FORM 4

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

## UNITED STATES SECURITIES AND EXCHANGE COMMISSION

| Washington, | D.C. | 20549 |
|-------------|------|-------|
|-------------|------|-------|

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934

| OMB APPROVAL             |     |  |  |  |  |  |  |  |
|--------------------------|-----|--|--|--|--|--|--|--|
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|---|--|--|--|----------|-------------------------|--|------------------------|-------------------------|-----------------|--------------------------------|--------|---------------------------------|--|-----------|--|---|---|------------------------------|--|---|--|--|
| 1. Name and Address of Reporting Person*  GRASSO MARC |  |  |  |          |                         | 2. Issuer Name and Ticker or Trading Symbol Kura Oncology, Inc. [ KURA ] |                        |                         |                 |                                |        |                                 |  |           |  | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) |   |                              |  |   |  |  |
|   |  |  |  |          |                         |  |                        |                         |                 |                                |        |                                 |  |           |  | Directo<br>Officer  | r<br>(give title  |                              | 10% O  | · I                                     |  |  |
| (Last)  | (5   | iret\                                      | (Middle)   |          | 3 [                     | 3. Date of Earliest Transaction (Month/Day/Year)                         |                        |                         |                 |                                |        |                                 |  | -1     -2 | below)                                 |   |   | below)                       | specify  |   |  |  |
| (Last) (First) (Middle)  C/O KURA ONCOLOGY, INC.      |  |  |  |          |                         | 09/08/2020   |                        |                         |                 |                                |        |                                 |  |           | CFO, CBO                               |   |   |                              |  |   |  |  |
| <b>'</b>  |  |  |  |          |                         |  |                        |                         |                 |                                |        |                                 |  |           |  |   |   |                              |  |   |  |  |
| 12730 HIGH BLUFF DRIVE, SUITE 400                     |  |  |  |          |                         | 4. If Amendment, Date of Original Filed (Month/Day/Year)                 |                        |                         |                 |                                |        |                                 |  |           | 6. In                                  | 6. Individual or Joint/Group Filing (Check Applicable                   |   |                              |  |   |  |  |
| (Street)  |  |  |  |          |                         |  |                        | ,                       |                 | ,                              |        |                                 | ,,   |           | Line                                   | Line)   |   |                              |  |   |  |  |
| SAN DII   | EGO C  | A  | 92130  |          |                         |  |                        |                         |                 |                                |        |                                 |  |           |  |   | orting Perso  |                              |  |   |  |  |
|   |  |  |  |          |                         |  |                        |                         |                 |                                |        |                                 |  |           |  | Form filed by More than One Reporting<br>Person                         |   |                              |  |   |  |  |
| (City)  | (S   | tate)                                      | (Zip)  |          |                         |  |                        |                         |                 |                                |        |                                 |  |           |  |   |   |                              |  |   |  |  |
|   | Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned |  |  |          |                         |  |                        |                         |                 |                                |        |                                 |  |           |  |   |   |                              |  |   |  |  |
| 1. Title of S   | Security (Ins  | tr. 3)                                     |  | 2. Trans | action                  |  | 2A. De                 |                         | 3.              |                                |        |                                 |  |           |  |   |   |                              |  | 7. Nature                               |  |  |
| Date<br>(Month/D                                      |  |  |  |          | Day/Ye                  | ar)  | Execution Date, if any |                         | Code (Instr. 5) |                                |        | Disposed Of (D) (Instr. 3, 4 5) |  |           | Securitie<br>Benefici                  | ally ([   | (D) or  | orm: Direct<br>) or Indirect | of Indirect<br>Beneficial  |   |  |  |
|   |  |  |  |          |                         | (Month/Day/Ye  |                        |                         | r) 8)           |                                |        |                                 |  |           | Owned F<br>Reported                    | ı "   ```   | (I) (In<br>   | nstr. 4)                     | Ownership<br>(Instr. 4)  |   |  |  |
|   |  |  |  |          |                         |  |                        |                         |                 | ode \                          | V      | Amount                          | mount (A) or Pr  |           | Price                                  | Transaction(s) (Instr. 3 and 4)   |   |                              |  |   |  |  |
| Common Stock 09/                                      |  |  |  |          | 3/2020                  |  | М                      | <b>1</b> <sup>(1)</sup> |                 | 10,000 A                       |        | A                               | \$15.4   | 7 10      | 10,000                                 |   | D   |                              |  |   |  |  |
| Common Stock 09/08                                    |  |  |  | 3/202    | 3/2020                  |  |                        | S                       | g(1)            |                                | 10,000 |                                 | )  | \$26      | 0                                      |   |   | D                            |  |   |  |  |
|   | Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned    |  |  |          |                         |  |                        |                         |                 |                                |        |                                 |  |           |  |   |   |                              |  |   |  |  |
|   |  |  |  | (e.g., p | uts,                    | cal  | ls, wa                 | arrants                 | , op            | tions                          | s, c   | onvertil                        | ole se   | curi      | ities)                                 |   |   |                              |  |   |  |  |
| Security or E<br>(Instr. 3) Pric<br>Deri              | 2.<br>Conversion<br>or Exercise<br>Price of<br>Derivative<br>Security            | 3. Transaction<br>Date<br>(Month/Day/Year) | 3A. Deemed<br>Execution D<br>if any<br>(Month/Day/ | Date,    |                         | ransaction<br>ode (Instr.  |                        |                         |                 | ate Exe<br>ration I<br>ath/Day | Date   |                                 | 7. Title and Amou<br>of Securities<br>Underlying<br>Derivative Securit<br>(Instr. 3 and 4) |           | s<br>Security                          | 8. Price of<br>Derivative<br>Security<br>(Instr. 5)                     | 9. Numbe<br>derivative<br>Securities<br>Beneficial<br>Owned<br>Following<br>Reported<br>Transaction<br>(Instr. 4) | illy                         | 10.<br>Ownership<br>Form:<br>Direct (D)<br>or Indirect<br>(I) (Instr. 4) | Beneficial<br>Ownership<br>t (Instr. 4) |  |  |
|   |  |  |  | c        | Code                    | v  | (A)                    | (D)                     | Date<br>Exerc   | cisable                        |        | expiration<br>Pate              | Title  | N<br>O    | Amount<br>or<br>Number<br>of<br>Shares |   |   |                              |  |   |  |  |
| Option to purchase common                             | \$15.47  | 09/08/2020                                 |  |          | <b>M</b> <sup>(1)</sup> |  |                        | 10,000                  | (               | (2)                            | 0      | 1/21/2029                       | Comm   |           | 10,000                                 | \$0.00  | 112,89  | 8                            | D  |   |  |  |

## **Explanation of Responses:**

- 1. The transactions reported in this Form 4 were effected pursuant to a Rule 10b5-1 trading plan adopted by the reporting person on November 21, 2019.
- 2. This option vests in 48 equal monthly installments commencing on January 22, 2019.

## Remarks:

James Basta, attorney-in-fact for Marc Grasso

09/10/2020

\*\* Signature of Reporting Person

Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

- $^{\star}$  If the form is filed by more than one reporting person, see Instruction 4 (b)(v).
- \*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.