ACCELERON PHARMA INC Form SC 13G/A February 16, 2016

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

SCHEDULE 13G/A

Under the Securities Exchange Act of 1934 (Amendment No. 2)*

ACCELERON PHARMA INC. (Name of Issuer)

COMMON STOCK (Title of Class of Securities)

00434H108 (CUSIP Number)

December 31, 2015 (Date of Event Which Requires Filing of This Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

Rule 13d-1(b)

Rule 13d-1(c)

Rule 13d-1(d)

* 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 the disclosures provided in a prior cover page.

The information required in 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).

CUSIP No. 00434H108 Page 2 of 17 Pages

1. Name of Reporting Persons

Advanced Technology Ventures VI, L.P.

- 2. Check the Appropriate Box if a Member of a Group (See Instructions)
 - (a) (b) 1
- 3. SEC USE ONLY
- 4. Citizenship or Place of Organization

Dela	ware
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Delaware	5.	Sole Voting Power
Number of		0
Shares	6.	Shared Voting Power
Beneficially		-
Owned by		1,677,3992
Each	7.	Sole Dispositive Power
Reporting		•
Person		0
With:	8.	Shared Dispositive Power
		1 (77 2002

1,677,3992

9. Aggregate Amount Beneficially Owned by Each Reporting Person

1,677,3992

- 10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)
- 11. Percent of Class Represented by Amount in Row (9)

4.5%3

12. Type of Reporting Person (See Instructions)

PN

1 This Schedule 13G/A is filed by Advanced Technology Ventures VI, L.P. ("ATV VI"), Advanced Technology Ventures VII, L.P. ("ATV VII"), Advanced Technology Ventures VII (B), L.P. ("ATV VII-B"), Advanced Technology Ventures VII(C), L.P. ("ATV VII-C"), ATV Entrepreneurs VI, L.P. ("ATVE VI"), ATV Entrepreneurs VI, L.P. ("ATVE VII"), ATV Alliance 2003, L.P. ("ATV Alliance"), ATV Associates VI, L.L.C. (the general partner of ATV VI and ATVE VI) ("ATVA VI"), ATV Associates VII, L.L.C. (the general partner of ATV VII-B, ATV VII-C and ATVE VII) ("ATVA VII"), and ATV Alliance Associates, L.L.C. (the general partner of ATV Alliance) ("ATVAA" and, together with ATV VI, ATV VII, ATV VII-B, ATV VII-C, ATVE VI, ATVE VII, ATV Alliance, ATVA VI and ATVA VII, the "ATV Entities"). The ATV Entities expressly disclaim status as a "group" for purposes of this Schedule 13G/A.

- 2 Consists of (i) 205,334 shares of common stock and warrants to purchase 19,916 shares of common stock owned by ATV VI, (ii) 1,227,853 shares of common stock and warrants to purchase 119,323 shares of common stock owned by ATV VII, (iii) 49,271 shares of common stock and warrants to purchase 4,788 shares of common stock owned by ATV VII-B, (iv) 23,684 shares of common stock and warrants to purchase 2,302 shares of common stock owned by ATV VII-C, (v) 7,314 shares of common stock and warrants to purchase 711 shares of common stock owned by AVTE VII, (vi) 13,104 shares of common stock and warrants to purchase 1,271 shares of common stock owned by AVTE VI and (vii) 2,528 shares of common stock owned by ATV Alliance.
- 3 This percentage is calculated based the number of the Issuer's outstanding shares equal to the sum of (i) 33,253,235 shares of the Issuer's common stock outstanding as of October 31, 2015, as set forth in the Issuer's quarterly report on Form 10-Q filed with the Securities and Exchange Commission on November 4, 2015, (ii) 3,750,000 shares issued in connection with a public offering in January 2016 and (iii) 148,311 shares of common stock underlying warrants owned by the Reporting Persons.

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1. Name of Reporting Persons

Advanced Technology Ventures VII, L.P.

- 2. Check the Appropriate Box if a Member of a Group (See Instructions)
 - (a) (b) 1
- 3. SEC USE ONLY
- 4. Citizenship or Place of Organization

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Bolaware	5.	Sole Voting Power
Number of		0
Shares	6.	Shared Voting Power
Beneficially		_
Owned by		1,677,3992
Each	7.	Sole Dispositive Power
Reporting		_
Person		0
With:	8.	Shared Dispositive Power
		_

1,677,3992

9. Aggregate Amount Beneficially Owned by Each Reporting Person

1,677,3992

- 10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)
- 11. Percent of Class Represented by Amount in Row (9)

4.5%3

12. Type of Reporting Person (See Instructions)

- 1 This Schedule 13G/A is filed by ATV VI, ATV VII, ATV VII-B, ATV VII-C, ATVE VI, ATVE VII, ATV Alliance, ATVA VI (the general partner of ATV VI and ATVE VI), ATVA VII (the general partner of ATV VII, ATV VII-B, ATV VII-C and ATVE VII), and ATVAA (the general partner of ATV Alliance). The ATV Entities expressly disclaim status as a "group" for purposes of this Schedule 13G/A.
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- stock and warrants to purchase 711 shares of common stock owned by AVTE VII, (vi) 13,104 shares of common stock and warrants to purchase 1,271 shares of common stock owned by AVTE VI and (vii) 2,528 shares of common stock owned by ATV Alliance.
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1. Name of Reporting Persons

Advanced Technology Ventures VII (B), L.P.

- 2. Check the Appropriate Box if a Member of a Group (See Instructions)
 - (a) (b) 1
- 3. SEC USE ONLY
- 4. Citizenship or Place of Organization

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	5.	Sole Voting Power
Number of Shares	6.	0 Shared Voting Power
Beneficially		
Owned by		1,677,3992
Each	7.	Sole Dispositive Power
Reporting		
Person		0
With:	8.	Shared Dispositive Power

1,677,3992

9. Aggregate Amount Beneficially Owned by Each Reporting Person

1,677,3992

- 10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)
- 11. Percent of Class Represented by Amount in Row (9)

4.5%3

12. Type of Reporting Person (See Instructions)

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1. Name of Reporting Persons

Advanced Technology Ventures VII(C), L.P.

- 2. Check the Appropriate Box if a Member of a Group (See Instructions)
 - (a) (b) 1
- 3. SEC USE ONLY
- 4. Citizenship or Place of Organization

Del	aw	are

5.	Sole Voting Power
6	0 Shared Voting Power
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	1,677,3992
7.	Sole Dispositive Power
	0
8.	Shared Dispositive Power
	6.7.

1,677,3992

9. Aggregate Amount Beneficially Owned by Each Reporting Person

1,677,3992

- 10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)
- 11. Percent of Class Represented by Amount in Row (9)

4.5%3

12. Type of Reporting Person (See Instructions)

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Pages

1. Name of Reporting Persons

ATV Entrepreneurs VI, L.P.

- 2. Check the Appropriate Box if a Member of a Group (See Instructions)
 - (a) (b) 1
- 3. SEC USE ONLY
- 4. Citizenship or Place of Organization

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Sole Voting Power
0 Shared Voting Power
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1,677,3992
Sole Dispositive Power
0
Shared Dispositive Power

1,677,3992

9. Aggregate Amount Beneficially Owned by Each Reporting Person

1,677,3992

- 10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)
- 11. Percent of Class Represented by Amount in Row (9)

4.5%3

12. Type of Reporting Person (See Instructions)

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CUSIP No. 00434H108

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Pages

1. Name of Reporting Persons

ATV Entrepreneurs VII, L.P.

- 2. Check the Appropriate Box if a Member of a Group (See Instructions)
 - (a) (b) 1
- 3. SEC USE ONLY
- 4. Citizenship or Place of Organization

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5.	Sole Voting Power
6	0 Shared Voting Power
0.	Shared voung Fower
	1,677,3992
7.	Sole Dispositive Power
	0
8.	Shared Dispositive Power
	6.7.

1,677,3992

9. Aggregate Amount Beneficially Owned by Each Reporting Person

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CUSIP No. 00434H108

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Pages

1. Name of Reporting Persons

ATV Alliance 2003, L.P.

- 2. Check the Appropriate Box if a Member of a Group (See Instructions)
 - (a) (b) 1
- 3. SEC USE ONLY
- 4. Citizenship or Place of Organization

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Number of		0
Shares	6.	Shared Voting Power
Beneficially		
Owned by		1,677,3992
Each	7.	Sole Dispositive Power
Reporting		
Person		0
With:	8.	Shared Dispositive Power

1,677,3992

9. Aggregate Amount Beneficially Owned by Each Reporting Person

1,677,3992

- 10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)
- 11. Percent of Class Represented by Amount in Row (9)

4.5%3

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CUSIP No. 00434H108

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Pages

1. Name of Reporting Persons

ATV Associates VI, L.L.C.

- 2. Check the Appropriate Box if a Member of a Group (See Instructions)
 - (a) (b) 1
- 3. SEC USE ONLY
- 4. Citizenship or Place of Organization

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Belaware	5.	Sole Voting Power
Number of		0
Shares	6.	Shared Voting Power
Beneficially		
Owned by		1,677,3992
Each	7.	Sole Dispositive Power
Reporting		-
Person		0
With:	8.	Shared Dispositive Power
		-

1,677,3992

9. Aggregate Amount Beneficially Owned by Each Reporting Person

1,677,3992

- 10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)
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4.5%3

12. Type of Reporting Person (See Instructions)

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Name of Reporting Persons 1.

ATV Associates VII, L.L.C.

- 2. Check the Appropriate Box if a Member of a Group (See Instructions)
 - (b) 1 (a)
- 3. SEC USE ONLY
- Citizenship or Place of Organization 4.

Delaware

	5.	Sole Voting Power
Number of		0
Shares	6.	Shared Voting Power
Beneficially		
Owned by		1,677,3992
Each	7.	Sole Dispositive Power
Reporting		-
Person		0
With:	8.	Shared Dispositive Power

1,677,3992

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1,677,3992

- 10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)
- Percent of Class Represented by Amount in Row (9) 11.

4.5%3

Type of Reporting Person (See Instructions) 12.

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Pages

1. Name of Reporting Persons

ATV Alliance Associates, L.L.C.