UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8 REGISTRATION STATEMENT

UNDER
THE SECURITIES ACT OF 1933

Ultragenyx Pharmaceutical Inc.

(Exact name of Registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

27-2546083 (I.R.S. Employer Identification Number)

60 Leveroni Court Novato, CA 94949 (415) 483-8800

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

2014 Incentive Plan 2014 Employee Stock Purchase Plan (Full Title of the Plans)

Emil D. Kakkis, M.D., Ph.D. President and Chief Executive Officer Ultragenyx Pharmaceutical Inc. 60 Leveroni Court Novato, CA 94949 (415) 483-8800

(Name, Address and Telephone Number, Including Area Code, of Agent for Service)

with copies to:

Shalini Sharp, Chief Financial Officer
Lisa M. Kahle, Esq., Senior Corporate Counsel
Ultragenyx Pharmaceutical Inc.
60 Leveroni Court
Novato, CA 94949

Telephone: (415) 483-8800 Facsimile: (415) 483-8810 Ryan A. Murr, Esq. Sean Sullivan, Esq. Gibson, Dunn & Crutcher LLP 555 Mission Street, Suite 3000 San Francisco, CA 94105-0921 Telephone: (415) 393-8200

Facsimile: (415) 393-8306

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.					
Large accelerated filer		Accelerated filer			
Non-accelerated filer	☑ (Do not check if a smaller reporting company)	Smaller reporting company			
CALCULATION OF REGISTRATION FEE					

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, \$0.001 par value per share (3)	1,401,180	\$56.31	\$78,900,445.80	\$ 9,168.23
Common Stock, \$0.001 par value per share (4)	350,295	\$56.31	\$19,725,111.45	\$ 2,292.06
Total	1,751,475			\$11,460.29

- Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement shall also cover any additional shares of common stock, par value \$0.001 per share ("Common Stock"), which become issuable under the 2014 Incentive Plan (the "2014 Plan") and the 2014 Employee Stock Purchase Plan (the "ESPP") by reason of any stock dividend, stock split, recapitalization or any other similar transaction effected without the receipt of consideration which would result in an increase in the number of outstanding shares of common stock. In addition, pursuant to Rule 416(c) under the Securities Act, this registration statement shall also cover an indeterminate amount of interests to be offered or sold pursuant to the employee benefit plans described herein.
- (2) Estimated solely for the purpose of calculating the registration fee pursuant to Rules 457(c) and (h) of the Securities Act, and based on the average of the high and low sale prices of the registrant's Common Stock, as quoted on The NASDAQ Global Select Market, on January 28, 2015.
- Represents shares of Common Stock reserved for issuance under the 2014 Plan.
- Represents shares of Common Stock reserved for issuance under the ESPP.

EXPLANATORY NOTE

This Registration Statement on Form S-8 is filed by Ultragenyx Pharmaceutical Inc. (the "Company" or "Registrant"), relating to (i) 1,401,180 shares of the Company's Common Stock, to be issued pursuant to the 2014 Plan, and (ii) 350,295 shares of the Company's Common Stock, to be issued pursuant to the ESPP. The information contained in the Registrant's registration statement on Form S-8 (SEC File No. 333-194773), together with all exhibits filed therewith or incorporated therein by reference, is hereby incorporated by reference pursuant to General Instruction E to Form S-8.

PART II INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 8. Exhibits.

See the Exhibit Index included in this registration statement, which is incorporated into this Item 8 herein by reference.

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 Novato, California on February 3, 2015.

ULTRAGENYX PHARMACEUTICAL INC.

By: /s/ Emil Kakkis

Emil D. Kakkis, M.D., Ph.D.

President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints each of Emil D. Kakkis, M.D., Ph.D. and Shalini Sharp, and each of them acting individually, as his or her true and lawful attorneys-in-fact and agents, each with full power of substitution and resubstitution in each of them singly, for him or her and in his or her 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 Ultragenyx Pharmaceutical 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 or she 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, as amended, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Emil Kakkis Emil D. Kakkis, M.D., Ph.D.	Director, President and Chief Executive Officer (Principal Executive Officer)	February 3, 2015
/s/ Shalini Sharp Shalini Sharp	Senior Vice President, Chief Financial Officer (Principal Financial Officer)	February 3, 2015
/s/ Theodore Huizenga Theodore Huizenga	Corporate Controller (Principal Accounting Officer)	February 3, 2015
/s/ Eran Nadav Eran Nadav, Ph.D.	Chairman of the Board	February 3, 2015
/s/ William Aliski William Aliski	Director	February 3, 2015
/s/ Matthew Fust Matthew Fust	Director	February 3, 2015
/s/ Clay Siegall Clay Siegall, Ph.D.	Director	February 3, 2015

Exhibit Index

			Incorporated by Reference		
Exhibit <u>Number</u>	Exhibit Description	<u>Form</u>	<u>Date</u>	Number	Filed <u>Herewith</u>
4.1	Amended and Restated Certificate of Incorporation of Ultragenyx Pharmaceutical Inc., as currently in effect	8-K	2/5/2014	3.1	
4.2	Amended and Restated Bylaws of Ultragenyx Pharmaceutical Inc., as currently in effect	8-K	2/5/2014	3.2	
4.3	Form of Common Stock Certificate	S-1	11/8/2013	4.2	
4.4	2014 Incentive Plan	S-1	1/17/2014	10.13	
4.5	2014 Employee Stock Purchase Plan	S-1	1/17/2014	10.19	
5.1	Opinion of Gibson, Dunn & Crutcher LLP				X
23.1	Consent of Independent Registered Public Accounting Firm				X
23.2	Consent of Gibson, Dunn & Crutcher LLP (included in Exhibit 5.1)				X
24.1	Power of Attorney (included on the signature page to this registration statement)				X



Gibson, Dunn & Crutcher LLP

555 Mission Street San Francisco, CA 94105-0921 Tel 415.393.8200 www.gibsondunn.com

Client: 93631-00008

February 3, 2015

Ultragenyx Pharmaceutical Inc. 60 Leveroni Court Novato, CA 94949

> Re: Ultragenyx Pharmaceutical Inc. Registration Statement on Form S-8

Ladies and Gentlemen:

We have examined the Registration Statement on Form S-8 (the "Registration Statement"), of Ultragenyx Pharmaceutical Inc., a Delaware corporation (the "Company") filed with the Securities and Exchange Commission (the "Commission") pursuant to the Securities Act of 1933, as amended (the "Securities Act"), in connection with the offering by the Company of up to (a) 1,401,180 shares of the Company's common stock, par value \$0.001 per share (the "Common Stock"), issuable to eligible individuals under the Company's 2014 Incentive Plan (the "2014 Plan") and (b) 350,295 shares of Common Stock issuable to eligible individuals under the Company's 2014 Employee Stock Purchase Plan (the "ESPP," and together with the 2014 Plan, the "Plans").

We have examined the originals, or photostatic or certified copies, of such records of the Company and certificates of officers of the Company and of public officials and such other documents as we have deemed relevant and necessary as the basis for the opinions set forth below. In our examination, we have assumed the genuineness of all signatures, the legal capacity and competency of all natural persons, the authenticity of all documents submitted to us as originals and the conformity to original documents of all documents submitted to us as copies.

Based upon the foregoing examination and in reliance thereon, and subject to the assumptions stated and in reliance on statements of fact contained in the documents that we have examined, we are of the opinion that the shares of Common Stock issuable under the Plans, when issued in accordance with the terms of the respective Plans, will be validly issued, fully paid and non-assessable.

Beijing — Brussels — Century City — Dallas — Denver — Dubai — Hong Kong — London — Los Angeles — Munich New York — Orange County — Palo Alto — Paris — San Francisco — São Paulo — Singapore — Washington, D.C.

GIBSON DUNN

Ultragenyx Pharmaceutical Inc. February 3, 2015 Page 2

We render no opinion herein as to matters involving the laws of any jurisdiction other than the Delaware General Corporation Law (the "<u>DGCL</u>"). We are not admitted to practice in the State of Delaware; however, we are generally familiar with the DGCL as currently in effect and have made such inquiries as we consider necessary to render the opinions above. This opinion is limited to the effect of the current state of the law of the DGCL and the facts as they currently exist. We assume no obligation to revise or supplement this opinion in the event of future changes in such law or the interpretations thereof or such facts.

We consent to the filing of this opinion as an exhibit to the Registration Statement. In giving this consent, we do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the Rules and Regulations of the Commission.

Very truly yours,

GIBSON, DUNN & CRUTCHER 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 2014 Incentive Plan and 2014 Employee Stock Purchase Plan of Ultragenyx Pharmaceutical Inc. of our report dated March 24, 2014, with respect to the financial statements of Ultragenyx Pharmaceutical Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2013, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Redwood City, California February 3, 2015