FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

OMB APPROVAL

I

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

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

| | | | 2. Issuer Name and Ticker or Trading Symbol ZAFGEN, INC. [ZFGN] | (Check | tionship of Reporting Pe all applicable) Director Officer (give title | rson(s) to Issuer 10% Owner Other (specify | |
|--------------------------------------|---------------|----------------|---|------------------------|--|--|--|
| (Last) C/O ZAFGEN, 175 PORTLAN | | (Middle) | 3. Date of Earliest Transaction (Month/Day/Year) 03/31/2016 | | below) Chief Commerc | below) | |
| (Street) BOSTON (City) | MA (State) | 02114 (Zip) | 4. If Amendment, Date of Original Filed (Month/Day/Year) | 6. Indiv Line) X | ridual or Joint/Group Filir Form filed by One Rej Form filed by More tha Person | porting Person | |

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 | Code (| | 4. Securities Disposed Of (5) | | | 5. Amount of Securities Beneficially | 6. Ownership Form: Direct (D) or Indirect | 7. Nature of Indirect Beneficial |
|---------------------------------|--|---|------------|---|--------------------------------------|---------------|-------|---|---|--|
| | | (Month/Day/Year) | 8) Code | v | Amount | (A) or (D) | Price | Owned Following Reported Transaction(s) (Instr. 3 and 4) | (l) (Instr. 4) | Ownership (Instr. 4) |

 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. Transa Code (8) | | of | | 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 | Amount or Number of Shares | | | | |
| Stock Option (Right to Buy) | \$6.68 | 03/31/2016 | | A | | | 53,000 | (1) | 03/31/2026 | Common Stock | 53,000 | \$0.00 | 53,000 | D | |
| Stock Option (Right to Buy) | \$6.68 | 03/31/2016 | | A | | | 26,500 | (2) | 03/31/2026 | Common Stock | 26,500 | \$0.00 | 26,500 | D | |

Explanation of Responses:

1. 25% of this option vests on March 31, 2017, and the remainder vests in equal monthly installments thereafter over 36 months.

2. This option vests as follows: 25% on March 31, 2017; 25% on September 30, 2017; and 50% on March 31, 2018.

Remarks:

/s/ Laurie Burlingame, Attorney-in-Fact

04/04/2016

** 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.