

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

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

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 APPROVAL	
OMB Number:	3235-0287
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1. Name and Address of Reporting Person * <u>Hughes Thomas E.</u> (Last) (First) (Middle) <u>C/O ZAFGEN, INC.,</u> <u>175 PORTLAND STREET, 4TH FLOOR</u> (Street) <u>BOSTON MA 02114</u> (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <u>ZAFGEN, INC. [ZFGN]</u>	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) <u>Chief Executive Officer</u>
	3. Date of Earliest Transaction (Month/Day/Year) <u>09/17/2015</u>	
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	09/17/2015		M		4,874	A	\$2.45	23,320 ⁽¹⁾	D	
Common Stock	09/17/2015		S		22,500 ⁽²⁾	D	\$40	820 ⁽¹⁾	D	
Common Stock	09/18/2015		M		23,126	A	\$2.45	23,946 ⁽¹⁾	D	
Common Stock	09/18/2015		S		23,126 ⁽²⁾	D	\$45	820 ⁽¹⁾	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
Stock Option (Right to Buy)	\$2.45	09/17/2015		M			4,874	(3)	06/12/2023	Common Stock	4,874	\$0.00	183,681	D	
Stock Option (Right to Buy)	\$2.45	09/18/2015		M			23,126	(3)	06/12/2023	Common Stock	23,126	\$0.00	160,555	D	

Explanation of Responses:

- Includes 428 shares acquired by the Reporting Person under Zafgen, Inc.'s 2014 Employee Stock Purchase Plan (the "Plan") on June 30, 2015 and 392 shares acquired under the Plan on December 31, 2014.
- This sale of shares by the Reporting Person was effected pursuant to a Rule 10b5-1 trading plan adopted by the Reporting Person in accordance with Rule 10b5-1 of the Securities Exchange Act of 1934, as amended.
- 25% of this option vested on December 19, 2013, and the remainder vests in equal monthly installments thereafter over 36 months.

Remarks:

/s/ Laurie Burlingame, by 09/21/2015
power of attorney.

** 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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