Instruction 1(b)

FORM 4

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

| STATEMENT | OF (| CHANGES | IN BENEFI | CIAL | OWNERS | SHIP |
|-----------|------|---------|-----------|------|--------|------|
| | | | | | | |

OMB APPROVAL OMB Number: Estimated average burden hours per response: 0.5

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* Barrett Peter | | | | | 2. Issuer Name and Ticker or Trading Symbol SYNLOGIC, INC. [SYBX] | | | | | (Ch | eck all applic | cable) or | Person(s) to Iss | wner | | |
|--|-------------------|--|------------------------------|--------------------------------------|---|---|-----|----------------------|---|--|--|--|---|------------------|------------|--|
| (Last) | (Fi NLOGIC, IN | , | (Middle) | | 3. Date of Earliest Transaction (Month/Day/Year) 01/02/2019 Officer (give title below) below) Other (specify below) | | | | | | | | specify | | | |
| 301 BINNEY STREET, SUITE 402 | | | | | 4. If Amendment, Date of Original Filed (Month/Day/Year) | | | | | | 6. Individual or Joint/Group Filing (Check Applicable | | | | | |
| (Street) | IDGE M | A | 02142 | | | | | | | | Line | X Form f | led by More | Reporting Perso | | |
| (City) | (S | tate) | (Zip) | | | | | | | | | | | | | |
| Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned | | | | | | | | | | | | | | | | |
| Date | | | ransaction e nth/Day/Y | Execution Date, | | 3. 4. Securities Acquired (A) Disposed Of (D) (Instr. 3, 4) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1 | | | ed (A) or tr. 3, 4 and | 5. Amou Securitie Beneficia Owned F Reported | es For ally (D) collowing (I) (| 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership | | | |
| | | | | | | | | Code V | Amount | (A) or (D) | Price | Transact (Instr. 3 a | ion(s) | | (Instr. 4) | |
| Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) | | | | | | | | | | | | | | | | |
| Derivative Conversion Date Execution Date Security or Exercise (Month/Day/Year) if any | | 3A. Deemed Execution Date, if any (Month/Day/Year | Code | ransaction of ode (Instr. Derivative | | 6. Date Exercisable and Expiration Date (Month/Day/Year) (Month/Day/Year) 7. Title and Am of Securities Underlying Derivative Seci (Instr. 3 and 4) | | ies g Security | 8. Price of Derivative Security (Instr. 5) | 9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4) | 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 | Amount or Number of Shares | | | | | |
| Stock Option (right to buy) | \$7.62 | 01/02/2019 | | A | | 17,380 | | (1) | 01/02/2029 | Common Stock | 17,380 | \$4.39 | 17,380 | D ⁽²⁾ | | |

Explanation of Responses:

1. The options were issued to the Reporting Person pursuant to the Issuer's Amended and Restated Non-Employee Director Compensation Program and 2015 Equity Incentive Award Plan in lieu of the nonemployee director board and committee cash retainers of \$76,250 in the aggregate. Such options vest in four quarterly installments on the last day of each calendar quarter during 2019 provided the Reporting Person continues to provide services to the Issuer.

2. The reporting person is a member of Atlas Venture Associates IX, LLC and is obligated to transfer the economic benefit, if any, received upon the sale of the shares issuable upon exercise of the equity grants to Atlas Venture Advisors, LLC. As such, the Reporting Person disclaims beneficial ownership of the securities reported herein for purposes of Section 16 of the Securities Exchange Act of 1934, as amended, except to the extent of his pecuniary interest therein, if any.

Remarks:

/s/ Frank Castellucci, Attorney-04/09/2019 in-fact

** 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.

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.