

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

**FORM S-8
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

ZAFGEN, INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

20-3857670
(I.R.S. Employer
Identification No.)

Zafgen, Inc.
175 Portland Street, 4th Floor
Boston, Massachusetts 02114
(617) 622-4003
(Address of Principal Executive Offices)

Zafgen, Inc. Non-Qualified Stock Option Agreements for Inducement Awards
(Full Title of the Plans)

Jeffrey S. Hatfield
Chief Executive Officer
Zafgen, Inc.
175 Portland Street, 4th Floor
Boston, Massachusetts 02114
(Name and Address of Agent For Service)

Copy to:

Mitchell S. Bloom, Esq.
Danielle M. Lauzon, Esq.
Goodwin Procter LLP
100 Northern Avenue
Boston, Massachusetts 02210
(617) 570-1000

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer
Non-accelerated filer Smaller reporting company
Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Offering Price per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, \$0.001 par value per share	1,650,000 shares (2)	\$3.40	\$5,610,000 (4)	\$679.93
Common Stock, \$0.001 par value per share	225,000 shares (3)	\$6.46	\$1,453,500 (4)	\$176.16

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the “Securities Act”), this registration statement on Form S-8 (this “Registration Statement”) shall also cover any additional shares of common stock, par value \$0.001 per share (the “Common Stock”), of Zafgen, Inc. (the “Registrant”) that may from time to time be offered or issued by reason of any stock dividend, stock split, recapitalization or any other similar transaction effected without the receipt of consideration which results in an increase in the number of the Registrant’s outstanding shares of Common Stock.
 - (2) Represents shares of Registrant’s Common Stock available for future issuance upon the exercise of stock option awards granted on October 9, 2017 outside of the Registrant’s employee equity compensation plans to certain individuals to induce such individuals to accept employment with the Registrant.
 - (3) Represents shares of Registrant’s Common Stock available for future issuance upon the exercise of stock option awards granted on May 29, 2018 outside of the Registrant’s employee equity compensation plans to certain individuals to induce such individuals to accept employment with the Registrant.
 - (4) In accordance with Rule 457(h) under the Securities Act, the proposed maximum aggregate offering prices for the shares of the Registrant’s Common Stock have been computed based upon the prices at which the inducement options described above may be exercised.
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EXPLANATORY NOTE

This Registration Statement on Form S-8 is being filed for the purpose of registering 1,875,000 shares of the Registrant's Common Stock issuable under previously announced inducement stock option awards granted on October 9, 2017 and May 29, 2018.

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

The information called for in Part I of Form S-8 is not being filed with or included in this Registration Statement (by incorporation by reference or otherwise) in accordance with the rules and regulations of the Securities and Exchange Commission (the "Commission").

Part II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents, which have been filed with the Commission by the Registrant, pursuant to the Securities Act and the Securities Exchange Act of 1934, as amended (the "Exchange Act"), as applicable, are hereby incorporated by reference in, and shall be deemed to be a part of, this Registration Statement:

- The Registrant's Annual Report on Form 10-K for the year ended December 31, 2017, filed with the Commission on March 9, 2018.
- The Registrant's Proxy Statement on Schedule 14A, filed with the Commission on April 18, 2018.
- The Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018, filed with the Commission on May 10, 2018, the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018, filed with the Commission on August 9, 2018 and the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2018, filed with the Commission on November 9, 2018.
- The Registrant's Current Report on Form 8-K filed with the Commission on January 5, 2018, May 30, 2018, June 7, 2018, June 28, 2018, and August 2, 2018.
- The description of the Registrant's Common Stock contained in its Registration Statement on Form 8-A, filed with the Commission on June 18, 2014, and any amendment or report filed with the Commission for the purpose of updating the description.

All documents subsequently filed by the Registrant pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act subsequent to the date of this Registration Statement and prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference in this Registration Statement and to be part hereof from the date of the filing of such documents. The Registrant is not, however, incorporating by reference any documents or portions thereof, whether specifically listed above or filed in the future, that are not deemed "filed" with the Commission, including the Registrant's Compensation Committee report and performance graph or any information furnished pursuant to Items 2.02 or 7.01 of Form 8-K or related exhibits furnished pursuant to Item 9.01 of Form 8-K.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for the purposes of this Registration Statement to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement. Under no circumstances will any information furnished under Items 2.02 or 7.01 of Form 8-K be deemed incorporated herein by reference unless such Current Report on Form 8-K expressly provides to the contrary.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

None.

Item 6. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law permits a corporation to include in its charter documents, and in agreements between the corporation and its directors and officers, provisions expanding the scope of indemnification beyond that specifically provided by the current law.

The Registrant's amended and restated certificate of incorporation provides for the indemnification of directors to the fullest extent permissible under Delaware law.

The Registrant's amended and restated by-laws provide for the indemnification of officers, directors and third parties acting on the Registrant's behalf if such persons act in good faith and in a manner reasonably believed to be in and not opposed to the Registrant's best interest, and, with respect to any criminal action or proceeding, such indemnified party had no reason to believe his or her conduct was unlawful.

The Registrant has entered into indemnification agreements with each of its directors and executive officers, in addition to the indemnification provisions provided for in its charter documents, and the Registrant intends to enter into indemnification agreements with any new directors and executive officers in the future. These agreements provide for indemnification for all reasonable expenses and liabilities incurred in connection with any action or proceeding brought against them by reason of the fact that they are or were agents of the Registrant.

The Registrant has purchased and maintains insurance on behalf of any person who is or was a director or officer against any loss arising from any claim asserted against him or her and incurred by him or her in that capacity, subject to certain exclusions and limits of the amount of coverage.

These indemnification provisions and the indemnification agreements entered into between the Registrant and its officers and directors may be sufficiently broad to permit indemnification of the Registrant's officers and directors for liabilities (including reimbursement of expenses incurred) arising under the Securities Act.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

The Exhibit Index preceding the exhibits is incorporated by reference.

Item 9. Undertakings.

The undersigned Registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:
 - i. to include any prospectus required by Section 10(a)(3) of the Securities Act;
 - ii. to reflect in the prospectus any facts or events arising after the effective date of the Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered

(if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective Registration Statement; and

- iii. to include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement;

provided, however, that paragraphs (1)(i) and (1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the Registration Statement.

- (2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

The Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in this Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted directors, officers and controlling persons of the Registrant pursuant to the provisions described in Item 6 hereof, or otherwise, the Registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

EXHIBIT INDEX

<u>Exhibit No.</u>	<u>Description</u>
4.1	<u>Form of Common Stock certificate of the Registrant (incorporated by reference to Exhibit 4.1 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-195391)).</u>
4.2	<u>Ninth Amended and Restated Certificate of Incorporation of the Registrant, as currently in effect (incorporated by reference to Exhibit 3.1 of the Registrant's Form 8-K filed on June 24, 2014 (File No. 001-36510)).</u>
4.3	<u>Amended and Restated By-laws of the Registrant, as currently in effect (incorporated by reference to Exhibit 3.2 of the Registrant's Form 8-K filed on June 24, 2014 (File No. 001-36510)).</u>
4.4	<u>Third Amended and Restated Investors' Rights Agreement by and among the Registrant and certain of its stockholders, dated as of November 25, 2013 (incorporated by reference to Exhibit 4.2 to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-195391)).</u>
5.1*	<u>Opinion of Goodwin Procter LLP.</u>
23.1*	<u>Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm.</u>
23.2*	<u>Consent of Goodwin Procter LLP (included in Exhibit 5.1).</u>
24.1*	<u>Power of attorney (included on signature page).</u>
99.1	<u>Non-Qualified Stock Option Agreement Inducement Award by and between Registrant and Jeffrey S. Hatfield granted on October 9, 2017 (incorporated by reference to Exhibit 10.23 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2017, filed on March 9, 2018 (File No. 001-36510)).</u>
99.2	<u>Non-Qualified Stock Option Agreement Inducement Award by and between Registrant and Jeffrey S. Hatfield granted on October 9, 2017 (incorporated by reference to Exhibit 10.24 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2017, filed on March 9, 2018 (File No. 001-36510)).</u>
99.3	<u>Non-Qualified Stock Option Agreement Inducement Award by and between Registrant and Brian P. McVeigh granted on May 29, 2018 (incorporated by reference to Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018, filed on August 9, 2018 (File No. 001-36510)).</u>

* Filed herewith.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Boston, Commonwealth of Massachusetts, on the 9 day of November, 2018.

ZAFGEN, INC.

By: /s/ Jeffrey S. Hatfield
Jeffrey S. Hatfield
Chief Executive Officer

POWER OF ATTORNEY AND SIGNATURES

KNOW ALL BY THESE PRESENT, that each individual whose signature appears below hereby constitutes and appoints each of Jeffrey Hatfield and Patricia L. Allen as such person's true and lawful attorney-in-fact and agent with full power of substitution and resubstitution, for such person in such person's name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement on Form S-8, and to file the same, with all exhibits thereto, and all documents in connection therewith, with the Securities and Exchange Commission granting unto each said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as such person might or could do in person, hereby ratifying and confirming all that any said attorney-in-fact and agent, or any substitute or substitutes of any of them, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following person in the capacities and on the date indicated.

Name	Title	Date
<u>/s/ Jeffrey S. Hatfield</u> Jeffrey S. Hatfield	Chief Executive Officer and Director (Principal Executive Officer)	November 9, 2018
<u>/s/ Patricia L. Allen</u> Patricia L. Allen	Chief Financial Officer (Principal Financial and Accounting Officer)	November 9, 2018
<u>/s/ Peter Barrett</u> Peter Barrett, Ph.D.	Chairman of the Board of Directors	November 9, 2018
<u>/s/ Thomas O. Daniel</u> Thomas O. Daniel, M.D.	Director	November 9, 2018
<u>/s/ Wendy Everett</u> Wendy Everett, Sc.D.	Director	November 9, 2018
<u>/s/ John L. LaMattina</u> John L. LaMattina, Ph.D.	Director	November 9, 2018
<u>/s/ Cameron Geoffrey McDonough</u> Cameron Geoffrey McDonough, M.D.	Director	November 9, 2018
<u>/s/ Robert J. Perez</u> Robert J. Perez	Director	November 9, 2018
<u>/s/ Frank E. Thomas</u> Frank E. Thomas	Director	November 9, 2018

November 9, 2018

Zafgen, Inc.
175 Portland Street, 4th Floor
Boston, MA 02114

Re: Securities Being Registered under Registration Statement on Form S-8

Ladies and Gentlemen:

We have acted as counsel to you in connection with your filing of a Registration Statement on Form S-8 (the "Registration Statement") pursuant to the Securities Act of 1933, as amended (the "Securities Act"), on or about the date hereof relating to an aggregate of 1,875,000 shares (the "Shares") of Common Stock, \$0.001 par value per share, of Zafgen, Inc., a Delaware corporation (the "Company"), that may be issued pursuant to Inducement Stock Option Agreements, between the Company and certain of its employees, for awards granted on October 9, 2017 and May 29, 2018 (collectively, the "Awards").

We have reviewed such documents and made such examination of law as we have deemed appropriate to give the opinions set forth below. We have relied, without independent verification, on certificates of public officials and, as to matters of fact material to the opinion set forth below, on certificates of officers of the Company.

The opinion set forth below is limited to the Delaware General Corporation Law.

For purposes of the opinion set forth below, we have assumed that no event occurs that causes the number of authorized shares of Common Stock available for issuance by the Company to be less than the number of then unissued Shares.

Based on the foregoing, we are of the opinion that the Shares have been duly authorized and, upon issuance and delivery against payment therefor in accordance with the terms of the Awards, will be validly issued, fully paid and nonassessable.

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the Registration Statement. In giving our consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours,

/s/ GOODWIN PROCTER LLP

GOODWIN PROCTER LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of Zafgen, Inc. of our report dated March 9, 2018 relating to the financial statements, which appears in Zafgen, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2017.

/s/ PricewaterhouseCoopers LLP
Boston, Massachusetts
November 9, 2018