

Prospectus Supplement No. 6

(to Prospectus dated July 21, 2015)



This Prospectus Supplement No. 6 supplements and amends the prospectus dated July 21, 2015, relating to the offering and resale by the selling stockholders identified in the prospectus of up to 14,279,820 shares of our common stock, par value \$0.0001 per share. These shares were privately issued to the selling stockholders on March 6, 2015 in connection with the reverse merger transaction described in the prospectus.

This prospectus supplement incorporates into our prospectus the information contained in our attached current report on Form 8-K, which was filed with the Securities and Exchange Commission on February 4, 2016.

You should read this prospectus supplement in conjunction with the prospectus, including any supplements and amendments thereto. This prospectus supplement is qualified by reference to the prospectus except to the extent that the information in the prospectus supplement supersedes the information contained in the prospectus.

This prospectus supplement is not complete without, and may not be delivered or utilized except in connection with, the prospectus, including any supplements and amendments thereto.

Our common stock is listed on the NASDAQ Global Select Market under the symbol "KURA." On February 3, 2016, the last reported sale price of our common stock on the NASDAQ Global Select Market was \$4.22 per share.

Investment in our common stock involves risks. See "Risk Factors" on page 9 of the prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has passed upon the adequacy or accuracy of this prospectus supplement. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is February 4, 2016.

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

FORM 8-K

**CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934**

Date of Report (Date of earliest event reported): January 29, 2016

KURA ONCOLOGY, INC.

(Exact name of Registrant as Specified in Its Charter)

Delaware
(State or Other Jurisdiction
of Incorporation)

001-37620
(Commission
File Number)

61-1547851
(IRS Employer
Identification No.)

11119 N. Torrey Pines Road, Suite 125, La Jolla, CA
(Address of Principal Executive Offices)

92037
(Zip Code)

Registrant's Telephone Number, Including Area Code: (858) 500-8800

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instructions A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
 - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
 - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
 - Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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Item 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers.

(e)

On January 29, 2016, based on the recommendation of the compensation committee of our board of directors, our board of directors approved (a) the payment of an annual performance cash bonus to Troy Wilson, Ph.D., J.D., our Chief Executive Officer, in the amount of \$195,000, which was based on a determination of 100% achievement of certain corporate goals, (b) the grant to Dr. Wilson of an option to purchase 125,000 shares of our common stock at an exercise price of \$4.80 per share, which is equal to the closing price of our common stock on the NASDAQ Global Select Market on January 29, 2016, and (c) an increase in the annual base salary of Dr. Wilson from \$390,000 to \$429,000. Our board also approved an amendment to Dr. Wilson's executive employment agreement to provide for an increase in the cash lump-sum payment amount to which Dr. Wilson is entitled following a termination without cause or resignation with good reason in connection with a change of control, such that such payment amount will equal 15 months of Dr. Wilson's then annual base salary rather than 12 months. The foregoing description of the amendment to the executive employment agreement with Dr. Wilson does not purport to be complete and is qualified in its entirety by reference to the amendment, a copy of which will be attached to a future filing under the Securities Exchange Act of 1934, as amended.

On January 29, 2016, the compensation committee of our board of directors approved (a) the payment of an annual performance cash bonus to Heidi Henson, our Chief Financial Officer, in the amount of \$105,000, 75% of which was based on a determination of 100% achievement of certain corporate goals and 25% of which was based on individual performance, (b) the grant to Ms. Henson of an option to purchase 80,000 shares of our common stock at an exercise price of \$4.80 per share, which is equal to the closing price of our common stock on the NASDAQ Global Select Market on January 29, 2016, and (c) an increase in the annual base salary of Ms. Henson from \$300,000 to \$313,900.

Target Bonus Percentages and 2016 Corporate Goals

Our executive officers are eligible to receive annual performance-based cash bonuses, which are (i) generally based on the extent to which we achieve the corporate goals that our board of directors establishes each year and (ii) other than with respect to our Chief Executive Officer, weighted 25% based on individual performance. At the end of the year, our board of directors reviews our performance against each corporate goal and approves the extent to which we achieved each of our corporate goals, and also reviews individual performance, as applicable.

On January 29, 2016, our board of directors approved the following target bonus percentages applicable for 2016 for our principal executive officer, principal financial officer and named executive officers:

<u>Executive Officer</u>	<u>Target Bonus %</u>
Troy Wilson, Ph.D., J.D. <i>President and Chief Executive Officer</i>	50%
Heidi Henson <i>Chief Financial Officer</i>	35%

In addition, our board of directors approved the corporate goals for 2016. The goals contain performance objectives related to advancing our pre-clinical and clinical programs and financial goals. In addition, our board of directors approved additional development goals, weighted up to 50% towards overall corporate goal achievement, which are only eligible to be earned if we achieve 85% of our base corporate goals.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: February 4, 2016

KURA ONCOLOGY, INC.

By: /s/ Annette North

Annette North

Senior Vice President and General Counsel