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

FORM S-8
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

ACELRX PHARMACEUTICALS, INC.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of Incorporation or
organization)

41-2193603
(I.R.S. Employer Identification No.)

**351 Galveston Drive
Redwood City, CA
(650) 216-3500**
(Address of principal executive offices) (Zip code)

**2011 Equity Incentive Plan
2011 Employee Stock Purchase Plan**
(Full title of the plan)

**Raffi Asadorian
Chief Financial Officer
AcelRx Pharmaceuticals, Inc.
351 Galveston Drive
Redwood City, CA 94063
(650) 216-3500**
(Name and address of agent for service) (Telephone number, including area code, of agent for service)

**Copy to:
Robert Phillips
Cooley LLP
3175 Hanover Street
Palo Alto, California 94304
(650) 843-5000**

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
Non-accelerated filer

Accelerated filer
Smaller reporting company

Emerging growth company

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)(2)	Proposed Maximum Offering Price per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, \$0.001 par value per share ("Common Stock")				
- Reserved for future issuance under the 2011 Incentive Equity Incentive Plan (the "Plan")	3,182,924	\$1.10(3)	\$3,501,216	\$454.46
- Reserved for future issuance under the 2011 Employee Stock Purchase Plan (the "ESPP")	1,591,462	\$0.94(4)	\$1,495,974	\$194.18
Total	4,774,386			\$648.64

- (1) Pursuant to Rule 416(a) promulgated under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement shall also cover any additional shares of the Registrant's Common Stock that become issuable under the plans set forth herein by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without receipt of consideration that increases the number of outstanding shares of the Registrant's Common Stock.
 - (2) Represents additional shares of the Registrant's Common Stock reserved for future issuance under the Plan and the ESPP by reason of the automatic increase provisions therein.
 - (3) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(c) and Rule 457(h) promulgated under the Securities Act, and based on the average of the high and low sales prices of Registrant's Common Stock as reported on the Nasdaq Global Market on March 12, 2020.
 - (4) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(c) and Rule 457(h) promulgated under the Securities Act, and based on 85% of the average of the high and low sales prices of Registrant's Common Stock as reported on the Nasdaq Global Market on March 12, 2020. Pursuant to the ESPP, the purchase price of a share of Common Stock is 85% of the fair market value of the Common Stock.
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EXPLANATORY NOTE

This Registration Statement on Form S-8 is being filed for the purpose of registering additional shares of the common stock of AcelRx Pharmaceuticals, Inc. (the "Registrant") to be issued pursuant to the Plan and the ESPP. The information contained in the Registrant's registration statements on Form S-8 (SEC File Nos. 333-230139, 333-223535, 333-216492, 333-209998, 333-202709, 333-194634, 333-187206, 333-180334, and 333-172409) ("Prior Forms S-8"), are securities of the same class as other securities as the additional shares of common stock being registered by this Registration Statement on Form S-8.

PART II INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Pursuant to General Instruction E to Form S-8, the contents of the Prior Forms S-8 are incorporated by reference herein.

All other reports and documents subsequently filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act (other than Current Reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits furnished on such form that relate to such items) on or after the date of this Registration Statement and prior to the filing of a post-effective amendment to this Registration Statement which indicates that all securities offered have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference herein and to be a part of this Registration Statement from the date of the filing of such reports and documents. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any subsequently filed document that also is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

ITEM 8. EXHIBITS

Exhibit Number	Exhibit Description	Incorporation by Reference			
		Form	SEC File No.	Exhibit	Filing Date
3.1	Amended and Restated Certificate of Incorporation of the Registrant	8-K	001-35068	3.1	2/28/2011
3.2	Certificate of Amendment of Amended and Restated Certificate of Incorporation of the Registrant	8-K	001-35068	3.1	6/25/2019
3.3	Amended and Restated Bylaws of the Registrant	S-1	333-170594	3.4	1/7/2011
4.1	Reference is made to Exhibits 3.1 through 3.3				
4.2	Specimen Common Stock Certificate of the Registrant.	S-1	333-170594	4.2	1/31/2011
5.1	Opinion of Cooley LLP				
10.1+	2011 Equity Incentive Plan	S-8	333-172409	99.3	2/24/2011
10.2+	2011 Employee Stock Purchase Plan	S-8	333-172409	99.6	2/24/2011
23.1	Consent of OUM & Co. LLP, Independent Registered Public Accounting Firm.				
23.2	Consent of Cooley LLP (included in Exhibit 5.1).				
24.1	Power of Attorney. Reference is made to the signature page of this Form S-8.				

+ Indicates management contract or compensatory plan.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, 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 Redwood City, State of California, on March 16, 2020.

ACELRX PHARMACEUTICALS, INC.

By: /s/ Vincent J. Angotti
Vincent J. Angotti
Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints **Vincent J. Angotti** and **Raffi Asadorian**, and each or any one of them, his true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his substitutes or substitute, 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.

Signature	Title	Date
<u>/s/ Vincent J. Angotti</u> Vincent J. Angotti	Chief Executive Officer and Director (Principal Executive Officer)	March 16, 2020
<u>/s/ Raffi Asadorian</u> Raffi Asadorian	Chief Financial Officer (Principal Financial and Accounting Officer)	March 16, 2020
<u>/s/ Adrian Adams</u> Adrian Adams	Chairman	March 16, 2020
<u>/s/ Richard Afable</u> Richard Afable	Director	March 16, 2020
<u>/s/ Mark G. Edwards</u> Mark G. Edwards	Director	March 16, 2020
<u>/s/ Stephen J. Hoffman</u> Stephen J. Hoffman	Director	March 16, 2020
<u>/s/ Pamela P. Palmer</u> Pamela P. Palmer	Director	March 16, 2020
<u>/s/ Howard B. Rosen</u> Howard B. Rosen	Director	March 16, 2020
<u>/s/ Mark Wan</u> Mark Wan	Director	March 16, 2020



March 16, 2020

AcelRx Pharmaceuticals, Inc.
351 Galveston Drive
Redwood City, CA 94063

Ladies and Gentlemen:

We have acted as counsel to AcelRx Pharmaceuticals, Inc., a Delaware corporation (the "**Company**"), in connection with the filing of a Registration Statement on Form S-8 (the "**Registration Statement**") with the Securities and Exchange Commission covering the offering of up to (a) 3,182,924 shares of the Company's Common Stock, par value \$0.001 per share (the "**2011 EIP Shares**"), issuable pursuant to the Company's 2011 Equity Incentive Plan and (b) 1,591,462 shares of the Company's Common Stock, par value \$0.001 per share (together with the 2011 EIP Shares, the "**Shares**"), issuable pursuant to the Company's 2011 Employee Stock Purchase Plan (together with the Company's 2011 Equity Incentive Plan, the "**Plans**").

In connection with this opinion, we have examined and relied upon (a) the Registration Statement and related prospectuses, (b) the Plans, (c) the Company's Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws, each as currently in effect, and (d) such other documents, records, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. We have assumed the genuineness and authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as copies thereof, the accuracy, completeness and authenticity of certificates of public officials, and the due authorization, execution and delivery by all persons other than by the Company, of all documents where due authorization, execution and delivery are a prerequisite to the effectiveness thereof. As to certain factual matters, we have relied upon a certificate of officers of the Company and have not sought independently to verify such matters.

Our opinion is expressed only with respect to the General Corporation Law of the State of Delaware. We express no opinion to the extent that any other laws are applicable to the subject matter hereof and express no opinion and provide no assurance as to compliance with any federal or state securities law, rule or regulation.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares, when sold and issued in accordance with the Plans, the Registration Statement and the applicable related prospectuses, will be validly issued, fully paid, and nonassessable (except as to shares issued pursuant to certain deferred payment arrangements, which will be fully paid and nonassessable when such deferred payments are made in full).

We consent to the filing of this opinion as an exhibit to the Registration Statement.

Sincerely,

Cooley LLP

By: /s/ Robert W. Phillips
Robert W. Phillips

Cooley LLP 101 California Street 5th Floor San Francisco, CA 94111-5800
t: (415) 693-2000 f: (415) 693-2222 cooley.com

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference, in the Registration Statement on Form S-8 pertaining to the 2011 Equity Incentive Plan of AcclRx Pharmaceuticals, Inc., of our reports dated March 16, 2020, relating to the consolidated financial statements and the effectiveness of internal control over financial reporting of AcclRx Pharmaceuticals, Inc. appearing in the Company's Annual Report on Form 10-K for the year ended December 31, 2019.

/s/ OUM & CO. LLP

San Francisco, California
March 16, 2020