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 No.)

60 Leveroni Court Novato, CA 94949 (415) 483-8800 (Address, Including Zip Code, of Principal Executive Offices)

> 2011 Equity Incentive Plan 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:

Ryan A. Murr, Esq. Lisa M. Kahle, Esq. Ropes & Gray LLP Three Embarcadero Center, Third Floor San Francisco, CA 94111 Telephone: (415) 315-6300 Facsimile: (415) 315-6350 Shalini Sharp Chief Financial Officer Ultragenyx Pharmaceutical Inc. 60 Leveroni Court Novato, CA 94949 Telephone: (415) 483-8800 Facsimile: (415) 483-8810

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 \Box

Non-accelerated filer 🛛 🖂 (Do not check if a smaller reporting company)

Accelerated filer \Box

Smaller reporting company

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	5,177,050 shares	\$6.33 - \$58.15	\$175,586,967	\$22,689

(1) 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 which become issuable under the 2011 Equity Incentive Plan, as amended (the "2011 Plan"), 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 determining the amount of the registration fee in accordance with Rule 457(c) and (h) under the Securities Act. The offering price per share and the aggregate offering price (a) for outstanding options granted under the 2011 Plan or 2014 Plan, as applicable, is based upon the weighted-average exercise price (rounded to the nearest cent) of such outstanding options and (b) for shares reserved for issuance under the 2014 Plan and ESPP are based upon the average of the high and the low price of the Registrant's common stock as reported on The NASDAQ Global Select Market on March 21, 2014. The chart below details the calculations of the registration fee:

Securities	Number of Shares	Offering Price Per Share	Aggregate Offering Price
Shares issuable upon the exercise of outstanding options granted under the 2011 Plan and			
the 2014 Plan (3)	2,410,050	\$6.33 (2)(a)	\$15,255,617
Shares reserved for future grant under the 2014 Plan (3)	2,167,000	\$58.15 (2)(b)	\$126,011,050
Shares reserved for future grant under the ESPP	600,000	\$58.15 (2)(b)	\$34,890,000
Proposed Maximum Aggregate Offering Price			\$176,156,667
Registration Fee			\$22,689

(3) Pursuant to the terms of the 2014 Plan, any shares subject to outstanding options originally granted under the 2011 Plan that are terminated, cancelled, or forfeited shall become available for issuance pursuant to awards granted under the 2014 Plan.

Proposed sale to take place as soon after the effective date of the registration statement as awards under the plans are exercised and/or vest.

PART I INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

The information called for in Part I of Form S-8 is not being filed with or included in this Form S-8 (by incorporation by reference or otherwise) in accordance with the rules and regulations of the Securities and Exchange Commission (the "Commission").

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents filed by the Registrant with the Commission are incorporated herein by reference:

(1) The Registrant's Annual Report on Form 10-K for the period ended December 31, 2013;

(2) The Registrant's Current Reports on Form 8-K filed February 5, 2014 and February 25, 2014; and

(3) The description of the Registrant's Common Stock, \$0.001 par value per share, contained in the Registrant's Registration Statement on Form 8-A, filed with the Commission pursuant to Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), on January 24, 2014, and any other amendments or reports filed for the purpose of updating such description (File No. 001-36276).

All reports and other documents filed by the Registrant after the date hereof pursuant to Sections 13(a), 13(c), 14, and 15(d) of the Exchange Act prior to the filing of a post-effective amendment which indicates that all of the securities offered hereby have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference herein and to be part hereof from the date of 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 the purposes of this registration statement to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this registration statement.

Under no circumstances will any information furnished under Items 2.02 or 7.01 of the Registrant's Current Reports on Form 8-K, and exhibits furnished on such form that relate to such items, be deemed incorporated herein by reference unless such Form 8-K expressly provides to the contrary.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Section 145(a) of the Delaware General Corporation Law provides, in general, that a corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation), because he or she is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding, if he or she acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful.

Section 145(b) of the Delaware General Corporation Law provides, in general, that a corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor because the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees) actually and reasonably incurred by the person in connection with the defense or settlement of such action or suit if he or she acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, he or she is fairly and reasonably entitled to indemnify for such expenses which the Court of Chancery or other adjudicating court shall deem proper.

Section 145(g) of the Delaware General Corporation Law provides, in general, that a corporation may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of his or her status as such, whether or not the corporation would have the power to indemnify the person against such liability under Section 145 of the Delaware General Corporation Law.

Article VI of the Registrant's amended and restated certificate of incorporation (the "Charter") provides that no director of the Registrant shall be personally liable to the Registrant or its stockholders for monetary damages for any breach of fiduciary duty as a director, except for liability (1) for any breach of the director's duty of loyalty to the Registrant or its stockholders, (2) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (3) in respect of unlawful dividend payments or stock redemptions or repurchases, or (4) for any transaction from which the director derived an improper personal benefit. In addition, the Charter provides that if the Delaware General Corporation Law is amended to authorize the further elimination or limitation of the liability of directors, then the liability of a director of the Registrant shall be eliminated or limited to the fullest extent permitted by the Delaware General Corporation Law, as so amended.

Article VI of the Charter further provides that any repeal or modification of such article by the Registrant's stockholders or amendment to the Delaware General Corporation Law will not adversely affect any right or protection existing at the time of such repeal or modification with respect to any acts or omissions occurring before such repeal or modification of a director serving at the time of such repeal or modification.

The Registrant has entered into indemnification agreements with each of its directors and our executive officers. These agreements provide that the Registrant will indemnify each of its directors and such officers to the fullest extent permitted by law and the Charter.

The Registrant also maintains an insurance policy that covers certain liabilities of its directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

Reference is made under this Item 8 to the exhibit index included in this registration statement.

Item 9. Undertakings.

(a) The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of a prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement; provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) above shall not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or 15(d) of the Exchange Act that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

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 March 24, 2014.

ULTRAGENYX PHARMACEUTICAL INC.

By: /s/ Emil D. 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 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 D. Kakkis	Director, President and Chief Executive Officer	
Emil D. Kakkis, M.D., Ph.D.	(Principal Executive Officer)	March 24, 2014
/s/ Shalini Sharp	Senior Vice President, Chief Financial Officer	
Shalini Sharp	(Principal Financial Officer)	March 24, 2014
/s/ Theodore Huizenga	Corporate Controller	
Theodore Huizenga	(Principal Accounting Officer)	March 24, 2014
/s/ Eran Naday		
Eran Nadav, Ph.D.	Chairman of the Board	March 24, 2014
/s/ William Aliski		
William Aliski	Director	March 24, 2014
/s/ Mårten Steen		
Mårten Steen, M.D., Ph.D.	Director	March 24, 2014
/s/ Matthew Fust		
	Director	M
Matthew Fust	Director	March 24, 2014
/s/ Clay Siegall		
Clay Siegall, Ph.D.	Director	March 24, 2014

Exhibit Index

5 1 1 1 %		Incorporated by Reference		Filed	
Exhibit <u>Number</u>	Exhibit Description	Form	Date	Number	Herewith
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 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	2011 Equity Incentive Plan (including forms of Stock Option Grant Notice and Stock Option Agreement thereunder)	S-1	11/8/2013	10.11	
4.5	Amendment to the 2011 Equity Incentive Plan	S-1	11/8/2013	10.12	
4.6	2014 Incentive Plan	S-1	1/17/2014	10.13	
4.7	Form of Incentive Stock Option Award Agreement	S-1	1/17/2014	10.14	
4.8	Form of Non-Statutory Stock Option Agreement (Employees)	S-1	1/17/2014	10.15	
4.9	Form on Non-Statutory Stock Option Agreement (Directors)	S-1	1/17/2014	10.16	
4.10	Form of Restricted Stock Unit Agreement (Employees)	S-1	1/17/2014	10.17	
4.11	Form of Restricted Stock Unit Agreement (Directors)	S-1	1/17/2014	10.18	
4.12	2014 Employee Stock Purchase Plan	S-1	1/17/2014	10.19	
5.1	Opinion of Ropes & Gray LLP				Х
23.1	Consent of Independent Registered Public Accounting Firm				Х
23.2	Consent of Ropes & Gray LLP (included in Exhibit 5.1)				Х
24.1	Power of Attorney (included on the signature page to this registration statement)				Х



ROPES & GRAY LLP THREE EMBARCADERO CENTER, THIRD FLOOR SAN FRANCISCO, CA 94111 WWW.ROPESGRAY.COM

March 24, 2014

Ultragenyx Pharmaceutical Inc. 60 Leveroni Court Novato, CA 94949

Re: <u>Registration Statement on Form S-8</u>

Ladies and Gentlemen:

This opinion letter is furnished to you in connection with the registration statement on Form S-8 (the "<u>Registration Statement</u>"), filed by Ultragenyx Pharmaceutical Inc., a Delaware corporation (the "<u>Company</u>"), on the date hereof, with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "<u>Securities Act</u>"), for the registration of an aggregate of 5,177,050 shares of Common Stock, \$0.001 par value of the Company (the "<u>Shares</u>"). The Shares are issuable under the Company's 2011 Equity Incentive Plan, as amended, 2014 Incentive Plan, and 2014 Employee Stock Purchase Plan (each a "<u>Plan</u>," and collectively, the "<u>Plans</u>").

We are familiar with the actions taken by the Company in connection with the adoption of the Plans. 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 a certificate of an officer of the Company.

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 applicable 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 2011 Equity Incentive Plan, as amended, 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 March 24, 2014