **Stabilization**

In connection with this offering, the underwriters may engage in stabilizing transactions, over-allotment transactions, syndicate-covering transactions, penalty bids, and purchases to cover positions created by short sales.

- Stabilizing transactions permit bids to purchase securities so long as the stabilizing bids do not exceed a specified maximum and are engaged in for the purpose of preventing or retarding a decline in the market price of the securities while the offering is in progress.
- Over-allotment transactions involve sales by the underwriter of securities in excess of the number of securities the underwriter is obligated to purchase. This creates a syndicate short position which may be either a covered short position or a naked short position. In a covered short position, the number of securities over-allotted by the underwriter is not greater than the number of securities that they may purchase in the over-allotment option. In a naked short position, the number of securities involved is greater than the number of securities in the over-allotment option. The underwriter may close out any short position by exercising their over-allotment option and/or purchasing securities in the open market.
- Syndicate covering transactions involve purchases of securities in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of securities to close out the short position, the underwriter will consider, among other things, the price of securities available for purchase in the open market as compared with the price at which they may purchase securities through exercise of the over-allotment option. If the underwriter sells more securities than could be covered by exercise of the over-allotment option and, therefore, have a naked short position, the position can be closed out only by buying securities in the open market. A naked short position is more likely to be created if the underwriter is concerned that after pricing there could be downward pressure on the price of the securities in the open market that could adversely affect investors who purchase in the offering.
- Penalty bids permit the underwriter to reclaim a selling concession from a syndicate member when the securities originally sold by that syndicate member are purchased in stabilizing or syndicate covering transactions to cover syndicate short positions.

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These stabilizing transactions, over-allotment transactions, syndicate covering transactions, and penalty bids may have the effect of raising or maintaining the market price of our securities or preventing or retarding a decline in the market price of our securities. As a result, the price of our securities in the open market may be higher than it would otherwise be in the absence of these transactions. Neither we nor the underwriter make any representation or prediction as to the effect that the transactions described above may have on the price of our securities. These transactions may be affected on the Nasdaq Stock Market, in the over-the-counter market or otherwise and, if commenced, may be discontinued at any time.

### **Passive Market Making**

In connection with this offering, the underwriters and selling group members may engage in passive market making transactions in our securities on the Nasdaq Stock Market in accordance with Rule 103 of Regulation M under the Exchange Act, during a period before the commencement of offers or sales of the shares and extending through

the completion of the distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. However, if all independent bids are lowered below the passive market maker's bid, then that bid must then be lowered when specified purchase limits are exceeded.

### Certain Relationships

The underwriters and their affiliates have provided, or may in the future, from time to time, engage in transactions with and perform services for us in the ordinary course of their business for which they may receive customary fees and reimbursement of expenses. In the ordinary course of their various business activities, the underwriters and their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments of our Company. The underwriters and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

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### INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to "incorporate by reference" information into this document, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is an important part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information.

We incorporate by reference the documents listed below and any future filings made with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act made subsequent to the date of this prospectus until the termination of the offering of the securities described in this prospectus (other than information in such filings that was "furnished," under applicable SEC rules, rather than "filed"). We incorporate by reference the following documents or information that we have filed with the SEC:

- our Annual Report on Form 10-K for the year ended [September 30, 2022](#), filed with the SEC on December 15, 2022;
- our Quarterly Reports on Form 10-Q for the fiscal quarters ended [December 31, 2022](#), [March 31, 2023](#), and [June 30, 2023](#), filed with the SEC on February 13, 2023, May 10, 2023, and August 14, 2023, respectively; and
- our Current Reports on Form 8-K filed with the SEC on [October 4, 2022](#), [October 17, 2022](#), [October 31, 2022](#), [November 2, 2022](#), [November 9, 2022](#), [January 9, 2023](#), [January 19, 2023](#), [February 13, 2023](#), [March 24, 2023](#), [April 18, 2023](#), [June 30, 2023](#), [July 21, 2023](#), [August 22, 2023](#), [August 31, 2023](#) and [September 1, 2023](#) (other than any portions thereof deemed furnished and not filed).

Any statement contained in this prospectus or contained in a document incorporated or deemed to be incorporated by reference into this prospectus will be deemed to be modified or superseded to the extent that a statement contained in this prospectus or any subsequently filed supplement to this prospectus, or document deemed to be incorporated by reference into this prospectus, modifies or supersedes such statement. Any statements so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

You may request a copy of these filings at no cost, by writing or telephoning us at the following address:

Sonnet BioTherapeutics Holdings, Inc.  
Attn: Pankaj Mohan, Ph.D., CEO and Chairman  
100 Overlook Center, Suite 102  
Princeton, New Jersey 08540  
(609) 375-2227

You may also access these filings on our website at [www.sonnetbio.com](http://www.sonnetbio.com). You should rely only on the information incorporated by reference or provided in this prospectus. We have not authorized anyone else to provide different or additional information on our behalf. An offer of these securities is not being made in any jurisdiction where the offer or sale is not permitted. You should not assume that the information in this prospectus is accurate as of any date other than the date of those respective documents.

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### WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of a registration statement we filed with the SEC. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities we are offering under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. You should rely only on the information contained in this prospectus or incorporated by reference into this prospectus. We have not authorized anyone else to provide you with different information. We are not making an offer of these securities in any jurisdiction where the offer is not permitted. You should assume that the information contained in this prospectus, or any document incorporated by reference in this prospectus, is accurate only as of the date of those respective documents, regardless of the time of delivery of this prospectus or any sale of our securities.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public from commercial document retrieval services and over the Internet at the SEC's website at <http://www.sec.gov>.

We maintain a website at [www.sonnetbio.com](http://www.sonnetbio.com). You may access our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The information contained in, or that can be accessed through, our website is not incorporated by reference into, and is not part of, this prospectus.

### LEGAL MATTERS

The validity of the common stock and certain other legal matters will be passed upon for us by Lowenstein Sandler LLP, New York, New York. Lucosky Brookman LLP, Woodbridge, New Jersey, has acted as counsel to the underwriters in connection with this offering.

### EXPERTS

The consolidated financial statements of Sonnet BioTherapeutics Holdings, Inc. as of September 30, 2022 and 2021 and for the years then ended have been incorporated by reference herein in reliance upon the report of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing. The audit report covering the September 30, 2022 consolidated financial statements contains an explanatory paragraph that states that Sonnet BioTherapeutics Holdings, Inc. has incurred recurring losses and negative cash flows from operations since inception and will require

substantial additional financing to continue to fund its research and development activities that raise substantial doubt about its ability to continue as a going concern. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.



**Up to Shares of Common Stock**  
**Pre-Funded Warrants to Purchase up to Shares of Common Stock**  
**Common Warrants to Purchase up to Shares of Common Stock**  
**Underwriter Warrants to Purchase up to Shares of Common Stock**  
**Shares of Common Stock issuable upon exercise of the Pre-Funded Warrants and Common Warrants**  
**Shares of Common Stock issuable upon exercise of the Underwriter Warrants**

**PROSPECTUS**

*Joint Book-Running Managers*

**Chardan**

**Ladenburg Thalmann**

The date of this prospectus is \_\_\_\_\_, 2023.

**PART II**

**INFORMATION NOT REQUIRED IN PROSPECTUS**

**Item 13. Other Expenses of Issuance and Distribution.**

The following table sets forth the costs and expenses, other than underwriting discounts and commissions, payable by us in connection with the sale and distribution of the securities being registered. All of the amounts shown are estimates, except for the SEC registration fee and the FINRA filing fee:

	<b>Amount to be paid</b>
SEC registration fee	\$ 2,300
FINRA filing fee	*
Legal fees and expenses	*
Accounting fees and expenses	*
Miscellaneous	*
Total expenses	\$ *

\* To be provided by amendment.

**Item 14. Indemnification of Directors and Officers.**

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

Article X of our Certificate of Incorporation states that to the fullest extent permitted by the DGCL, a director of the corporation shall not be liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director.

Under Article VI of our Bylaws, any director, officer, employee or agent of the Company who was or is made or is threatened to be made a party or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (a "Proceeding") by reason of the fact that such director, officer, employee or agent or a person for whom such director, officer, employee or agent is the legal representative, is or was a director or officer of the Company or, while serving as a director, officer, employee or agent of the Company, is or was serving at the request of the Company as a director, officer, employee or agent of another corporation or of a partnership, joint venture, trust, enterprise or non-profit entity, including service with respect to employee benefit plans (an "Indemnification Covered Person"), against all liability and loss suffered and expenses (including attorneys' fees, judgments, fines ERISA excise taxes or penalties and amounts paid in settlement) reasonably incurred by such person in connection with any such Proceeding.

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

#### **Item 15. Recent Sales of Unregistered Securities.**

In the three years preceding the filing of this registration statement, the Company made sales of the following unregistered securities:

In August 2022, we entered into a securities purchase agreement (the “Preferred SPA”) with several accredited investors for the issuance and sale of (i) an aggregate of 22,275 shares of our Series 3 Convertible Preferred Stock, stated value \$100 per share, (ii) 225 shares of our Series 4 Convertible Preferred Stock, stated value \$100 per share, and (iii) Series 3 warrants to purchase up to 12,551 shares of our common stock in a private placement for aggregate gross proceeds of \$2.3 million, with \$0.1 million of issuance costs for net proceeds of \$2.1 million. The shares of Series 3 Convertible Preferred Stock were convertible into an aggregate of 24,852 shares of our common stock and the shares of Series 4 Convertible Preferred Stock were convertible into an aggregate of 251 shares of our common stock, in each case, at a conversion price of \$89.628 per share. The Series 3 warrants have an exercise price of \$89.628 per share, are exercisable commencing six months after issuance, and will expire five years from the issuance date. In September 2022, all shares of preferred stock issued in connection with the Preferred SPA were converted into shares of common stock.

Pursuant to a Securities Purchase Agreement (the “Securities Purchase Agreement”) dated February 7, 2020, by and among the Company, Sonnet BioTherapeutics, Inc. (“Sonnet Sub”) and certain investors, for an aggregate purchase price of approximately \$19.0 million (comprised of (I) a \$4 million credit from Sonnet Sub and the Company to Chardan Capital Markets, LLC (“Chardan”), in lieu of certain transaction fees otherwise owed to Chardan, and (II) \$15 million in cash from the other Investors (the “Purchase Price”), (i) Sonnet Sub issued and sold to the investors shares of Sonnet Sub’s common stock (the “Initial Shares”) which converted in the merger among the Company and Sonnet Sub on April 1, 2020 into an aggregate of approximately 6,987 shares of the Company’s common stock, (ii) the Company issued to the investors Series A Warrants (the “Series A Warrants”) to purchase an aggregate of 10,714 shares of common stock at an exercise price of \$1,662.54 per share and (iii) the Company issued to the investors Series B Warrants (the “Series B Warrants”) to purchase an aggregate of 7,297 shares of common stock at an exercise price of \$0.0308 per share. The Company issued the warrants to the investors in reliance on the exemption from registration provided for under Section 4(a)(2) of the Securities Act. The Company relied on this exemption from registration for private placements based in part on the representations made by the investors, including the representations with respect to each investor’s status as an “accredited investor,” as such term is defined in Rule 501(a) of the Securities Act, and the Investors’ investment intent.

On August 3, 2020, the Company entered into Warrant Exercise and Omnibus Amendment Agreements (the “Exercise Agreements”) with the holders of the Series A Warrants and Series B Warrants (the “Holders”). Pursuant to the Exercise Agreements, in order to induce the Holders to exercise the Series A Warrants for cash, pursuant to the terms of the Series A Warrants, the Company agreed to reduce the exercise price of the Series A Warrants from \$1,662.54 to \$982.52 per share. The Holders and the Company agreed that the Holders would exercise all of their Series A Warrants for gross proceeds before expenses of approximately \$10.5 million. In addition, the Exercise Agreements also provide for the issuance to the Holders, Series C Warrants (the “Series C Warrants”) to purchase 3.4331 shares of common stock (the “Series C Warrant Shares”) for each share of common stock issued upon such exercise of the Series A Warrants pursuant to the Exercise Agreements or an aggregate of 36,783 Series C Warrants. The terms of the Series C Warrants are substantially similar to those of the Series A Warrants, except that the Series C Warrants have an exercise price of \$982.52, do not contain subsequent issuance price protection, were not exercisable until the date that was six months from the date of issuance of each Series C Warrant and will expire on October 16, 2025. The Exercise Agreements provided for the amendment to each Holder’s Series B Warrants to (i) remove the provisions providing for the rest of the number of shares of common stock underlying the Series B Warrants and (ii) set the aggregate number of shares of common stock underlying all of the Series B Warrants at 14,715, which results from an increase of 7,418 shares pursuant to the terms of the Exercise Agreements. The Company issued the Series B Warrants, the Series C Warrants and the shares of common stock underlying the Series A Warrants, the Series B Warrants and the Series C Warrants to the Holders in reliance on the exemption from registration provided for under Section 4(a)(2) of the Securities Act. The Company relied on this exemption from registration for private placements based in part on the representations made by the Holders, including the representations with respect to each Holder’s status as an “accredited investor,” as such term is defined in Rule 501(a) of the Securities Act, and each Holder’s investment intent.

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In connection with a registered direct offering of our shares of common stock and pre-funded warrants to purchase shares of common stock, on June 28, 2023, we entered into a securities purchase agreement with certain institutional investors (the “Purchasers”), pursuant to which, among other things, we sold to the Purchasers warrants (the “Private Warrants”) to purchase up to 227,272 shares of common stock in a private placement. No separate consideration was paid for the issuance of the Private Warrants. In addition, the Company issued to Chardan or its designees, warrants (“PA Warrants” and together with the Private Warrants, the “Warrants”) to purchase up to 6,818 shares of common stock (the “PA Warrant Shares”). The Warrants will be exercisable as of December 30, 2023. The Warrants have a term of exercise equal to five years from the date of the securities purchase agreement and have an exercise price equal to \$14.8478 per share.

The Warrants and the shares of common stock issuable upon exercise of the Warrants were offered pursuant to an exemption from the registration requirement of the Securities Act provided in Section 4(a)(2) of the Securities Act and/or Rule 506 promulgated under Regulation D of the Securities Act.

#### **Item 16. Exhibits.**

The list of exhibits following the signature page of this registration statement is incorporated by reference herein.

#### **Item 17. Undertakings.**

(1) The undersigned registrant hereby undertakes:

- (a) 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 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;
- (b) 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.
- (c) 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.

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- (d) That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned registrant hereby undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
- (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
  - (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
  - (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
  - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (2) 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.
- (3) The undersigned registrant hereby undertakes that:
- (a) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance on Rule 430A and contained in a form of prospectus filed by the undersigned registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective; and
  - (b) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus 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.
- (4) 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.

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## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Princeton, State of New Jersey, on September 19, 2023.

### SONNET BIOTHERAPEUTICS HOLDINGS, INC.

By: /s/ Pankaj Mohan  
Pankaj Mohan  
Chief Executive Officer

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Pankaj Mohan and Jay Cross, and each of them, as his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this registration statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ Pankaj Mohan</u> Pankaj Mohan	Chief Executive Officer and Chairman (Principal Executive Officer)	September 19, 2023
<u>/s/ Jay Cross</u> Jay Cross	Chief Financial Officer (Principal Financial and Accounting Officer)	September 19, 2023
<u>/s/ Nailesh Bhatt</u> Nailesh Bhatt	Director	September 19, 2023
<u>/s/ Albert Dyrness</u> Albert Dyrness	Director	September 19, 2023
<u>/s/ Donald Griffith</u> Donald Griffith	Director	September 19, 2023
<u>/s/ Raghu Rao</u> Raghu Rao	Director	September 19, 2023
<u>/s/ Lori McNeill</u>	Director	September 19, 2023



## EXHIBIT INDEX

Exhibit No.	Description
1.1*	Form of Underwriting Agreement
2.1#	<a href="#">Agreement and Plan of Merger, dated October 10, 2019, by and among the Company, Sonnet Sub. and Merger Sub (filed as Exhibit 2.1 to the Company's Current Report on Form 8-K as filed on October 11, 2019, and incorporated herein by reference).</a>
2.2	<a href="#">Amendment No. 1 to Agreement and Plan of Merger, dated February 7, 2020, by and among the Company, Sonnet Sub and Merger Sub (filed as Exhibit 2.1 to the Company's Current Report on Form 8-K as filed on February 7, 2020, and incorporated herein by reference).</a>
2.3#	<a href="#">Share Exchange Agreement, between Sonnet BioTherapeutics, Inc. and Relief Therapeutics Holding SA, dated August 9, 2019 (incorporated by reference to Exhibit 2.10 to the Company's Registration Statement on Form S-4 filed with the SEC on November 27, 2019).</a>
3.1	<a href="#">Certificate of Incorporation, as amended, of Sonnet BioTherapeutics Holdings, Inc. (incorporated by reference to Exhibit 3.1 to our Annual Report on Form 10-K, filed with the SEC on December 17, 2020).</a>
3.2	<a href="#">Amended and Restated Bylaws of Sonnet BioTherapeutics Holdings, Inc. (incorporated by reference to Exhibit 3.3 to our Current Report on Form 8-K, filed with the SEC on August 15, 2022).</a>
4.1	<a href="#">Form of Common Stock Certificate (Incorporated by reference to Exhibit 4.1 to our Registration Statement on Form S-1 (Registration No. 333-178307), filed with the SEC on December 2, 2011).</a>
4.2	<a href="#">Form of Warrant dated May 4, 2017 (incorporated by reference to Exhibit 4.2 to Current Report on Form 8-K, filed with the SEC on May 5, 2017).</a>
4.3	<a href="#">Spin-Off Entity Warrant, dated April 1, 2020 (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed with the SEC on April 3, 2020).</a>
4.4	<a href="#">Form of Sonnet BioTherapeutics, Inc. Converted Warrant (incorporated by reference to Exhibit 4.2 to the Company's Quarterly Report on Form 10-Q filed with the SEC on August 14, 2020).</a>
4.5	<a href="#">Form of Series A/B Warrants (incorporated by reference to Exhibit 4.16 to the Company's Registration Statement on Form S-4/A filed with the SEC on February 7, 2020).</a>
4.6	<a href="#">Form of Series C Warrant (incorporated by reference to Exhibit 4.1 to our Current Report on Form 8-K filed with the SEC on August 4, 2020).</a>
4.7	<a href="#">Registration Rights Agreement, dated February 7, 2020, by and between the Company and certain investors named therein (incorporated by reference to Exhibit 4.17 to the Company's Registration Statement on Form S-4/A filed with the SEC on February 7, 2020).</a>
4.8	<a href="#">Form of Pre-Funded Warrant (Incorporated by reference to Exhibit 4.8 to our Registration Statement on Form S-1 (Registration No. 333-269307), filed with the SEC on February 6, 2023).</a>
4.9	<a href="#">Form of Underwriter Warrant (Incorporated by reference to Exhibit 4.9 to our Registration Statement on Form S-1 (Registration No. 333-269307), filed with the SEC on February 6, 2023).</a>
4.10	<a href="#">Form of Common Warrant (Incorporated by reference to Exhibit 4.10 to our Registration Statement on Form S-1 (Registration No. 333-269307), filed with the SEC on February 6, 2023).</a>
4.11	<a href="#">Form of Pre-Funded Warrant dated June 30, 2023 (incorporated by reference to Exhibit 4.1 to Current Report on Form 8-K, filed with the SEC on June 30, 2023).</a>
4.12	<a href="#">Form of Warrant dated June 30, 2023 (incorporated by reference to Exhibit 4.2 to Current Report on Form 8-K, filed with the SEC on June 30, 2023).</a>
4.13	<a href="#">Form of Placement Agent Warrant dated June 30, 2023 (incorporated by reference to Exhibit 4.3 to Current Report on Form 8-K, filed with the SEC on June 30, 2023).</a>
4.14*	Form of Pre-Funded Warrant.
4.15*	Form of Underwriter Warrant.
4.16*	Form of Common Warrant.
5.1*	Opinion of Lowenstein Sandler LLP.
10.1	<a href="#">Common Stock Purchase Agreement, between GEM Global Yield Fund LLC SCS and Sonnet BioTherapeutics, Inc., dated August 6, 2019 (incorporated by reference to Exhibit 10.54 to the Company's Registration Statement on Form S-4 filed with the SEC on November 27, 2019).</a>
10.2	<a href="#">Amendment to Common Stock Purchase Agreement, between GEM Global Yield Fund LLC SCS and Sonnet BioTherapeutics, Inc., dated September 25, 2019 (incorporated by reference to Exhibit 10.55 to the Company's Registration Statement on Form S-4 filed with the SEC on November 27, 2019).</a>
10.3	<a href="#">Side Letter and Amendment No. 2 to Common Stock Purchase Agreement, between GEM Global Yield Fund LLC SCS, Sonnet BioTherapeutics, Inc. and Chanticleer Holdings, Inc., dated February 7, 2020 (incorporated by reference to Exhibit 10.60 to the Company's Registration Statement on Form S-4 filed with the SEC on February 7, 2020).</a>

- 10.4 [Employment Agreement, between Pankaj Mohan and Sonnet BioTherapeutics, Inc., dated December 31, 2018 \(incorporated by reference to Exhibit 10.56 to the Company's Registration Statement on Form S-4 filed with the SEC on February 7, 2020\).](#) †
- 10.5 [Employment Agreement, between John Cini and Sonnet BioTherapeutics, Inc., dated January 10, 2020 \(incorporated by reference to Exhibit 10.58 to the Company's Registration Statement on Form S-4 filed with the SEC on February 7, 2020\).](#) †
- 10.6 [Employment Agreement, between Jay Cross and Sonnet BioTherapeutics, Inc., dated January 10, 2020 \(incorporated by reference to Exhibit 10.57 to the Company's Registration Statement on Form S-4 filed with the SEC on February 7, 2020\).](#) †
- 10.7 [Employment Agreement, between Susan Dexter and the Company, dated April 1, 2020 \(incorporated by reference to Exhibit 10.7 to the Company's Current Report on Form 8-K filed with the SEC on April 3, 2020\).](#) †
- 10.8 [Offer Letter, between Donald Griffith and Sonnet BioTherapeutics, Inc., dated January 1, 2019 \(incorporated by reference to Exhibit 10.59 to the Company's Registration Statement on Form S-4 filed with the SEC on February 7, 2020\).](#) †
- 10.9 [Sonnet BioTherapeutics Holdings, Inc. 2020 Omnibus Equity Incentive Plan \(incorporated by reference to Exhibit 4.2 to the Company's Registration Statement on Form S-8 filed with the SEC on May 20, 2020\).](#) †
- 10.10 [Form of Restricted Stock Unit Award \(incorporated by reference to Exhibit 10.1 to our Current Report on Form 8-K \(file No. 001-35570\), filed with the SEC on July 9, 2020\).](#) †
- 10.11\*\*\* [License Agreement, between Ares Trading SA and Relief Therapeutics SA, dated August 28, 2015 \(incorporated by reference to Exhibit 10.51 to the Company's Registration Statement on Form S-4 filed with the SEC on February 7, 2020\).](#)
- 10.12\*\*\* [Discovery Collaboration Agreement, between XOMA \(US\) LLC and Oncobiologics, Inc., dated July 23, 2012 \(incorporated by reference to Exhibit 10.52 to the Company's Registration Statement on Form S-4 filed with the SEC on February 7, 2020\).](#)
- 10.13\*\*\* [Amendment of Discovery Collaboration Agreement, between XOMA \(US\) LLC and Sonnet BioTherapeutics, Inc., dated May 7, 2019 \(incorporated by reference to Exhibit 10.53 to the Company's Registration Statement on Form S-4 filed with the SEC on February 7, 2020\).](#)

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- 10.14 [Securities Purchase Agreement, dated as of February 7, 2020, by and among Chanticleer Holdings, Inc., Sonnet BioTherapeutics, Inc. and the investors party thereto \(incorporated by reference to Exhibit 10.64 to the Company's Registration Statement on Form S-4 filed with the SEC on February 7, 2020\).](#)
- 10.15 [Form of Warrant Exercise and Omnibus Amendment Agreement, dated as of August 3, 2020, by and between Sonnet BioTherapeutics Holdings, Inc. and the Holders \(incorporated by reference to Exhibit 10.1 to our Current Report on Form 8-K \(File No. 001-35570\), filed with the SEC on August 4, 2020\).](#)
- 10.16 [Assignment and Assumption Employment Agreements by Sonnet BioTherapeutics Holdings, Inc., effective April 1, 2020 \(incorporated by reference to Exhibit 10.16 to our Annual Report on Form 10-K, filed with the SEC on December 17, 2020\).](#)
- 10.17 [Amendment No. 1 to Executive Employment Agreement, between Pankaj Mohan and the Company, dated November 23, 2020 \(incorporated by reference to Exhibit 10.17 to our Annual Report on Form 10-K, filed with the SEC on December 17, 2020\).](#)
- 10.18 [Amendment No. 1 to Executive Employment Agreement, between John Cini and the Company, dated November 23, 2020 \(incorporated by reference to Exhibit 10.18 to our Annual Report on Form 10-K, filed with the SEC on December 17, 2020\).](#)
- 10.19 [Form of Indemnification Agreement \(incorporated by reference to Exhibit 10.19 to our Annual Report on Form 10-K, filed with the SEC on December 17, 2020\).](#)
- 10.20 [At-The-Market Sales Agreement, dated February 5, 2020, between the Company and BTIG \(incorporated by reference to Exhibit 1.1 to our Current Report on Form 8-K \(File No. 001-35570\), filed with the SEC on February 5, 2021\).](#)
- 10.21 [License Agreement, dated May 2, 2021, between Sonnet BioTherapeutics, Inc. and New Life Therapeutics PTE, LTD \(incorporated by reference to Exhibit 10.1 to our Quarterly Report on Form 10-Q, filed with the SEC on May 17, 2021\).](#)
- 10.22 [First Amendment to License Agreement, dated June 11, 2021, between Sonnet BioTherapeutics, Inc. and New Life Therapeutics PTE, LTD \(incorporated by reference to Exhibit 10.22 to our Annual Report on Form 10-K, filed with the SEC on December 17, 2021\).](#)
- 10.23 [Second Amendment to License Agreement, dated July 7, 2021, among Sonnet Biotherapeutics CH SA, Sonnet BioTherapeutics, Inc. and New Life Therapeutics PTE, Ltd. \(incorporated by reference to Exhibit 10.23 to our Annual Report on Form 10-K, filed with the SEC on December 17, 2021\).](#)
- 10.24 [Amendment to License Agreement and Settlement, dated November 1, 2021, between ARES TRADING SA and Sonnet BioTherapeutics CH SA \(incorporated by reference to Exhibit 10.24 to our Annual Report on Form 10-K, filed with the SEC on December 17, 2021\).](#)
- 10.25 [At-The-Market Sales Agreement, dated August 15, 2022, between the Company and BTIG \(incorporated by reference to Exhibit 1.1 to our Current Report on Form 8-K, filed with the SEC on August 15, 2022\).](#)
- 21.1 [Subsidiaries of the Company \(incorporated by reference to Exhibit 21.1 to our Annual Report on Form 10-K, filed with the SEC on December 17, 2020\).](#)
- 23.1\*\* [Consent of KPMG LLP](#)
- 23.2\* Consent of Lowenstein Sandler LLP (included as part of Exhibit 5.1).
- 24.1\*\* [Power of attorney \(included in the signature page to this registration statement\)](#)
- 107\*\* [Filing Fee Table](#)

\* To be filed by amendment.

\*\* Filed herewith.

\*\*\* Filed herewith; portions of the exhibit have been omitted pursuant to Item 601(b)(10) of Regulation S-K. A copy of any omitted portions will be furnished to the Securities and Exchange Commission upon request.

# The schedules and exhibits to this agreement have been omitted pursuant to Item 601(b)(2) of Regulation S-K. A copy of any omitted schedule and/or exhibit will be furnished to the Securities and Exchange Commission upon request.

**Consent of Independent Registered Public Accounting Firm**

We consent to the use of our report dated December 15, 2022, with respect to the consolidated financial statements of Sonnet BioTherapeutics Holdings, Inc., incorporated herein by reference, and to the reference to our firm under the heading “Experts” in the prospectus.

*/s/ KPMG LLP*

Philadelphia, Pennsylvania  
September 19, 2023

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## Calculation of Filing Fee Tables

Form S-1  
(Form Type)

Sonnet BioTherapeutics Holdings, 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	Proposed Maximum Offering Price Per Share	Maximum Aggregate Offering Price(1)	Fee Rate	Amount of Registration Fee
Fees to Be Paid	Equity	Common Stock, \$0.0001 par value per share <sup>(2)</sup>	457(o)			\$ 10,000,000	0.0001102	1,102.00
Fees to Be Paid	Equity	Pre-Funded Warrants <sup>(3)</sup>	457(g)					(4)
Fees to Be Paid	Equity	Common Warrants <sup>(3)</sup>	457(g)					(4)
Fees to Be Paid	Equity	Underwriter Warrants	457(g)					(4)
Fees to Be Paid	Equity	Common Stock underlying Pre-Funded Warrants <sup>(2)(3)</sup>	457(o)			(3)	0.0001102	(3)
Fees to Be Paid	Equity	Common Stock underlying Common Warrants <sup>(2)</sup>	457(o)			\$ 10,000,000	0.0001102	1,102.00
Fees to Be Paid	Equity	Common Stock underlying Underwriter Warrants <sup>(2)</sup>	457(o)			\$ 875,000	0.0001102	96.43
<b>Total Fees Previously Paid</b>								—
<b>Total Fee Offsets</b>								\$ —
<b>Net Fee Due</b>								<u>\$ 2,300.43</u>

- (1) Estimated solely for the purpose of calculating the amount of the registration fee in pursuant to Rule 457(o) under the Securities Act of 1933, as amended (the “Securities Act”).
- (2) Pursuant to Rule 416(a) under the Securities Act, this registration statement shall also cover an indeterminate number of shares that may be issued and resold resulting from stock splits, stock dividends or similar transactions.
- (3) The proposed maximum aggregate offering price of the common stock will be reduced on a dollar-for-dollar basis based on the offering price of any pre-funded warrants issued in the offering, and the proposed maximum aggregate offering price of the pre-funded warrants to be issued in the offering will be reduced on a dollar-for-dollar basis based on the offering price of any common stock issued in the offering. Accordingly, the proposed maximum aggregate offering price of the common stock, pre-funded warrants and accompanying common warrants (including the common stock issuable upon exercise of the pre-funded warrants), if any, is \$10,000,000.
- (4) No separate registration fee is payable pursuant to Rule 457(g) under the Securities Act.