

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
WASHINGTON, D.C. 20549

**FORM S-8**

**REGISTRATION STATEMENT  
under the  
SECURITIES ACT OF 1933**

**ACCELERON PHARMA INC.**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction  
of incorporation or organization)

**27-0072226**  
(I.R.S. Employer  
Identification No.)

**128 Sidney Street  
Cambridge, Massachusetts 02139  
(617) 649-9200**  
(Address, including Zip Code, of Principal Executive Offices)

**Acceleron Pharma Inc. 2013 Equity Incentive Plan**  
(Full title of the plan)

**Habib J. Dable**  
**Chief Executive Officer and President**  
**128 Sidney Street**  
**Cambridge, Massachusetts 02139**  
**(617) 649-9200**  
(Name, address and telephone number, including area code, of agent for service)

with copies to:

**Marc Rubenstein, Esq.**  
Ropes & Gray LLP  
Prudential Tower  
800 Boylston Street  
Boston, Massachusetts 02199  
(617) 951-7000

**John D. Quisel, Ph.D., Esq.**  
Executive Vice President, Chief Business Officer and Secretary  
Acceleron Pharma Inc.  
128 Sidney Street  
Cambridge, Massachusetts 02139  
(617) 649-9200

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

**CALCULATION OF REGISTRATION FEE**

Title of securities to be registered	Amount to be registered (1)	Proposed maximum offering price per share (2)	Proposed maximum aggregate offering price (2)	Amount of registration fee
Common Stock, par value \$0.001 per share	1,850,429	\$ 42.33	\$ 78,328,659.57	\$ 9,493.43

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- (1) The number of shares of common stock, par value \$0.001 per share (“Common Stock”), of Acceleron Pharma Inc. (the “Registrant”) stated above consists of shares of Common Stock reserved under the Registrant's 2013 Equity Incentive Plan (the “Plan”) as a result of the automatic increase in shares reserved thereunder on January 1, 2019 pursuant to the terms of the Plan. In addition, pursuant to Rule 416 under the Securities Act of 1933, as amended (the “Securities Act”), this Registration Statement covers, in addition to the number of shares stated above, an indeterminate number of shares which may be subject to grant or otherwise issuable after the operation of certain anti-dilution and other provisions of the Plan.
  - (2) Pursuant to Rules 457(c) and 457(h) of the Securities Act, the proposed maximum offering price is estimated solely for the purpose of calculating the registration fee and is based on the average of the high and low market prices for the Common Stock reported on the Nasdaq Global Market as of a date (February 22, 2019) within five business days prior to filing this Registration Statement.
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## EXPLANATORY NOTE

This Registration Statement registers additional securities of the same class as other securities for which a registration statement filed on Form S-8 (SEC File No. 333-192789) of the Registrant is effective. The information contained in the Registrant's registration statement on Form S-8 (SEC File No. 333-192789) is hereby incorporated by reference pursuant to General Instruction E.

### PART II INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

#### Item 8. Exhibits.

Exhibit Number	Description
4.1	<a href="#">Restated Certificate of Incorporation of Acceleron Pharma Inc. (previously filed as Exhibit 3.1 to the report on Form 8-K filed September 24, 2013 (File No. 001-36065) and incorporated herein by reference)</a>
4.2	<a href="#">Amended and Restated Bylaws of Acceleron Pharma Inc., as amended (previously filed as Exhibit 3.2 to the report on Form 10-K filed February 27, 2018 (File No. 001-36065) and incorporated herein by reference)</a>
4.3	<a href="#">Form of Common Stock Certificate, \$0.001 par value per share (previously filed as Exhibit 4.1 to the registration statement on Form S-1 (File No. 333-190417) and incorporated herein by reference)</a>
4.4	<a href="#">Acceleron Pharma Inc. 2013 Equity Incentive Plan (previously filed as Exhibit 4.4 to the registration statement on Form S-8 (File No. 333-192789) and incorporated herein by reference)</a>
5.1	<a href="#">Opinion of Ropes &amp; Gray LLP</a>
23.1	<a href="#">Consent of Ropes &amp; Gray LLP (included in Exhibit 5.1)</a>
23.2	<a href="#">Consent of Ernst &amp; Young LLP</a>
24.1	<a href="#">Power of Attorney (included on the signature page of this registration statement)</a>

## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cambridge, Commonwealth of Massachusetts on the 27th day of February, 2019.

ACCELERON PHARMA INC.

By: /s/ Habib J. Dable  
Habib J. Dable  
Chief Executive Officer, President and Director

## POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints Habib J. Dable, Kevin F. McLaughlin and John D. Quisel, Ph.D., Esq., and each of them singly, his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution in each of them singly, for him and in his name, place and stead, and in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement on Form S-8 of Acceleron Pharma Inc., and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting to the attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite or necessary to be done in or about the premises, as full to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that the attorneys-in-fact and agents or any of each of them or their substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Habib J. Dable</u> Habib J. Dable	Chief Executive Officer, President and Director (Principal Executive Officer)	February 27, 2019
<u>/s/ Kevin F. McLaughlin</u> Kevin F. McLaughlin	Senior Vice President, Chief Financial Officer and Treasurer (Principal Financial Officer and Principal Accounting Officer)	February 27, 2019
<u>/s/ Francois Nader, M.D.</u> Francois Nader, M.D.	Chair of the Board of Directors	February 27, 2019
<u>/s/ Jean M. George</u> Jean M. George	Director	February 27, 2019
<u>/s/ Terrence C. Kearney</u> Terrence C. Kearney	Director	February 27, 2019
<u>/s/ Tom Maniatis, Ph.D.</u> Tom Maniatis, Ph.D.	Director	February 27, 2019
<u>/s/ Thomas A. McCourt</u> Thomas A. McCourt	Director	February 27, 2019
<u>/s/ Richard F. Pops</u> Richard F. Pops	Director	February 27, 2019
<u>/s/ Karen L. Smith</u> Karen L. Smith	Director	February 27, 2019
<u>/s/ Joseph S. Zakrzewski</u> Joseph S. Zakrzewski	Director	February 27, 2019



ROPES & GRAY LLP  
PRUDENTIAL TOWER  
800 BOYLSTON STREET  
BOSTON, MA 02199-3600  
WWW.ROPESGRAY.COM

February 27, 2019

Acceleron Pharma Inc.  
128 Sidney Street  
Cambridge, MA 02139

Ladies and Gentlemen:

This opinion letter is furnished to you in connection with the registration statement on Form S-8 (the "Registration Statement"), filed by Acceleron Pharma Inc., a Delaware corporation (the "Company"), on the date hereof, with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "Securities Act"), for the registration of 1,850,429 shares of Common Stock, \$0.001 par value, of the Company (the "Shares"). The Shares are issuable under the Company's 2013 Equity Incentive Plan (the "Plan").

We are familiar with the actions taken by the Company in connection with the adoption of the Plan. We have examined such certificates, documents and records and have made such investigation of fact and such examination of law as we have deemed appropriate in order to enable us to render the opinions set forth herein. In conducting such investigation, we have relied, without independent verification, upon certificates of officers of the Company, public officials and other appropriate persons.

The opinions expressed below are limited to the Delaware General Corporation Law.

Based upon and subject to the foregoing, we are of the opinion that the Shares have been duly authorized and, when the Shares have been issued and sold in accordance with the terms of the Plan, the Shares will be validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion letter as an exhibit to the Registration Statement. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours,

/s/ Ropes & Gray LLP

Ropes & Gray LLP

**Consent of Independent Registered Public Accounting Firm**

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the Acceleron Pharma Inc. 2013 Equity Incentive Plan of our reports dated February 27, 2019, with respect to the consolidated financial statements of Acceleron Pharma Inc. and the effectiveness of internal control over financial reporting of Acceleron Pharma Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2018, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Boston, Massachusetts  
February 27, 2019