

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13D

[Rule 13d-101]

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT TO § 24.13d-1(a) AND AMENDMENTS THERETO FILED PURSUANT TO § 240.13D-2(a)

(Amendment No. 4)*

Homology Medicines, Inc.

(Name of Issuer)

Common Stock, par value \$0.0001 per share

(Title of Class of Securities)

438083107

(CUSIP Number)

David Clark

Elliot Press

Deerfield Mgmt, L.P.

780 Third Avenue, 37th Floor

New York, New York 10017

(212) 551-1600

With a copy to:

Jonathan D. Weiner, Esq.

Mark D. Wood, Esq.

Katten Muchin Rosenman LLP

575 Madison Avenue

New York, New York 10022

(212) 940-8800

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

April 24, 2020

(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.

(Continued on following pages)

(Page 1 of 12 Pages)

* 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 (however, see the Notes).

| | | |
|--|--|---|
| 1 | NAME OF REPORTING PERSONS Deerfield Mgmt III, L.P. | |
| 2 | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/> | |
| 3 | SEC USE ONLY | |
| 4 | SOURCE OF FUNDS AF | |
| 5 | CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/> | |
| 6 | CITIZENSHIP OR PLACE OF ORGANIZATION Delaware | |
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 7 | SOLE VOTING POWER 0 |
| | 8 | SHARED VOTING POWER 1,280,229 (1) |
| | 9 | SOLE DISPOSITIVE POWER 0 |
| | 10 | SHARED DISPOSITIVE POWER 1,280,229 (1) |
| 11 | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 1,280,229 (1) | |
| 12 | CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* <input type="checkbox"/> | |
| 13 | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 2.83% | |
| 14 | TYPE OF REPORTING PERSON PN | |

(1) Comprised of shares held by Deerfield Private Design Fund III, L.P.

| | | |
|--|--|---------------------------------------|
| 1 | NAME OF REPORTING PERSONS Deerfield Private Design Fund III, L.P. | |
| 2 | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/> | |
| 3 | SEC USE ONLY | |
| 4 | SOURCE OF FUNDS WC | |
| 5 | CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/> | |
| 6 | CITIZENSHIP OR PLACE OF ORGANIZATION Delaware | |
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 7 | SOLE VOTING POWER 0 |
| | 8 | SHARED VOTING POWER 1,280,229 |
| | 9 | SOLE DISPOSITIVE POWER 0 |
| | 10 | SHARED DISPOSITIVE POWER 1,280,229 |
| 11 | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 1,280,229 | |
| 12 | CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* <input type="checkbox"/> | |
| 13 | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 2.83% | |
| 14 | TYPE OF REPORTING PERSON PN | |

| | | |
|--|--|-------------------------------------|
| 1 | NAME OF REPORTING PERSONS Deerfield Healthcare Innovations Fund, L.P. | |
| 2 | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/> | |
| 3 | SEC USE ONLY | |
| 4 | SOURCE OF FUNDS WC | |
| 5 | CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/> | |
| 6 | CITIZENSHIP OR PLACE OF ORGANIZATION Delaware | |
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 7 | SOLE VOTING POWER 0 |
| | 8 | SHARED VOTING POWER 974,338 |
| | 9 | SOLE DISPOSITIVE POWER 0 |
| | 10 | SHARED DISPOSITIVE POWER 974,338 |
| 11 | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 974,338 | |
| 12 | CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* <input type="checkbox"/> | |
| 13 | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 2.15% | |
| 14 | TYPE OF REPORTING PERSON PN | |

| | | |
|--|--|---|
| 1 | NAME OF REPORTING PERSONS Deerfield Mgmt HIF, L.P. | |
| 2 | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/> | |
| 3 | SEC USE ONLY | |
| 4 | SOURCE OF FUNDS AF | |
| 5 | CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/> | |
| 6 | CITIZENSHIP OR PLACE OF ORGANIZATION Delaware | |
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 7 | SOLE VOTING POWER 0 |
| | 8 | SHARED VOTING POWER 974,338 (2) |
| | 9 | SOLE DISPOSITIVE POWER 0 |
| | 10 | SHARED DISPOSITIVE POWER 974,338 (2) |
| 11 | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 974,338 (2) | |
| 12 | CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* <input type="checkbox"/> | |
| 13 | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 2.15% | |
| 14 | TYPE OF REPORTING PERSON PN | |

(2) Comprised of shares held by Deerfield Healthcare Innovations Fund, L.P.

| | | |
|--|---|---|
| 1 | NAME OF REPORTING PERSONS Deerfield Management Company, L.P. | |
| 2 | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/> | |
| 3 | SEC USE ONLY | |
| 4 | SOURCE OF FUNDS AF | |
| 5 | CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input checked="" type="checkbox"/> | |
| 6 | CITIZENSHIP OR PLACE OF ORGANIZATION Delaware | |
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 7 | SOLE VOTING POWER 0 |
| | 8 | SHARED VOTING POWER 2,254,567 (3) |
| | 9 | SOLE DISPOSITIVE POWER 0 |
| | 10 | SHARED DISPOSITIVE POWER 2,254,567 (3) |
| 11 | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 2,254,567 (3) | |
| 12 | CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* <input type="checkbox"/> | |
| 13 | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 4.99% | |
| 14 | TYPE OF REPORTING PERSON PN | |

(3) Comprised of 1,280,229 shares held by Deerfield Private Design Fund III, L.P. and 974,338 shares held by Deerfield Healthcare Innovations Fund, L.P.

| | | |
|--|--|---|
| 1 | NAME OF REPORTING PERSONS James E. Flynn | |
| 2 | CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/> | |
| 3 | SEC USE ONLY | |
| 4 | SOURCE OF FUNDS AF | |
| 5 | CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/> | |
| 6 | CITIZENSHIP OR PLACE OF ORGANIZATION United States of America | |
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 7 | SOLE VOTING POWER 0 |
| | 8 | SHARED VOTING POWER 2,254,567 (4) |
| | 9 | SOLE DISPOSITIVE POWER 0 |
| | 10 | SHARED DISPOSITIVE POWER 2,254,567 (4) |
| 11 | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 2,254,567 (4) | |
| 12 | CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* <input type="checkbox"/> | |
| 13 | PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 4.99% | |
| 14 | TYPE OF REPORTING PERSON IN | |

(4) Comprised of 1,280,229 shares held by Deerfield Private Design Fund III, L.P. and 974,338 shares held by Deerfield Healthcare Innovations Fund, L.P.

This Amendment No. 4 (this "Amendment") to Schedule 13D amends the Schedule 13D (as previously amended, the "Schedule 13D") filed on April 2, 2018 by (i) Deerfield Mgmt III, L.P. ("Deerfield Mgmt III"), (ii) Deerfield Private Design Fund III, L.P. ("Deerfield Private Design Fund III"), (iii) Deerfield Mgmt, L.P. ("Deerfield Mgmt"), (iv) Deerfield Partners, L.P. ("Deerfield Partners"), (v) Deerfield Healthcare Innovations Fund, L.P. ("Deerfield Healthcare Innovations Fund"), (vi) Deerfield Mgmt HIF, L.P. ("Deerfield Mgmt HIF"), (vii) Deerfield Management Company, L.P. ("Deerfield Management") and (viii) James E. Flynn, a natural person ("Flynn" and collectively with Deerfield Mgmt III, Deerfield Private Design Fund III, Deerfield Healthcare Innovations Fund, Deerfield Mgmt HIF and Deerfield Management, the "Reporting Persons"), with respect to the common stock (the "Common Stock") of Homology Medicines, Inc. (the "Issuer"), as amended by Amendment Nos. 1, 2 and 3 thereto filed on December 30, 2019, January 31, 2020 and April 20, 2020, respectively. Deerfield Private Design Fund III and Deerfield Healthcare Innovations Fund are collectively referred to herein as the "Funds"). As disclosed in Amendment No. 2 to the Schedule 13D, Deerfield Partners and Deerfield Mgmt ceased to beneficially own any shares of Common Stock as of January 30, 2020 and, therefore, are not reporting persons for purposes of this Amendment.

Item 5. Interest in Securities of the Issuer.

Items 5(a), (b), (c) and (e) of the Schedule 13D are hereby amended and restated as follows:

(a)

(1) Deerfield Mgmt III

Number of shares: 1,280,229 (comprised of shares held by Deerfield Private Design Fund III)
 Percentage of shares: 2.83%

(2) Deerfield Private Design Fund III

Number of shares: 1,280,229
 Percentage of shares: 2.83%

(3) Deerfield Healthcare Innovations Fund

Number of shares: 974,338
 Percentage of shares: 2.15%

(4) Deerfield Mgmt HIF

Number of shares: 974,338 (comprised of shares held by Deerfield Healthcare Innovations Fund)
 Percentage of shares: 2.15%

(5) Deerfield Management

Number of shares: 2,254,567 (comprised of shares held by Deerfield Private Design Fund III and Deerfield Healthcare Innovations Fund)
 Percentage of shares: 4.99%

(6) Flynn

Number of shares: 2,254,567 (comprised of shares held by Deerfield Private Design Fund III and Deerfield Healthcare Innovations Fund)

Percentage of shares: 4.99%

(b)

(1) Deerfield Mgmt III

Sole power to vote or direct the vote: 0

Shared power to vote or direct the vote: 1,280,229

Sole power to dispose or to direct the disposition: 0

Shared power to dispose or direct the disposition: 1,280,229

(2) Deerfield Private Design Fund III

Sole power to vote or direct the vote: 0

Shared power to vote or direct the vote: 1,280,229

Sole power to dispose or to direct the disposition: 0

Shared power to dispose or direct the disposition: 1,280,229

(3) Deerfield Healthcare Innovations Fund

Sole power to vote or direct the vote: 0

Shared power to vote or direct the vote: 974,338

Sole power to dispose or to direct the disposition: 0

Shared power to dispose or direct the disposition: 974,338

(4) Deerfield Mgmt HIF

Sole power to vote or direct the vote: 0

Shared power to vote or direct the vote: 974,338

Sole power to dispose or to direct the disposition: 0

Shared power to dispose or direct the disposition: 974,338

(5) Deerfield Management

Sole power to vote or direct the vote: 0

Shared power to vote or direct the vote: 2,254,567

Sole power to dispose or to direct the disposition: 0

Shared power to dispose or direct the disposition: 2,254,567

(6) Flynn

Sole power to vote or direct the vote: 0

Shared power to vote or direct the vote: 2,254,567

Sole power to dispose or to direct the disposition: 0

Shared power to dispose or direct the disposition: 2,254,567

Flynn is the managing member of the general partner of each of Deerfield Mgmt III, Deerfield Mgmt HIF and Deerfield Management. Deerfield Mgmt III is the general partner of Deerfield Private Design Fund III, Deerfield Mgmt HIF is the general partner of Deerfield Healthcare Innovations Fund and Deerfield Management is the investment manager of the Funds.

(c) Transactions in the Common Stock effected by the Reporting Persons in the last sixty (60) days are set forth on Schedule A to this Amendment and Schedule A to Amendment No. 3 ("Amendment No. 3") to the Schedule 13D filed by the Reporting Persons on April 20, 2020. All of the transactions reflected in Schedule A to this Amendment and Schedule A to Amendment No. 3 were effected in open market transactions on the Nasdaq Global Select Market in the ordinary course of the applicable Reporting Person's business.

(e) As of April 20, 2020, the Reporting Persons ceased to beneficially own more than five percent of the Common Stock.

SIGNATURE

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

Dated: May 1, 2020

DEERFIELD MGMT III, L.P.

By: J.E. Flynn Capital III, LLC, General Partner

By: /s/ Jonathan Isler

Name: Jonathan Isler

Title: Attorney-in-Fact

DEERFIELD PRIVATE DESIGN FUND III, L.P.

By: Deerfield Mgmt III, L.P., General Partner

By: J.E. Flynn Capital III, LLC, General Partner

By: /s/ Jonathan Isler

Name: Jonathan Isler

Title: Attorney-in-Fact

DEERFIELD MGMT HIF, L.P.

By: J.E. Flynn Capital HIF, LLC, General Partner

By: /s/ Jonathan Isler

Jonathan Isler, Attorney-in-Fact

DEERFIELD HEALTHCARE INNOVATIONS FUND, L.P.

By: Deerfield Mgmt HIF, L.P., General Partner

By: J.E. Flynn Capital HIF, LLC, General Partner

By: /s/ Jonathan Isler

Jonathan Isler, Attorney-In-Fact

DEERFIELD MANAGEMENT COMPANY, L.P.

By: Flynn Management LLC, General Partner

By: /s/ Jonathan Isler

Name: Jonathan Isler

Title: Attorney-in-Fact

JAMES E. FLYNN

/s/ Jonathan Isler

Jonathan Isler, Attorney-in-Fact

| <u>Reporting Person</u> | <u>Date</u> | <u>Number of Shares Sold</u> | <u>Price per Share (\$)*</u> | <u>Price Range (\$)**</u> |
|---|-------------|--|--------------------------------------|-------------------------------|
| Deerfield Private Design Fund III, L.P. | 4/20/2020 | 84,556 | 13.7021 | 13.425 - 14.03 |
| Deerfield Healthcare Innovations Fund, L.P. | 4/20/2020 | 64,353 | 13.7021 | 13.425 - 14.03 |
| Deerfield Private Design Fund III, L.P. | 4/21/2020 | 51,587 | 12.9358 | 12.85 - 13.265 |
| Deerfield Healthcare Innovations Fund, L.P. | 4/21/2020 | 39,261 | 12.9358 | 12.85 - 13.265 |
| Deerfield Private Design Fund III, L.P. | 4/22/2020 | 70,881 | 13.1754 | 13.00 - 13.46 |
| Deerfield Healthcare Innovations Fund, L.P. | 4/22/2020 | 53,946 | 13.1754 | 13.00 - 13.46 |
| Deerfield Private Design Fund III, L.P. | 4/23/2020 | 29,506 | 13.203 | 13.00 - 13.47 |
| Deerfield Healthcare Innovations Fund, L.P. | 4/23/2020 | 22,456 | 13.203 | 13.00 - 13.47 |
| Deerfield Private Design Fund III, L.P. | 4/24/2020 | 92,080 | 12.827 | 12.70 - 13.28 |
| Deerfield Healthcare Innovations Fund, L.P. | 4/24/2020 | 70,080 | 12.827 | 12.70 - 13.28 |
| Deerfield Private Design Fund III, L.P. | 4/27/2020 | 44,438 | 13.3264 | 13.15 - 13.735 |
| Deerfield Healthcare Innovations Fund, L.P. | 4/27/2020 | 33,820 | 13.3264 | 13.15 - 13.735 |
| Deerfield Private Design Fund III, L.P. | 4/28/2020 | 51,656 | 12.6632 | 12.45 - 13.32 |
| Deerfield Healthcare Innovations Fund, L.P. | 4/28/2020 | 39,313 | 12.6632 | 12.45 - 13.32 |
| Deerfield Private Design Fund III, L.P. | 4/29/2020 | 57,034 | 13.1307 | 12.75 - 13.48 |
| Deerfield Healthcare Innovations Fund, L.P. | 4/29/2020 | 43,407 | 13.1307 | 12.75 - 13.48 |
| Deerfield Private Design Fund III, L.P. | 4/30/2020 | 62,421 | 12.3545 | 12.05 - 12.88 |
| Deerfield Healthcare Innovations Fund, L.P. | 4/30/2020 | 47,506 | 12.3545 | 12.05 - 12.88 |
| Deerfield Private Design Fund III, L.P. | 4/30/2020 | 782 | 13.0946 | 13.085 - 13.10 |
| Deerfield Healthcare Innovations Fund, L.P. | 4/30/2020 | 596 | 13.0946 | 13.085 - 13.10 |

* Each price per share reported in the "Price per Share" column of this Schedule A is a weighted average price. The Reporting Persons undertake to provide to the staff of the Securities and Exchange Commission, upon request, full information regarding the number of shares sold at each separate price within the ranges set forth in the "Price Range" column of this Schedule A.

** The shares were sold in multiple transactions at prices within the price range indicated (unless otherwise indicated).