

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

OMB APPROVAL	
OMB Number:	3235-0287
Estimated average burden hours per response:	0.5

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

1. Name and Address of Reporting Person* <u>Flagship Ventures Fund IV General Partner LLC</u> (Last) (First) (Middle) 55 CAMBRIDGE PARKWAY, SUITE 800E (Street) CAMBRIDGE MA 02142 (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <u>Axcella Health Inc. [AXLA]</u>	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director <input checked="" type="checkbox"/> 10% Owner Officer (give title below) Other (specify below)
	3. Date of Earliest Transaction (Month/Day/Year) 10/13/2022	
	4. If Amendment, Date of Original Filed (Month/Day/Year)	6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	10/13/2022		p ⁽¹⁾		2,743,902	A	\$1.64	11,344,305	I	By Flagship Ventures Fund IV, L.P. ⁽²⁾
Common Stock	10/13/2022		p ⁽³⁾		2,757,333	A	\$1.64	14,101,638	I	By Flagship Ventures Fund IV, L.P. ⁽²⁾
Common Stock	10/13/2022		p ⁽¹⁾		914,634	A	\$1.64	5,380,500	I	By Flagship Ventures Opportunities I, L.P. ⁽⁴⁾
Common Stock	10/13/2022		p ⁽³⁾		919,111	A	\$1.64	6,299,611	I	By Flagship Ventures Opportunities I, L.P. ⁽⁴⁾
Common Stock	10/13/2022		p ⁽¹⁾		3,048,780	A	\$1.64	3,048,780	I	By FPA, L.P. ⁽⁵⁾
Common Stock								2,004,657	I	By Flagship Ventures Fund IV-Rx, L.P. ⁽⁶⁾
Common Stock								2,035,830	I	By Flagship VentureLabs IV, LLC ⁽⁷⁾
Common Stock								1,761,029	I	By Flagship Ventures Fund 2007, L.P. ⁽⁸⁾

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)	6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
				Code	V		Date Exercisable	Expiration Date					
1. Name and Address of Reporting Person*													

[Flagship Ventures Fund IV General Partner LLC](#)

(Last) (First) (Middle)
55 CAMBRIDGE PARKWAY, SUITE 800E

(Street)
CAMBRIDGE MA 02142

(City) (State) (Zip)

1. Name and Address of Reporting Person*

[Flagship Ventures Fund IV, L.P.](#)

(Last) (First) (Middle)
55 CAMBRIDGE PARKWAY, SUITE 800E

(Street)
CAMBRIDGE MA 02142

(City) (State) (Zip)

1. Name and Address of Reporting Person*

[Flagship Ventures Opportunities Fund I General Partner LLC](#)

(Last) (First) (Middle)
55 CAMBRIDGE PARKWAY, SUITE 800E

(Street)
CAMBRIDGE MA 02142

(City) (State) (Zip)

1. Name and Address of Reporting Person*

[Flagship Ventures Opportunities Fund I, L.P.](#)

(Last) (First) (Middle)
55 CAMBRIDGE PARKWAY, SUITE 800E

(Street)
CAMBRIDGE MA 02142

(City) (State) (Zip)

1. Name and Address of Reporting Person*

[AFEYAN NOUBAR](#)

(Last) (First) (Middle)
55 CAMBRIDGE PARKWAY, SUITE 800E

20 ACORN PARK DRIVE

(Street)
CAMBRIDGE MA 02142

(City) (State) (Zip)

Explanation of Responses:

1. On October 13, 2022, Flagship Ventures Fund IV, L.P. ("Flagship Fund IV"), Flagship Ventures Opportunities Fund I, L.P. ("Flagship Opportunities I") and FPA, L.P. ("FPA Fund") purchased 2,743,902 shares, 914,634 shares and 3,048,780 shares, respectively, of the Issuer's Common Stock in a registered direct offering (the "October 2022 Offering") at a price of \$1.64 per share pursuant to a Securities Purchase Agreement dated October 13, 2022.

2. Shares held by Flagship Fund IV, Flagship Ventures Fund IV General Partner LLC ("Flagship Fund IV GP") is the general partner of Flagship Fund IV. Noubar B. Afeyan, Ph.D. is the sole manager of Flagship Fund IV GP. Each of the reporting persons except for Flagship Fund IV disclaims beneficial ownership of such shares except to the extent of his or its pecuniary interest therein.

3. Represents shares of Common Stock issued upon conversion of unsecured convertible promissory notes (the "Notes") previously held by Flagship Fund IV and Flagship Opportunities I that were issued pursuant to the terms of the Securities Purchase Agreement dated September 20, 2022. In connection with the October 2022 Offering, the conversion price of the Notes became fixed at \$1.64 and the outstanding principal plus accrued interest of the Notes held by Flagship Fund IV and Flagship Opportunities I automatically converted into 2,757,333 shares and 919,111 shares, respectively, of the Issuer's Common Stock.

4. Shares held by Flagship Opportunities I, Flagship Ventures Opportunities Fund I General Partner LLC ("Flagship Opportunities GP") is the general partner of Flagship Opportunities I. Noubar B. Afeyan, Ph.D. is the sole manager of Flagship Opportunities GP. Each of the reporting persons except for Flagship Opportunities I disclaims beneficial ownership of the shares except to the extent of his or its pecuniary interest therein.

5. Shares held by FPA Fund, FPA General Partner LLC ("FPA Fund GP") is the general partner of FPA Fund. Flagship Pioneering, Inc. ("Flagship Pioneering") is the manager of FPA Fund GP. Noubar B. Afeyan, Ph.D. is the CEO and sole stockholder of Flagship Pioneering. Each of the reporting persons except for FPA Fund disclaims beneficial ownership of such shares except to the extent of his or its pecuniary interest therein.

6. Shares held by Flagship Ventures Fund IV-Rx, L.P., ("Flagship Fund IV-Rx"), Flagship Fund IV GP is the general partner of Flagship Fund IV-Rx. Noubar B. Afeyan, Ph.D. is the sole manager of Flagship Fund IV GP. Each of the reporting persons except for Flagship Fund IV-Rx disclaims beneficial ownership of such shares except to the extent of his or its pecuniary interest therein.

7. Shares held by Flagship VentureLabs IV, LLC ("VentureLabs IV"). Flagship Fund IV is a member of VentureLabs IV and also serves as its manager. Flagship Fund IV GP is the general partner of Flagship Fund IV. Noubar B. Afeyan, Ph.D. is the sole manager of Flagship Fund IV GP. Each of the reporting persons except for VentureLabs IV disclaims beneficial ownership of such shares except to the extent of his or its pecuniary interest therein.

8. Shares held by Flagship Ventures Fund 2007, L.P. ("Flagship Fund 2007"). Flagship Ventures Fund 2007 General Partner LLC ("Fund 2007 GP") is the general partner of Flagship Fund 2007. Noubar B. Afeyan, Ph.D. is the sole manager of Fund 2007 GP. Each of the reporting persons except for Flagship Fund 2007 disclaims beneficial ownership of such shares except to the extent of his or its pecuniary interest therein.

Remarks:

Flagship Ventures Fund IV
General Partner LLC, By: /s/
Noubar B. Afeyan, Ph.D., 10/17/2022
Name: Noubar B. Afeyan,
Ph.D., Title: Manager

Flagship Ventures Fund IV,
L.P., By: Flagship Ventures
Fund IV General Partner LLC,
its general partner, By: /s/ 10/17/2022
Noubar B. Afeyan, Ph.D.,
Name: Noubar B. Afeyan,
Ph.D., Title: Manager

Flagship Ventures
Opportunities Fund I General
Partner LLC, By: /s/ Noubar 10/17/2022
B. Afeyan, Ph.D., Name:
Noubar B. Afeyan, Ph.D.,
Title: Manager

Flagship Ventures
Opportunities Fund I, L.P. By:
Flagship Ventures
Opportunities Fund I General
Partner LLC, its general 10/17/2022
partner, By: /s/ Noubar B.
Afeyan, Ph.D., Name: Noubar
B. Afeyan, Ph.D., Title:
Manager

Noubar B. Afeyan, Ph.D. By: 10/17/2022
/s/ Noubar B. Afeyan, Ph.D.

** Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.