

FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

| OMB APPROVAL | |
|----------------------------------------------|-----------|
| OMB Number: | 3235-0287 |
| Estimated average burden hours per response: | 0.5 |

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

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

| | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Name and Address of Reporting Person * Brown Bob D (Last) (First) (Middle) C/O DICERNA PHARMACEUTICALS, INC. 33 HAYDEN AVENUE (Street) LEXINGTON MA 02421 (City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol Dicerna Pharmaceuticals Inc [DRNA] | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) See Remarks |
| | 3. Date of Earliest Transaction (Month/Day/Year) 02/10/2020 | |
| 4. If Amendment, Date of Original Filed (Month/Day/Year) | | |

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

| 1. Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year) | 3. Transaction Code (Instr. 8) | | 4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5) | | | 5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) |
|---------------------------------|--------------------------------------|----------------------------------------------------|--------------------------------|---|-------------------------------------------------------------------|------------|--------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------|
| | | | Code | V | Amount | (A) or (D) | Price | | | |
| Common Stock | 02/10/2020 | | M | | 5,650 | A | \$3.42 | 10,650 | D | |
| Common Stock | 02/10/2020 | | M | | 2,535 | A | \$3.42 | 13,185 | D | |
| Common Stock | 02/10/2020 | | S ⁽¹⁾⁽²⁾ | | 8,185 ⁽¹⁾ | D | \$21 | 5,000 | D | |

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | 4. Transaction Code (Instr. 8) | | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | | 6. Date Exercisable and Expiration Date (Month/Day/Year) | | 7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4) | 8. Price of Derivative Security (Instr. 5) | 9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4) | 10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) | |
|--------------------------------------------|--------------------------------------------------------|--------------------------------------|----------------------------------------------------|--------------------------------|---|----------------------------------------------------------------------------------------|-------|----------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------|-------|
| | | | | Code | V | (A) | (D) | Date Exercisable | Expiration Date | | | | | | Title |
| Employee Stock Option (Right to Buy) | \$3.42 | 02/10/2020 | | M | | | 5,650 | (3) | 09/24/2023 | Common Stock | 5,650 | \$0.00 | 81,850 | D | |
| Employee Stock Option (Right to Buy) | \$3.42 | 02/10/2020 | | M | | | 2,535 | (4) | 09/24/2023 | Common Stock | 2,535 | \$0.00 | 99,124 | D | |

Explanation of Responses:

- The reporting person sold an aggregate of 8,185 shares of common stock on February 10, 2020 (the "Shares Sold") as reported in this Form 4. The Shares Sold represent 0.77% of 1,058,484 shares of common stock, which is the number of shares of common stock owned by the reporting person prior to the Shares Sold transaction reported in this Form 4, as well as shares issuable upon exercise or settlement of vested and unvested options and restricted stock units held by the reporting person as of the date of this report.
- The sales reported in this Form 4 were effected pursuant to a Rule 10b5-1 trading plan adopted by the reporting person on November 27, 2019.
- The vesting of this option was subject to achievement of pre-established performance goals. As of the transaction date, the option was fully vested.
- The option vested 1/48 monthly on last day of each month with the vesting start date of 7/30/2013.

Remarks:

EVP of R&D, Chief Scientific Officer

/s/ John B. Green, attorney-in-fact 02/10/2020

** Signature of Reporting Person Date

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

* 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.

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