

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

OMB APPROVAL	
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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>Atlas Venture Fund IX, L.P.</u> (Last) (First) (Middle) 25 FIRST STREET, SUITE 303 (Street) CAMBRIDGE MA 02141 (City) (State) (Zip)	2. Date of Event Requiring Statement (Month/Day/Year) 11/01/2017	3. Issuer Name and Ticker or Trading Symbol <u>Spero Therapeutics, Inc. [SPRO]</u>	
		4. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director <input checked="" type="checkbox"/> 10% Owner Officer (give title below) Other (specify below)	5. If Amendment, Date of Original Filed (Month/Day/Year) 6. Individual or Joint/Group Filing (Check Applicable Line) Form filed by One Reporting Person <input checked="" type="checkbox"/> Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Beneficially Owned

1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)
Common Stock	42,781 ⁽¹⁾	D ⁽⁷⁾	

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

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)	4. Conversion or Exercise Price of Derivative Security	5. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date				
Junior Preferred Stock	(2)	(2)	Common Stock 245,605 ⁽³⁾	(2)	D ⁽⁷⁾	
Series A Preferred Stock	(4)	(4)	Common Stock 246,272 ⁽³⁾	(4)	D ⁽⁷⁾	
Series B Preferred Stock	(5)	(5)	Common Stock 328,992 ⁽³⁾	(5)	D ⁽⁷⁾	
Series C Preferred Stock	(6)	(6)	Common Stock 513,318 ⁽³⁾	(6)	D ⁽⁷⁾	

1. Name and Address of Reporting Person* <u>Atlas Venture Fund IX, L.P.</u> (Last) (First) (Middle) 25 FIRST STREET, SUITE 303 (Street) CAMBRIDGE MA 02141 (City) (State) (Zip)

1. Name and Address of Reporting Person* <u>Atlas Venture Associates IX, L.P.</u> (Last) (First) (Middle) 25 FIRST STREET, SUITE 303 (Street) CAMBRIDGE MA 02141 (City) (State) (Zip)

1. Name and Address of Reporting Person* <u>Atlas Venture Associates IX, LLC</u> (Last) (First) (Middle) 25 FIRST STREET, SUITE 303 (Street)
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CAMBRIDGE MA 02141

(City) (State) (Zip)

Explanation of Responses:

1. The number of shares reported reflects a 1-for-6.0774 reverse stock split of the Issuer's common stock effected on October 20, 2017.
2. The shares of Junior preferred stock are convertible into the number of shares of common stock shown in Column 3, calculated using the conversion ratio set forth in the Issuer's Amended and Restated Certificate of Incorporation, as amended, at any time at the holder's election and automatically upon the closing of the Issuer's initial public offering. The shares have no expiration date.
3. Share numbers give effect to the 1-for-6.0774 reverse stock split of the Issuer's common stock effected on October 20, 2017.
4. The shares of Series A preferred stock are convertible into the number of shares of common stock shown in Column 3, calculated using the conversion ratio set forth in the Issuer's Amended and Restated Certificate of Incorporation, as amended, at any time at the holder's election and automatically upon the closing of the Issuer's initial public offering. The shares have no expiration date.
5. The shares of Series B preferred stock are convertible into the number of shares of common stock shown in Column 3, calculated using the conversion ratio set forth in the Issuer's Amended and Restated Certificate of Incorporation, as amended, at any time at the holder's election and automatically upon the closing of the Issuer's initial public offering. The shares have no expiration date.
6. The shares of Series C preferred stock are convertible into the number of shares of common stock shown in Column 3, calculated using the conversion ratio set forth in the Issuer's Amended and Restated Certificate of Incorporation, as amended, at any time at the holder's election and automatically upon the closing of the Issuer's initial public offering. The shares have no expiration date.
7. The shares are held directly by Atlas Venture Fund IX, L.P. ("Atlas Venture Fund IX"). The general partner of Atlas Venture Fund IX is Atlas Venture Associates IX, L.P. ("AVA IX LP"). Atlas Venture Associates IX, LLC ("AVA IX LLC") is the general partner of AVA IX LP. Each of AVA IX LP and AVA IX LLC disclaims beneficial ownership of the shares held by Atlas Venture Fund IX, except to the extent of its pecuniary interest therein.

Remarks:

Atlas Venture Fund IX, LP, By:
Atlas Venture Associates IX,
LP, its general partner, By:
Atlas Venture Associates IX, 11/01/2017
LLC, its general partner, By:
Frank Castellucci, General
Counsel, /s/ Frank Castellucci
Atlas Venture Associates IX,
LP, By: Atlas Venture
Associates IX, LLC, its general
partner, By: Frank Castellucci, 11/01/2017
General Counsel, /s/ Frank
Castellucci
Atlas Venture Associates IX,
LLC, By: Frank Castellucci, 11/01/2017
General Counsel, /s/ Frank
Castellucci

** 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 5 (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.