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# SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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## SCHEDULE 13D

Under the Securities Exchange Act of 1934  
(Amendment No. 1)\*

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### Syros Pharmaceuticals, Inc.

(Name of Issuer)

Common Stock, \$0.001 par value per share  
(Title of Class of Securities)

87184Q107  
(CUSIP Number)

Noubar B. Afeyan, Ph.D.  
Flagship Ventures  
55 Cambridge Parkway, Suite 800E  
Cambridge, MA 02142  
(617) 868-1888

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

August 17, 2017  
(Date of Event Which Requires Filing of this Statement)

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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.

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

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\* 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, as amended ("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).

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1.	Names of Reporting Persons. Flagship Ventures Fund IV General Partner LLC	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3.	SEC Use Only	
4.	Source of Funds (See Instructions) AF	
5.	Check 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 3,204,437
	9.	Sole Dispositive Power 0
	10.	Shared Dispositive Power 3,204,437
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 3,204,437	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
13.	Percent of Class Represented by Amount in Row (11) 12.2%	
14.	Type of Reporting Person (See Instructions) OO	

1.	Names of Reporting Persons. Flagship Ventures Fund IV, L.P.
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>
3.	SEC Use Only
4.	Source of Funds (See Instructions) WC
5.	Check 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 2,591,995
	9. Sole Dispositive Power 0
	10. Shared Dispositive Power 2,591,995
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 2,591,995
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>
13.	Percent of Class Represented by Amount in Row (11) 9.9%
14.	Type of Reporting Person (See Instructions) PN

1.	Names of Reporting Persons. Flagship Ventures Fund IV-Rx, L.P.	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3.	SEC Use Only	
4.	Source of Funds (See Instructions) WC	
5.	Check 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 612,442
	9.	Sole Dispositive Power 0
	10.	Shared Dispositive Power 612,442
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 612,442	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
13.	Percent of Class Represented by Amount in Row (11) 2.3%	
14.	Type of Reporting Person (See Instructions) PN	

1.	Names of Reporting Persons. Flagship VentureLabs IV, LLC
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>
3.	SEC Use Only
4.	Source of Funds (See Instructions) WC
5.	Check 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 213,332
	9. Sole Dispositive Power 0
	10. Shared Dispositive Power 213,332
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 213,332
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>
13.	Percent of Class Represented by Amount in Row (11) 0.8%
14.	Type of Reporting Person (See Instructions) OO

1.	Names of Reporting Persons. Noubar B. Afeyan, Ph.D.	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3.	SEC Use Only	
4.	Source of Funds (See Instructions) AF	
5.	Check 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 3,228,964
	9.	Sole Dispositive Power 0
	10.	Shared Dispositive Power 3,228,964
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 3,228,964	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
13.	Percent of Class Represented by Amount in Row (11) 12.3%	
14.	Type of Reporting Person (See Instructions) IN	

1.	Names of Reporting Persons. Edwin M. Kania, Jr.	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3.	SEC Use Only	
4.	Source of Funds (See Instructions) AF	
5.	Check 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 3,228,964
	9.	Sole Dispositive Power 0
	10.	Shared Dispositive Power 3,228,964
11.	Aggregate Amount Beneficially Owned by Each Reporting Person 3,228,964	
12.	Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
13.	Percent of Class Represented by Amount in Row (11) 12.3%	
14.	Type of Reporting Person (See Instructions) IN	

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**Item 2. Identity and Background**

Item 2 is amended and supplemented to update the principal business address of each Reporting Person to 55 Cambridge Parkway, Suite 800E, Cambridge, Massachusetts 02142.

**Item 4. Purpose of Transaction**

Item 4 is amended and supplemented to disclose that Stéphane Bancel, who is a limited partner of Flagship IV and a member of Flagship IV LLC, is no longer a director of the Issuer. However, notwithstanding Mr. Bancel's departure from the Issuer's board of directors, the Reporting Persons may engage in discussions from time to time with the Issuer's board of directors, the Issuer's management or the Issuer's other stockholders. These discussions may be with respect to (i) acquiring or disposing shares of Common Stock or other securities of the Issuer (collectively, the "Securities"); (ii) maintaining or changing the Issuer's business, operations, governance, management, strategy or capitalization; or (iii) implementing transactions that may relate to or may result in any matter set forth in paragraphs (a) through (j) of Item 4 of Schedule 13D. Additionally, the Reporting Persons may acquire additional Securities through open market transactions, privately negotiated transactions or other methods.

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

Item 5(a)-(c) is amended and restated as follows:

(a)-(b) The information set forth in rows 7 through 13 of the cover pages to this Schedule 13D is incorporated by reference. The percentage set forth in row 13 is based on 26,260,203 outstanding shares of Common Stock on July 31, 2017, as reported in the Issuer's Form 10-Q filed on August 9, 2017.

Flagship IV, Flagship IV-Rx and VentureLabs IV directly hold 2,378,663 shares, 612,442 shares and 213,332 shares of Common Stock, respectively. Flagship IV, as the manager of VentureLabs IV, may be deemed to beneficially own the shares directly held by VentureLabs IV. Flagship IV LLC, as the general partner of Flagship IV and Flagship IV-Rx, may be deemed to beneficially own the shares directly held by Flagship IV, Flagship IV-Rx and VentureLabs IV. Dr. Afeyan and Mr. Kania, as the managers of Flagship IV LLC, may be deemed to beneficially own the shares directly held by Flagship IV, Flagship IV-Rx and VentureLabs IV.

(c) On August 17, 2017, Flagship IV and Flagship IV-Rx distributed to its limited partners and sole general partner, Flagship IV LLC, pro rata and without consideration, 1,295,997 shares and 306,222 shares, respectively, of Common Stock. Flagship IV LLC, in turn, distributed to its members, pro rata and without consideration, the 54,283 shares and 10 shares it received from Flagship IV and Flagship IV-Rx, respectively. Dr. Afeyan and Mr. Kania, each a manager of Flagship IV LLC, each received 24,527 shares through Flagship IV LLC's distribution.

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**SIGNATURES**

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.

Dated: August 21, 2017

FLAGSHIP VENTURES FUND IV GENERAL  
PARTNER LLC

By: /s/ Noubar B. Afeyan, Ph.D.

Name: Noubar B. Afeyan, Ph.D.

Title: Manager

FLAGSHIP VENTURES FUND IV, L.P.

By: Flagship Ventures Fund IV General Partner LLC

By: /s/ Noubar B. Afeyan, Ph.D.

Name: Noubar B. Afeyan, Ph.D.

Title: Manager

FLAGSHIP VENTURES FUND IV-RX, L.P.

By: Flagship Ventures Fund IV General Partner LLC

By: /s/ Noubar B. Afeyan, Ph.D.

Name: Noubar B. Afeyan, Ph.D.

Title: Manager

FLAGSHIP VENTURELABS IV, LLC

By: Flagship Ventures Fund IV, L.P.

By: Flagship Ventures Fund IV General Partner LLC

By: /s/ Noubar B. Afeyan, Ph.D.

Name: Noubar B. Afeyan, Ph.D.

Title: Manager

/s/ Noubar B. Afeyan, Ph.D.

NOUBAR B. AFEYAN, PH.D.

/s/ Edwin M. Kania, Jr.

EDWIN M. KANIA, JR.