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

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

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**MORPHIC HOLDING, INC.**

*(Exact name of registrant as specified in its charter)*

**Delaware**  
*(State or other jurisdiction of  
Incorporation or Organization)*

**47-3878772**  
*(I.R.S. Employer  
Identification No.)*

**35 Gatehouse Drive, A2  
Waltham, Massachusetts 02451  
(781) 996-0955**

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

**Amended and Restated 2019 Equity Incentive Plan  
2019 Employee Stock Purchase Plan  
2024 Equity Inducement Plan**

*(Full title of the plans)*

**Praveen P. Tipirneni, M.D.  
Chief Executive Officer  
Morphic Holding, Inc.  
35 Gatehouse Drive, A2  
Waltham, Massachusetts 02451  
(781) 996-0955**

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

***Please send copies of all communications to:***

**Effie Toshav, Esq.  
Robert Freedman, Esq.  
Julia Forbess, Esq.**

**Fenwick & West LLP  
555 California Street, 12th Floor  
San Francisco, California 94104  
(415) 875-2300**

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

Large accelerated filer   
Non-accelerated filer

Accelerated filer   
Smaller reporting company   
Emerging growth company

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

## EXPLANATORY NOTE

Morphic Holding, Inc. (the “Registrant”) is filing this Registration Statement with the Securities and Exchange Commission (the “Commission”) to register (a) 1,989,891 additional shares of common stock available for issuance under the Registrant’s Amended and Restated 2019 Equity Incentive Plan (the “Amended and Restated 2019 EIP”), pursuant to the provision of the Amended and Restated 2019 EIP providing for an annual 4% automatic increase in the number of shares reserved for issuance thereunder, (b) 497,472 additional shares of common stock available for issuance under the Registrant’s 2019 Employee Stock Purchase Plan (the “2019 ESPP”), pursuant to the provision of the 2019 ESPP providing for an annual 1% automatic increase in the number of shares reserved for issuance thereunder, and (c) 500,000 shares of common stock available for issuance under the Registrant’s 2024 Equity Inducement Plan (the “2024 Inducement Plan”).

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

The information called for by Part I of Form S-8 is omitted from this Registration Statement and has been or will be sent or given to participating service providers in accordance with Rule 428 of the Securities Act of 1933, as amended (the “Securities Act”) and the instructions to Form S-8. In accordance with the rules and regulations of the Commission and the instructions to Form S-8, such documents are not being filed with the Commission either as part of this Registration Statement or as prospectuses or prospectus supplements pursuant to Rule 424 of the Securities Act.

### PART II INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

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

The following documents filed by the Registrant with the Commission pursuant to the Securities Act and the Securities Exchange Act of 1934, as amended (the “Exchange Act”) are incorporated herein by reference:

- (a) the Registrant’s Annual Report on Form 10-K for the year ended December 31, 2023, filed with the Commission on February 22, 2024 pursuant to Section 13 of the Exchange Act;
- (b) all other reports filed pursuant to Section 13(a) or 15(d) of the Exchange Act since the end of the fiscal year covered by the Registrant’s Annual Report on Form 10-K referred to in (a) above; and
- (c) the description of the Registrant’s common stock contained in the Registrant’s registration statement on Form 8-A12B (File No. 001-38940) filed on June 14, 2019 under Section 12(b) of the Exchange Act, including any amendment or report filed for the purpose of updating such description.

All documents filed by the Registrant 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 deregisters 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 specific sections of such documents as set forth therein. 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 in any subsequently filed document which also is deemed to be incorporated by reference herein modifies or supersedes such statement.

#### Item 4. Description of Securities.

Not applicable.

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

Not applicable.

**Item 6. Indemnification of Directors and Officers.**

Section 145 of the Delaware General Corporation Law authorizes a court to award, or a corporation's board of directors to grant, indemnity to its directors and officers under certain circumstances and subject to certain limitations. The terms of Section 145 of the Delaware General Corporation Law are sufficiently broad to permit indemnification under certain circumstances for liabilities, including reimbursement of expenses incurred, arising under the Securities Act.

As permitted by the Delaware General Corporation Law, the Registrant's restated certificate of incorporation, as amended, provides that the Registrant will indemnify its directors and officers to the fullest extent permitted by the Delaware General Corporation Law. However, Delaware law prohibits the restated certificate of incorporation, as amended, from limiting the liability of the Registrant's directors for the following:

- any breach of the director's duty of loyalty to the Registrant or its stockholders;
- acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- under Section 174 of the Delaware General Corporation Law (regarding unlawful dividends and stock purchases); or
- any transaction from which the director derived an improper personal benefit.

As permitted by the Delaware General Corporation Law, the Registrant's amended and restated bylaws provide that:

- the Registrant is required to indemnify its directors and officers to the fullest extent permitted by the Delaware General Corporation Law, subject to very limited exceptions;
- the Registrant may enter into indemnification contracts with any director, officer, employee or agent of the Registrant;
- the Registrant is required to advance expenses, as incurred, to its directors and officers in connection with a legal proceeding to the fullest extent permitted by the Delaware General Corporation Law, subject to very limited exceptions; and
- the rights conferred in the amended and restated bylaws are not exclusive.

In addition, the Registrant has entered into indemnification agreements with each of its current directors and officers to provide these directors and officers with additional contractual assurances regarding the scope of the indemnification set forth in the Registrant's restated certificate of incorporation, as amended, and amended and restated bylaws and to provide additional procedural protections. The indemnification provisions in the Registrant's restated certificate of incorporation, as amended, and amended and restated bylaws and the indemnification agreements entered into between the Registrant and each of its directors and officers may be sufficiently broad to permit indemnification of the Registrant's directors and executive officers for liabilities arising under the Securities Act.

The Registrant currently carries liability insurance for its directors and officers.

See also the undertakings set out in response to Item 9 hereof.

**Item 7. Exemption from Registration Claimed.**

Not applicable.

**Item 8. Exhibits.**

The following exhibits are filed herewith:

<b>Exhibit Number</b>	<b>Exhibit Description</b>	<b>Incorporated by Reference Form</b>	<b>File No.</b>	<b>Exhibit</b>	<b>Filing Date</b>	<b>Filed Herewith</b>
4.1	<a href="#">Restated Certificate of Incorporation, as amended</a>	10-Q	001-38940	3.1	8/03/2023	
4.2	<a href="#">Amended and Restated Bylaws</a>	8-K	001-38940	3.1	2/13/2023	
4.3	<a href="#">Form of Common Stock certificate</a>	S-1/A	333-231837	4.1	6/14/2019	
5.1	<a href="#">Opinion of Fenwick &amp; West LLP</a>					X
23.1	<a href="#">Consent of Fenwick &amp; West LLP (contained in Exhibit 5.1)</a>					X
23.2	<a href="#">Consent of Ernst &amp; Young LLP, Independent Registered Public Accounting Firm</a>					X
24.1	<a href="#">Power of Attorney (included on the signature page to this Registration Statement)</a>					X
99.1	<a href="#">Amended and Restated 2019 Equity Incentive Plan</a>	10-Q	001-38940	10.1	8/03/2022	
99.2	<a href="#">Form of Stock Option Award Agreement under the Amended and Restated 2019 Equity Incentive Plan (Included in the 2019 Equity Incentive Plan)</a>	S-1/A	333-231837	10.3	6/14/2019	
99.3	<a href="#">Form of Restricted Stock Award Agreement under the Amended and Restated 2019 Equity Incentive Plan (Included in the 2019 Equity Incentive Plan)</a>	S-1/A	333-231837	10.3	6/14/2019	
99.4	<a href="#">2019 Employee Stock Purchase Plan and forms of award agreements thereunder</a>	S-1/A	333-231837	10.4	6/14/2019	
99.5	<a href="#">2024 Equity Inducement Plan</a>	10-K	001-38940	10.18	2/22/2024	
99.6	<a href="#">Form of Stock Option Award Agreement under the 2024 Equity Inducement Plan</a>	10-K	001-38940	10.19	2/22/2024	
99.7	<a href="#">Form of Restricted Stock Award Agreement under the 2024 Equity Inducement Plan</a>	10-K	001-38940	10.20	2/22/2024	
107.1	<a href="#">Filing Fee Table</a>					X

## Item 9. Undertakings.

A. The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the Registration Statement. Notwithstanding the foregoing, any increase or decrease in the volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Filing Fee Table" in the effective Registration Statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement;

provided, however, that clauses (a)(1)(i) and (a)(1)(ii) above do not apply if the information required to be included in a post-effective amendment by those clauses is contained in reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the Registration Statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

B. The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

C. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Commission 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 hereby, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

## SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Waltham, Commonwealth of Massachusetts, on this 22nd day of February, 2024.

### MORPHIC HOLDING, INC.

By: /s/ Praveen Tipirneni  
Praveen P. Tipirneni, M.D.  
Chief Executive Officer

## POWER OF ATTORNEY

**KNOW ALL PERSONS BY THESE PRESENTS**, that each person whose signature appears below hereby constitutes and appoints Praveen P. Tipirneni and William D. DeVaul, and each of them, as his or her true and lawful attorney-in-fact and agent with full power of substitution, for him or her in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement on Form S-8, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully for all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his or her substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed by the following persons in the capacities and on the date indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Praveen P. Tipirneni</u> Praveen P. Tipirneni, M.D.	Chief Executive Officer and Director (Principal Executive Officer)	February 22, 2024
<u>/s/ Marc Schegerin</u> Marc Schegerin, M.D.	Chief Financial Officer and Chief Operating Officer (Principal Financial Officer)	February 22, 2024
<u>/s/ Robert E. Farrell, Jr.</u> Robert E. Farrell, Jr., CPA	Chief Accounting Officer (Principal Accounting Officer)	February 22, 2024
<u>/s/ Norbert Bischofberger</u> Norbert Bischofberger, Ph.D.	Director	February 22, 2024
<u>/s/ Gustav Christensen</u> Gustav Christensen	Director	February 22, 2024
<u>/s/ Martin Edwards</u> Martin Edwards	Director	February 22, 2024

<u>/s/ Susannah Gray</u> Susannah Gray	Director	February 22, 2024
<u>/s/ Nisha Nanda</u> Nisha Nanda, Ph.D.	Director	February 22, 2024
<u>/s/ Amir Nashat</u> Amir Nashat	Director	February 22, 2024
<u>/s/ Joseph P. Slattery</u> Joseph P. Slattery, CPA	Director	February 22, 2024
<u>/s/ Timothy A. Springer</u> Timothy A. Springer, Ph.D.	Director	February 22, 2024



## CALCULATION OF FILING FEE TABLES

Form S-8  
(Form Type)

## Morphic Holding, 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, par value \$0.0001 per share	Rule 457(c) and Rule 457(h)	1,989,891 (2)	\$35.68 (3)	\$ 70,999,311	\$0.00014760	\$ 10,480
Equity	Common stock, par value \$0.0001 per share	Rule 457(c) and Rule 457(h)	500,000 (4)	\$35.68 (3)	\$ 17,840,000	\$0.00014760	\$ 2,633
Equity	Common stock, par value \$0.0001 per share	Rule 457(c) and Rule 457(h)	497,472 (5)	\$30.32 (6)	\$ 15,083,351	\$0.00014760	\$ 2,226
<b>Total Offering Amounts</b>					\$ 103,922,662		\$ 15,339
<b>Total Fee Offsets</b>							-
<b>Net Fee Due</b>							\$ 15,339

- (1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the “*Securities Act*”), this Registration Statement shall also cover any additional shares of the Registrant’s common stock, par value \$0.0001 per share (“*Common Stock*”), that become issuable under the Registrant’s Amended and Restated 2019 Equity Incentive Plan (the “*Amended and Restated 2019 EIP*”), 2019 Employee Stock Purchase Plan (the “*2019 ESPP*”) and 2024 Equity Inducement Plan (the “*2024 Inducement Plan*”) in respect of the securities identified in the above table by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without the receipt of consideration that increases the number of the Registrant’s outstanding shares of Common Stock.
- (2) Represents additional shares of Common Stock reserved for issuance under the Amended and Restated 2019 EIP resulting from the annual 4% automatic increase in the number of authorized shares available for issuance under the Amended and Restated 2019 EIP.
- (3) Estimated in accordance with Rules 457(c) and (h) under the Securities Act solely for the purpose of calculating the registration fee on the basis of \$35.68, the average of the high and low prices of the Common Stock as reported on the Nasdaq Global Market on February 21, 2024.
- (4) Represents additional shares of Common Stock reserved for issuance under the 2024 Inducement Plan.
- (5) Represents additional shares of Common Stock reserved for issuance under the 2019 ESPP resulting from the annual 1% automatic increase in the number of authorized shares available for issuance under the 2019 ESPP.
- (6) Estimated in accordance with Rules 457(c) and (h) under the Securities Act solely for the purpose of calculating the registration fee on the basis of \$30.32, the average of the high and low prices of the Common Stock as reported on the Nasdaq Global Market on February 21, 2024, multiplied by 85%, which is the percentage of the trading price per share applicable to purchasers under the 2019 ESPP.

801 California Street  
Mountain View, CA 94041650.988.8500  
Fenwick.com

February 22, 2024

Morphic Holding, Inc.  
35 Gatehouse Drive, A2  
Waltham, MA 02451

Re: Registration Statement on Form S-8

Ladies and Gentlemen:

As counsel to Morphic Holding, Inc., a Delaware corporation (the "**Company**"), we have examined the Registration Statement on Form S-8 (the "**Registration Statement**") to be filed by the Company with the Securities and Exchange Commission (the "**Commission**") on or about February 22, 2024 in connection with the registration under the Securities Act of 1933, as amended (the "**Securities Act**"), of an aggregate of 2,987,363 shares (the "**Shares**") of the Company's Common Stock, \$0.0001 par value per share (the "**Common Stock**"), that consists of (a) 1,989,891 additional shares of Common Stock that are subject to issuance by the Company upon the exercise or settlement of awards granted or to be granted under the Company's Amended and Restated 2019 Equity Incentive Plan (the "**Amended and Restated 2019 Plan**") pursuant to the provision of the Amended and Restated 2019 Plan providing for an annual 4% automatic increase in the number of shares reserved for issuance thereunder, (b) 497,472 additional shares of Common Stock that are subject to issuance by the Company pursuant to purchase rights to acquire shares of Common Stock granted or to be granted under the Company's 2019 Employee Stock Purchase Plan (the "**Purchase Plan**") pursuant to the provision of the Purchase Plan providing for an annual 1% automatic increase in the number of shares reserved for issuance thereunder, and (c) 500,000 additional shares of Common Stock that are subject to issuance by the Company pursuant to purchase rights to acquire shares of Common Stock granted or to be granted under the Company's 2024 Equity Inducement Plan (the "**Inducement Plan**"). The Amended and Restated 2019 Plan, the Purchase Plan and the Inducement Plan are collectively referred to in this letter as the "**Plans**".

As to matters of fact relevant to the opinions rendered herein, we have examined such documents, certificates and other instruments which we have deemed necessary or advisable, including a certificate addressed to us and dated the date hereof executed by the Company (the "**Opinion Certificate**"). We have not undertaken any independent investigation to verify the accuracy of any such information, representations or warranties or to determine the existence or absence of any fact, and no inference as to our knowledge of the existence or absence of any fact should be drawn from our representation of the Company or the rendering of the opinion set forth below. We have not considered parol evidence in connection with any of the agreements or instruments reviewed by us in connection with this letter.

In our examination of documents for purposes of this letter, we have assumed, and express no opinion as to, the genuineness and authenticity of all signatures on original documents, the authenticity and completeness of all documents submitted to us as originals, that each document is what it purports to be, the conformity to originals of all documents submitted to us as copies or facsimile copies, the absence of any termination, modification or waiver of or amendment to any document reviewed by us (other than as has been disclosed to us), the legal competence or capacity of all persons or entities (other than the Company) executing the same and (other than the Company) the due authorization, execution and delivery of all documents by each party thereto. We have also assumed the conformity of the documents filed with the Commission via the Electronic Data Gathering, Analysis and Retrieval System ("**EDGAR**"), except for required EDGAR formatting changes, to physical copies submitted for our examination.

The opinions in this letter are limited to the existing General Corporation Law of the State of Delaware now in effect. We express no opinion with respect to any other laws.

Based upon, and subject to, the foregoing, it is our opinion that the Shares, when issued and sold by the Company in accordance with the terms (including, without limitation, payment and authorization provisions) of the applicable Plan and the applicable form of award agreement thereunder, against the Company's receipt of payment therefor (in an amount and type of consideration not less than the par value per Share), and duly registered on the books of the transfer agent and registrar for the Shares in the name or on behalf of the holders thereof, will be validly issued, fully paid and non-assessable.

We consent to the use of this opinion as an exhibit to the Registration Statement and further consent to all references to us, if any, in the Registration Statement, the prospectuses constituting a part thereof and any amendments thereto. We do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission thereunder.

This opinion is intended solely for your use in connection with issuance and sale of the Shares subject to the Registration Statement and is not to be relied upon for any other purpose. In providing this letter, we are opining only as to the specific legal issues expressly set forth above, and no opinion shall be inferred as to any other matter or matters. This opinion is rendered on, and speaks only as of, the date of this letter first written above, and does not address any potential change in facts or law that may occur after the date of this opinion letter. We assume no obligation to advise you of any fact, circumstance, event or change in the law or the facts that may hereafter be brought to our attention, whether or not such occurrence would affect or modify any of the opinions expressed herein.

Very truly yours,

/s/ Fenwick & West LLP

**FENWICK & WEST LLP**

**Consent of Independent Registered Public Accounting Firm**

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the Morphic Holding, Inc. Amended and Restated 2019 Equity Incentive Plan, the 2019 Employee Stock Purchase Plan and the 2024 Equity Inducement Plan of our reports dated February 22, 2024, with respect to the consolidated financial statements of Morphic Holding, Inc. and the effectiveness of internal control over financial reporting of Morphic Holding, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2023, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Boston, Massachusetts  
February 22, 2024