

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

**FORM S-8  
REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933**

**PROMETHEUS BIOSCIENCES, INC.**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State or Other Jurisdiction of  
Incorporation or Organization)

**81-4282653**  
(I.R.S. Employer  
Identification No.)

**3050 Science Park Road  
San Diego, California 92121  
(858) 422-4300**  
(Address of Principal Executive Offices) (Zip Code)

**PROMETHEUS BIOSCIENCES, INC. 2021 INCENTIVE AWARD PLAN  
PROMETHEUS BIOSCIENCES, INC. 2021 EMPLOYEE STOCK PURCHASE PLAN**  
(Full title of the plans)

**Mark C. McKenna**  
**Chairman of the Board, President and Chief Executive Officer**  
**Prometheus Biosciences, Inc.**  
**3050 Science Park Road  
San Diego, California 92121  
(858) 422-4300**

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

*Copies to:*

**Cheston J. Larson  
Matthew T. Bush  
Latham & Watkins LLP  
12670 High Bluff Drive  
San Diego, California 92130  
(858) 523-5400**

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

|                         |                                     |                           |                          |
|-------------------------|-------------------------------------|---------------------------|--------------------------|
| Large accelerated filer | <input checked="" type="checkbox"/> | Accelerated filer         | <input type="checkbox"/> |
| Non-accelerated filer   | <input type="checkbox"/>            | Smaller reporting company | <input type="checkbox"/> |
|                         |                                     | Emerging growth company   | <input type="checkbox"/> |

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.

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## EXPLANATORY NOTE

This registration statement registers the offer and sale of an additional 5,390,313 shares of common stock of Prometheus Biosciences, Inc. for issuance under the Prometheus Biosciences, Inc. 2021 Incentive Award Plan, as well as the offer and sale of 1,208,062 shares of common stock for issuance under the Prometheus Biosciences, Inc. 2021 Employee Stock Purchase Plan. In accordance with Instruction E to Form S-8, the contents of the prior registration statement on Form S-8, File No. 333-254252, filed with the Securities and Exchange Commission (“SEC”) on March 15, 2021, which was previously filed with respect to the plans, are hereby incorporated by reference.

### PART I INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

The documents containing the information specified in Part I of Form S-8 will be sent or given to participants as specified by Rule 428(b)(1) of the Securities Act of 1933, as amended (the “Securities Act”). These documents and the documents incorporated by reference into this registration statement pursuant to Item 3 of Part II of this registration statement, taken together, constitute a prospectus that meets the requirements of Section 10(a) of the Securities Act.

### PART II INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

*In this registration statement, Prometheus Biosciences, Inc. is sometimes referred to as “Registrant,” “we,” “us” or “our.”*

#### **Item 3. Incorporation of Documents by Reference.**

The SEC allows us to “incorporate by reference” the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this registration statement, and later information filed with the SEC will update and supersede this information. We hereby incorporate by reference into this registration statement the following documents previously filed with the SEC as of their respective dates:

- (a) our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed by us with the SEC on February 28, 2023, which contains our audited financial statements for the latest fiscal year for which such statements have been filed;
- (b) the information specifically incorporated by reference into our Annual Report on Form 10-K for the fiscal year ended December 31, 2021 from our Definitive Proxy Statement on Schedule 14A, filed with the SEC on April 1, 2022; and
- (c) the description of our common stock set forth in our registration statement on Form 8-A12B, filed by us with the SEC under Section 12(b) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), on March 9, 2021 (File No. 001-40187), including any amendments or reports filed for the purpose of updating such description.

In addition, all documents we file with the SEC pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act, subsequent to the filing of this registration statement and prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which de-registers all securities then remaining unsold, shall be deemed to be incorporated by reference into this registration statement and to be a part hereof from the date of filing such documents, except as to any portion of any future annual or quarterly report to stockholders or document or current report furnished under current Items 2.02 or 7.01 of Form 8-K, and exhibits furnished on such form that relate to such items, that is not deemed filed under such provisions.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this registration statement to the extent that a statement contained herein or in any other subsequently filed document which also is incorporated or deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement contained herein shall be deemed to be modified or superseded for purposes of this registration statement to the extent that a statement contained in any subsequently filed document which also is incorporated or deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this registration statement.

Under no circumstances shall any information filed under current Items 2.02 or 7.01 of Form 8-K, or exhibits furnished on such form that relate to such items, be deemed incorporated herein by reference unless such Form 8-K expressly provides to the contrary.

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**Item 5. Interests of Named Experts and Counsel.**

Latham & Watkins LLP, San Diego, California, will pass upon certain legal matters relating to the issuance and sale of the securities offered hereby on behalf of Prometheus Biosciences, Inc. Latham & Watkins LLP and certain attorneys in the firm who have rendered, and will continue to render, legal services to us, own shares of our common stock representing in the aggregate less than one percent of the shares of our common stock outstanding.

**Item 8. Exhibits.**

| Exhibit Number | Exhibit Description   | Incorporated by Reference |            |         |             | Filed Herewith |
|----------------|---|---------------------------|------------|---------|-------------|----------------|
|                |   | Form                      | File No.   | Exhibit | Filing Date |                |
| 3.1            | <a href="#">Amended and Restated Certificate of Incorporation, as amended</a>   | 8-K                       | 001-40187  | 3.1     | 3/17/2021   |                |
| 3.2            | <a href="#">Amended and Restated Bylaws</a>   | 8-K                       | 001-40187  | 3.2     | 3/17/2021   |                |
| 4.1            | <a href="#">Specimen stock certificate evidencing the shares of common stock</a>  | S-1/A                     | 333-253323 | 4.1     | 3/8/2021    |                |
| 5.1            | <a href="#">Opinion of Latham &amp; Watkins LLP</a>   |                           |            |         |             | X              |
| 10.1           | <a href="#">Prometheus Biosciences, Inc. 2021 Incentive Award Plan and forms of grant notices and agreements thereunder</a> | 10-K                      | 001-40187  | 10.2    | 2/28/2023   |                |
| 10.2           | <a href="#">Prometheus Biosciences, Inc. 2021 Employee Stock Purchase Plan</a>  | S-1/A                     | 333-253323 | 10.3    | 3/8/2021    |                |
| 23.1           | <a href="#">Consent of BDO USA, LLP, independent registered public accounting firm</a>                                      |                           |            |         |             | X              |
| 23.2           | <a href="#">Consent of Latham &amp; Watkins LLP (included in Exhibit 5.1)</a>   |                           |            |         |             | X              |
| 24.1           | <a href="#">Power of Attorney (see signature page)</a>  |                           |            |         |             | X              |
| 107            | <a href="#">Filing Fee Table</a>  |                           |            |         |             | X              |

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## FIRM / AFFILIATE OFFICES

|              |                  |
|--------------|------------------|
| Austin       | Milan            |
| Beijing      | Munich           |
| Boston       | New York         |
| Brussels     | Orange County    |
| Century City | Paris            |
| Chicago      | Riyadh           |
| Dubai        | San Diego        |
| Düsseldorf   | San Francisco    |
| Frankfurt    | Seoul            |
| Hamburg      | Shanghai         |
| Hong Kong    | Silicon Valley   |
| Houston      | Singapore        |
| London       | Tel Aviv         |
| Los Angeles  | Tokyo            |
| Madrid       | Washington, D.C. |

LATHAM & WATKINS LLP

February 28, 2023

Prometheus Biosciences, Inc.  
 3050 Science Park Road  
 San Diego, California 92121

Re: Registration Statement on Form S-8; 6,598,375 Shares of Common Stock, par value \$0.0001 per share

To the addressees set forth above:

We have acted as special counsel to Prometheus Biosciences, Inc., a Delaware corporation (the “*Company*”), in connection with the proposed issuance of an aggregate of 6,598,375 shares of common stock, \$0.0001 par value per share (the “*Shares*”), of the Company, pursuant to the Company’s 2021 Incentive Award Plan (the “*2021 Plan*”) and the Company’s 2021 Employee Stock Purchase Plan (the “*ESPP*,” and together with the 2021 Plan, the “*Plans*”). The Shares are included in a registration statement on Form S-8 under the Securities Act of 1933, as amended (the “*Act*”), filed with the Securities and Exchange Commission (the “*Commission*”) on February 28, 2023 (the “*Registration Statement*”). This opinion is being furnished in connection with the requirements of Item 601(b)(5) of Regulation S-K under the Act, and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement, other than as expressly stated herein with respect to the issue of the Shares.

**LATHAM & WATKINS**<sup>LLP</sup>

As such counsel, we have examined such matters of fact and questions of law as we have considered appropriate for purposes of this letter. With your consent, we have relied upon certificates and other assurances of officers of the Company and others as to factual matters without having independently verified such factual matters. We are opining herein as to the General Corporation Law of the State of Delaware, and we express no opinion with respect to any other laws.

In our examination, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals and the conformity to authentic original documents of all documents submitted to us as copies.

Subject to the foregoing and the other matters set forth herein, it is our opinion that, as of the date hereof, when the Shares shall have been duly registered on the books of the transfer agent and registrar therefor in the name or on behalf of the recipients, or certificates representing the Shares (in the form of the specimen certificate most recently filed as an exhibit to the Registration Statement) have been manually signed by an authorized officer of the transfer agent and registrar therefor, and subject to the Company completing all actions and proceedings required on its part to be taken prior to the issuance of the Shares, and when the Shares have been issued by the Company in the circumstances contemplated by the Plans for legal consideration in excess of par value, the issuance of the Shares will have been duly authorized by all necessary corporate action of the Company, and the Shares will be validly issued, fully paid and nonassessable. In rendering the foregoing opinion, we have assumed that the Company will comply with all applicable notice requirements regarding uncertificated shares provided in the General Corporation Law of the State of Delaware.

This opinion is for your benefit in connection with the Registration Statement and may be relied upon by you and by persons entitled to rely upon it pursuant to the applicable provisions of the Act. We consent to your filing this opinion as an exhibit to the Registration Statement. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission thereunder.

Sincerely,

/s/ Latham & Watkins LLP

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Consent of Independent Registered Public Accounting Firm

Prometheus Biosciences, Inc.  
San Diego, California

We hereby consent to the incorporation by reference in the Registration Statement of our reports dated February 28, 2023, relating to the consolidated financial statements and the effectiveness of Prometheus Biosciences, Inc.'s internal control over financial reporting, appearing in the Company's Annual Report on Form 10-K for the year ended December 31, 2022.

/s/ BDO USA, LLP

San Diego, California  
February 28, 2028

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## Calculation of Filing Fee Tables

**Form S-8**

(Form Type)

**PROMETHEUS BIOSCIENCES, INC.**

(Exact Name of Registrant as Specified in its Charter)

**Table 1: Newly Registered Securities**

| Security Type          | Security Class Title                       | Fee Calculation Rule        | Amount Registered (1) | Proposed Maximum Offering Price Per Unit | Maximum Aggregate Offering Price | Fee Rate                 | Amount of Registration Fee |
|------------------------|--|-----------------------------|-----------------------|--|----------------------------------|--------------------------|----------------------------|
| Equity                 | Common Stock, \$0.0001 par value per share | Rule 457(c) and Rule 457(h) | 5,390,313 (2)         | \$119.50 (3)                             | \$644,142,403.50 (3)             | \$110.20 per \$1,000,000 | \$70,984.49                |
| Equity                 | Common Stock, \$0.0001 par value per share | Rule 457(c) and Rule 457(h) | 1,208,062 (4)         | \$119.50 (3)                             | \$144,363,409.00 (3)             | \$110.20 per \$1,000,000 | \$15,908.85                |
| Total Offering Amounts |  |                             |                       |  | \$788,505,812.50                 |                          | \$86,893.34                |
| Total Fee Offsets (5)  |  |                             |                       |  |                                  |                          | \$—                        |
| Net Fee Due            |  |                             |                       |  |                                  |                          | \$86,893.34                |

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement also registers an indeterminate number of additional shares that may be issued pursuant to the Prometheus Biosciences, Inc. 2021 Incentive Award Plan (the "2021 Plan") and the Prometheus Biosciences, Inc. 2021 Employee Stock Purchase Plan (the "ESPP") as the result of any future stock dividend, stock split, recapitalization or any other similar transaction effected without the receipt of consideration which results in an increase in the number of our outstanding shares of common stock.
- (2) Represents 5,390,313 shares of common stock available for future issuance under the 2021 Plan or that may become issuable under the 2021 Plan pursuant to its terms.
- (3) Estimated in accordance with Rule 457(c) and 457(h) of the Securities Act solely for the purpose of calculating the registration fee. The maximum price per share and the maximum aggregate offering price are based upon the average of the high and low prices of the Registrant's common stock as reported on the Nasdaq Global Select Market on February 22, 2023, which date is within five business days prior to filing this registration statement.
- (4) Represents 1,208,062 shares of common stock available for future issuance under the ESPP or that may become issuable under the ESPP pursuant to its terms.
- (5) The Registrant does not have any fee offsets.



