

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

SCHEDULE 13D

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT TO § 240.13d-1(a) AND AMENDMENTS THERETO FILED PURSUANT TO  
240.13d-2(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934

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MORPHIC HOLDING, INC.

(Name of Issuer)

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Common Stock, Par Value \$0.0001

(Title of Class of Securities)

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61775R105

(CUSIP Number)

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Victoria A. Whyte  
GlaxoSmithKline plc  
980 Great West Road  
Brentford, Middlesex TW8 9GS  
England  
Telephone: +44 (0)208 047 5000

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(Name, Address and Telephone Number of Person  
Authorized to Receive Notices and Communications)

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July 01, 2019

(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box.

**Note:** Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See §240.13d-7 for other parties to whom copies are to be sent.

\* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act.

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1. NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

GlaxoSmithKline plc

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

(see instructions)

(a)

(b)

3. SEC USE ONLY

4. SOURCE OF FUNDS (see instructions)

WC

5. CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e)

6. CITIZENSHIP OR PLACE OF ORGANIZATION

England and Wales

7. SOLE VOTING POWER

2,633,772

8. SHARED VOTING POWER

-0-

9. SOLE DISPOSITIVE POWER

2,633,772

10. SHARED DISPOSITIVE POWER

-0-

NUMBER OF  
SHARES  
BENEFICIALLY  
OWNED BY EACH  
REPORTING  
PERSON WITH

11. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,633,772

12. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES

(see instructions)

13. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

8.9% (1)

14. TYPE OF REPORTING PERSON (see instructions)

CO

Footnotes:

(1) Based upon 29,596,383 shares of the Issuer's Common Stock outstanding after the Issuer's initial public offering, as reported in the Issuer's prospectus dated June 26, 2019 (the "Final Prospectus") filed with the Securities and Exchange Commission (the "SEC") on June 27, 2019 pursuant to Rule 424(b)(4) of the Securities Act of 1933, as amended (the "Securities Act").

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**Item 1. Security and Issuer.**

This statement on Schedule 13D (this “Statement”) relates to the shares of common stock, par value \$0.0001 per share (the “Common Stock”) of Morphic Holding, Inc., a Delaware corporation (the “Issuer”). The Issuer’s principal executive offices are located at 35 Gatehouse Drive, A2, Waltham, Massachusetts 02451.

**Item 2. Identity and Background.**

This Statement is being filed on behalf of GlaxoSmithKline plc, a public limited company incorporated under the laws of England and Wales. GlaxoSmithKline plc and its subsidiaries constitute a major global healthcare group engaged in the creation, discovery, development, manufacture and marketing of pharmaceutical and consumer health-related products with its principal offices located at 980 Great West Road, Brentford, Middlesex TW8 9GS, England. Set forth in Schedule 1 to this Statement are the name, business address and present principal occupation or employment and citizenship of each executive officer and director of GlaxoSmithKline plc. The Common Stock, which is the subject of this Statement, is held of record by S.R. One, Limited (“S.R. One”), an indirect, wholly-owned subsidiary of GlaxoSmithKline plc.

On September 30, 2016, GlaxoSmithKline plc agreed to a settlement with the SEC relating to an investigation into the commercial practices of certain subsidiaries of GlaxoSmithKline plc in China. The SEC’s order found that GlaxoSmithKline plc violated the internal controls and books and records provisions of the U.S. Foreign Corrupt Practices Act (the “FCPA”). GlaxoSmithKline plc consented to the order without admitting or denying the findings and agreed to pay a \$20 million civil penalty. GlaxoSmithKline plc also agreed to provide status reports to the SEC for the next two years on its remediation and implementation of anti-corruption compliance measures.

Other than as set forth above in this Item 2, during the last five years prior to the date hereof, neither GlaxoSmithKline plc nor, to the best knowledge of GlaxoSmithKline plc, any of the other persons with respect to whom information is given in response to this Item 2 has been convicted in a criminal proceeding or been a party to a civil proceeding ending in a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws, or finding any violation with respect to such laws.

**Item 3. Source or Amount of Funds or Other Consideration.**

GlaxoSmithKline plc, through its wholly-owned indirect subsidiary S.R. One, purchased 8,581,428 shares of Series A convertible preferred units and 4,842,668 shares of Series B convertible preferred units of Morphic Holding, LLC. The consideration for each of the convertible preferred units was obtained from working capital of S.R. One.

On December 4, 2018, Morphic Holding, LLC was reorganized and converted in a tax-free exchange into Morphic Holding, Inc., the Issuer. In connection with the reorganization, each of the Series A convertible preferred units of Morphic Holding, LLC was converted into one share of Series A convertible preferred stock to a total of 8,571,428 shares of Series A convertible preferred stock of the Issuer, and each of the Series B convertible preferred units of Morphic Holding, LLC was converted into one share of Series B convertible preferred stock to a total of 4,842,668 shares of Series B convertible preferred stock of the Issuer.

A 5.8311-for-one reverse stock split of the Issuer’s common stock and convertible preferred stock became effective on June 13, 2019. Upon conversion S.R. One held 1,469,950 shares of Series A convertible preferred stock and 830,489 shares of Series B convertible preferred stock. Each share of Series A and Series B convertible preferred stock converts automatically into one share of Common Stock upon the completion of the Issuer’s initial public offering (the “IPO”).

S.R. One held an aggregate of 2,300,439 shares of Common Stock from the conversion of the Series A and Series B convertible preferred stock that occurred automatically on July 1, 2019 in the Issuer’s IPO. The shares have no expiration date.

In connection with the IPO, GlaxoSmithKline plc, through its wholly-owned indirect subsidiary S.R. One, acquired 333,333 shares of the Issuer’s Common Stock at the public offering price of \$15.00 per share. The total consideration paid by S.R. One for these shares was \$4,999,995 and such consideration was obtained from the working capital of S.R. One.

**Item 4. Purpose of Transaction.**

S.R. One appointed Vikas Goyal, a Principal at S.R. One and an employee of GlaxoSmithKline LLC, an indirect, wholly-owned subsidiary of GlaxoSmithKline plc, to the board of the Issuer in June 2016. Mr. Goyal continues to serve on the board of directors of the Issuer.

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On December 5, 2018, the Issuer, S.R. One and certain other investors, including the holders of Preferred Stock entered into the Investors' Rights Agreement, incorporated by reference to Exhibit 4.2 in the Issuer's Registration Statement on Form S-1/A filed with the SEC on June 14, 2019 (the "Investors' Rights Agreement"). Pursuant to the Investors' Rights Agreement, S.R. One has the right appoint an individual to attend meetings of the board of directors of the Issuer as a nonvoting observer. The Investors' Rights Agreement also grants S.R. One registration rights, including demand registration rights, piggyback registration rights, and Form S-3 registration rights, as well as customary indemnification provisions as more fully described in the agreement. The registration rights will expire on the earliest to occur of (a) the closing of a deemed liquidation event, as defined in the Issuer's restated certificate of incorporation, (b) at such time that all of the holder's registrable securities can be sold without limitation in any three-month period without registration in compliance with Rule 144, and (c) seven years following the completion of the Issuer's IPO.

In connection with the IPO, S.R. One entered into a lock-up agreement (the "Lock-Up Agreement"), a copy of which is attached hereto as Exhibit 2, with Jefferies LLC and Cowen & Company, LLC (in their capacity as representatives of several underwriters for the IPO) (the "Representatives"). Pursuant to the Lock-Up Agreement, S.R. One has agreed that for a period of 180 days following the date set forth on the final prospectus used to sell the securities in the IPO, subject to specified exceptions, it will not, without the prior written consent of the Representatives, (i) sell, offer to sell, contract to sell, lend, pledge, grant any option to purchase, make any short sale or in any other way transfer or dispose of any shares of Common Stock of the Issuer, or any options or warrants or other rights to acquire any shares of Common Stock of the Issuer or any securities convertible into, exchangeable for or that represent the right to receive shares of Common Stock ("Related Securities"), whether now owned or hereinafter acquired, owned directly by S.R. One or with respect to which S.R. One has beneficial ownership as defined in Rule 13d-3 under the Securities Exchange Act of 1934, as amended, (ii) enter into any Swap (as defined in the Lock-Up Agreement), (iii) make any demand for registration under the Securities Act of 1933, as amended, of the Common Stock or Related Securities or (iv) publicly announce any intention to do any of the foregoing.

Other than as described above, S.R. One has no plans or proposals that would result in:

- a. the acquisition by any person of additional securities of the Issuer, or the disposition of securities of the Issuer;
- b. an extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving the Issuer or any of its subsidiaries;
- c. a sale or transfer of a material amount of assets of the Issuer or any of its subsidiaries;
- d. any change in the present board of directors or management of the Issuer, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the board;
- e. any material change in the present capitalization or dividend policy of the Issuer;
- f. any other material change in the Issuer's business or corporate structure including but not limited to, if the Issuer is a registered closed-end investment company, any plans or proposals to make any changes in its investment policy for which a vote is required by Section 13 of the Investment Company Act of 1940;
- g. changes in the Issuer's charter, bylaws or instruments corresponding thereto or other actions which may impede the acquisition of control of the Issuer by any person;
- h. causing a class of securities of the Issuer to be delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association;
- i. a class of equity securities of the Issuer becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Act; or
- j. any action similar to any of those enumerated above.

S.R. One expects to review from time to time its investment in the Issuer and may, depending on the Issuer's business, assets, operations, financial condition, prospects and other factors, as well as (and subject to) the terms of the contracts described in Item 6 of this Statement: (i) purchase additional shares of Common Stock, options or other securities of the Issuer in the open market, in privately negotiated transactions or otherwise; (ii) sell all or a portion of the shares of Common Stock, options or other securities now beneficially owned or hereafter acquired by it; (iii) propose one or more directors for the Issuer's board of directors; (iv) engage in discussions, negotiations or enter into other transactions with a view to obtaining direct or indirect control of the Issuer; (v) acquire assets of the Issuer and its subsidiaries; and (vi) engage in such other proposals as S.R. One may deem appropriate under the circumstances, including plans or proposals which may relate to, or could result in, any of the matters referred to in clauses (a) through (j), above.

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Also, consistent with its investment intent, S.R. One may engage in communications with, without limitation, one or more shareholders of the Issuer, one or more officers of the Issuer and/or one or more members of the board of directors of the Issuer regarding the Issuer, including but not limited to its operations, governance and control.

**Item 5. Interest in Securities of the Issuer.**

- a. GlaxoSmithKline plc beneficially owns 2,633,772 shares of Common Stock, which represents 8.9% of the 29,596,383 shares of Common Stock outstanding as of June 26, 2019, upon the closing of the IPO, as reported in the Final Prospectus.
- b. GlaxoSmithKline plc has the sole power to vote or direct the vote, and the sole power to dispose or to direct the disposition of all 2,633,772 shares of Common Stock described in Item 5a above.
- c. Except as disclosed in Item 3 of this Statement, which is incorporated herein by reference, no transaction in shares of Common Stock were effected during the past 60 days by GlaxoSmithKline plc.
- d. No person, other than GlaxoSmithKline plc, is known to have the right to receive or the power to direct the receipt of dividends from, or any proceeds from the sale of, the shares of Common Stock beneficially owned by GlaxoSmithKline plc.
- e. Not applicable.

**Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer.**

Except as disclosed in Item 4 of this Statement, which is incorporated herein by reference, there are no contracts, arrangements, understandings or relationships (legal or otherwise) between GlaxoSmithKline plc or S.R. One and any other person with respect to any securities of the Company.

**Item 7. Material to Be Filed as Exhibits.**

Descriptions of documents set forth on this Statement are qualified in their entirety by reference to the exhibits listed in this Item 7.

| Exhibit | Name   |
|---------|--|
| 1       | Investors' Rights Agreement by and among the Issuer and the parties listed therein dated as of December 5, 2018, a copy of which is incorporated herein by reference from Exhibit 4.2 to the registration statement on Form S-1/A originally filed by the Issuer on June 14, 2019. |
| 2       | Lock-Up Agreement, dated as of April 4, 2019, entered into by and between the Representatives and S.R. One.  |

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**SIGNATURE**

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Date: July 12, 2019

GLAXOSMITHKLINE PLC

By: /s/ Victoria A. Whyte  
Name: Victoria A. Whyte  
Title: Authorized Signatory

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SCHEDULE 1

| Name                      | Business Address  | Principal Occupation or Employment             | Citizenship      |
|---------------------------|---|--|------------------|
| <b>Board of Directors</b> |   |  |                  |
| Emma Walmsley             | 980 Great West Road<br>Brentford<br>Middlesex, England<br>TW8 9GS | Executive Director and Chief Executive Officer | British          |
| Manvinder Singh Banga     | 980 Great West Road<br>Brentford<br>Middlesex, England<br>TW8 9GS | Company Director                               | British & Indian |
| Dr. Hal Barron            | 269 E. Grand Avenue,<br>South San Francisco,<br>CA 94080          | Chief Scientific Officer & President, R&D      | US               |
| Dr. Vivienne Cox          | 980 Great West Road<br>Brentford<br>Middlesex, England<br>TW8 9GS | Company Director                               | British          |
| Lynn Elsenhans            | 980 Great West Road<br>Brentford<br>Middlesex, England<br>TW8 9GS | Company Director                               | US               |
| Dr. Jesse Goodman         | 980 Great West Road<br>Brentford<br>Middlesex, England<br>TW8 9GS | Company Director                               | US               |
| Dr Laurie Glimcher        | 980 Great West Road<br>Brentford<br>Middlesex, England<br>TW8 9GS | Company Director                               | US               |
| Sir Philip Hampton        | 980 Great West Road<br>Brentford<br>Middlesex, England<br>TW8 9GS | Chairman and Company Director                  | British          |
| Judy Lewent               | 980 Great West Road<br>Brentford<br>Middlesex, England<br>TW8 9GS | Company Director                               | US               |
| Iain MacKay               | 980 Great West Road<br>Brentford<br>Middlesex, England<br>TW8 9GS | Executive Director & Chief Financial Officer   | British          |
| Urs Rohner                | 980 Great West Road<br>Brentford<br>Middlesex, England<br>TW8 9GS | Company Director                               | Swiss            |

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**Corporate  
Executive Team**

|                |   |   |              |
|----------------|---|---|--------------|
| Emma Walmsley  | 980 Great West Road<br>Brentford<br>Middlesex, England<br>TW8 9GS | Executive Director and Chief Executive Officer              | British      |
| Dr. Hal Barron | 269 E. Grand Avenue,<br>South San Francisco,<br>CA 94080          | Chief Scientific Officer & President, R&D                   | US           |
| Roger Connor   | 980 Great West Road<br>Brentford<br>Middlesex, England<br>TW8 9GS | President, Global Vaccines                                  | Irish        |
| Diana Conrad   | 980 Great West Road<br>Brentford<br>Middlesex, England<br>TW8 9GS | Senior Vice President, Human Resources                      | Canadian     |
| James Ford     | 980 Great West Road<br>Brentford<br>Middlesex, England<br>TW8 9GS | Senior Vice President & General Counsel                     | British & US |
| Nick Hirons    | 980 Great West Road<br>Brentford<br>Middlesex, England<br>TW8 9GS | Senior Vice President, Global Ethics and Compliance         | British & US |
| Sally Jackson  | 980 Great West Road<br>Brentford<br>Middlesex, England<br>TW8 9GS | Senior Vice President, Global Communications and CEO Office | British      |
| Iain MacKay    | 980 Great West Road<br>Brentford<br>Middlesex, England<br>TW8 9GS | Executive Director & Chief Financial Officer                | British      |
| Brian McNamara | 184 Liberty Corner Road<br>Warren<br>NJ, 07059                    | Chief Executive Officer, GSK Consumer Healthcare            | US           |
| Luke Miels     | 980 Great West Road<br>Brentford<br>Middlesex, England<br>TW8 9GS | President, Global Pharmaceuticals                           | Australian   |
| David Redfern  | 980 Great West Road<br>Brentford<br>Middlesex, England<br>TW8 9GS | Chief Strategy Officer                                      | British      |

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|                  |   |                                       |                  |
|------------------|---|---------------------------------------|------------------|
| Regis Simard     | 980 Great West Road<br>Brentford<br>Middlesex, England<br>TW8 9GS | President Pharmaceutical Supply Chain | French & British |
| Karenann Terrell | 980 Great West Road<br>Brentford<br>Middlesex, England<br>TW8 9GS | Chief Digital and Technology Officer  | Canadian         |
| Philip Thomson   | 980 Great West Road<br>Brentford<br>Middlesex, England<br>TW8 9GS | President, Global Affairs             | British          |