GENOCEA BIOSCIENCES, INC.

Form S-8

February 23, 2017

Registration No. 333-

As filed with the Securities and Exchange Commission on February 22, 2017

UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, DC 20549

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

GENOCEA BIOSCIENCES, INC.

(Exact name of registrant as specified in its charter)

Delaware 51-0596811 (State or other jurisdiction of incorporation or organization) Identification No.)

100 Acorn Park Drive, 5th Floor, Cambridge, MA 02140 (Address of Principal Executive Offices) (Zip Code)

2014 Equity Incentive Plan (Full titles of the plans)

William Clark
President and Chief Executive Officer
100 Acorn Park Drive, 5th Floor
Cambridge, MA 02140
(Name and address of agent for service)

(617) 876-8191

(Telephone number, including area code, of agent for service)

Please send copies of all communications to:

Marc A. Rubenstein Ropes & Gray LLP Prudential Tower 800 Boylston Street Boston, MA 02199-3600 617-951-7000

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

Large accelerated filer o

Accelerated filer x

Non-accelerated filer o (Do not check if a smaller reporting company) Smaller reporting company o

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered (1)	Proposed Maximu Offering Price Per Share	r Proposed Maximum Aggregate Offering P	Amount of Registration rice Fee
Common Stock, \$0.001 par value per share	1,137,781 shares	(2)\$ 4.41	(3)\$ 5,017,615	\$ 582
TOTAL	1,137,781		\$ 5,017,615	\$ 582

Pursuant to Rule 416(a) under the Securities Act of 1933, this Registration Statement also covers such additional (1)shares of Common Stock as may issued to prevent dilution from stock splits, stock dividends and similar transactions.

Represents 1,137,781 shares of Common Stock that were automatically added to the shares authorized for issuance under the registrant's 2014 Equity Incentive Plan (the "2014 Plan") on January 1, 2017 pursuant to an "evergreen" provision contained in the 2014 Plan. The "evergreen" provision provides that on each January 1,

- (2) 2015 through January 1, 2024, the number of shares of Common Stock available for issuance under the 2014 Plan will automatically increase annually in an amount equal to the lesser of 4% of outstanding shares of the registrant's Common Stock as of the close of business on the immediately preceding December 31st or the number of shares determined by the registrant's board of directors.
- Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(h) based on the (3) average high and low prices of the registrant's Common Stock as reported by the NASDAQ Global Market on February 17, 2017 to be \$4.60 and \$4.22, respectively.

EXPLANATORY NOTE

This Registration Statement on Form S-8 is being filed to register an additional 1,137,781 shares under the registrant's 2014 Equity Incentive Plan. Pursuant to Instruction E to Form S-8, the Registrant incorporates by reference, except to the extent supplemented, amended or superseded by the information set forth herein, into this Registration Statement the entire contents of its Registration Statement on Form S-8 (File No.333-194021) filed with the Securities and Exchange Commission on February 19, 2014.

PART II INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 8. Exhibits.

See the Exhibit Index following the signature page.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, 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 Cambridge, Commonwealth of Massachusetts, on this 22nd day of February, 2017.

GENOCEA BIOSCIENCES, INC. By:/s/ Jonathan Poole Name: Jonathan Poole

Title: Chief Financial Officer

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints William Clark and Jonathan Poole, and each of them acting individually, his or her true and lawful attorney-in-fact and agent with full power of substitution and resubstitution, for him or her and in his or her 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 to be filed by Genocea Biosciences, Inc., and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents full power and authority to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or their substitutes, 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 persons in the capacities and on the dates indicated:

Signature	Title	Date
/s/ William Clark William Clark	President and Chief Executive Officer and Director (Principal Executive Officer)	February 22, 2017
/s/ Jonathan Poole Jonathan Poole	Chief Financial Officer (Principal Financial Officer & Principal Accounting Officer)	February 22, 2017
/s/ Kevin Bitterman Kevin Bitterman, Ph.D.	Director	February 22, 2017
/s/ Katrine Bosley Katrine Bosley	Director	February 22, 2017
/s/ Kenneth Bate Kenneth Bate	Director	February 22, 2017
/s/ Ronald Cooper Ronald Cooper	Director	February 22, 2017
/s/ Michael Higgins Michael Higgins	Director	February 22, 2017
/s/ Stephen Hoffman Stephen Hoffman, M.D., Ph.D.	Director	February 22, 2017
/s/ George Siber George Siber, M.D.	Director	February 22, 2017

EXHIBIT INDEX

Exhibit Number Exhibit

- Fifth Amended and Restated Certificate of Incorporation (previously filed as Exhibit 3.1 to the current report on Form 8-K filed on February 12, 2014 (File No. 001-36289) and incorporated herein by reference).
- Amended and Restated By-laws (previously filed as Exhibit 3.2 to the current report on Form 8-K filed on February 12, 2014 (File No. 001-36289) and incorporated herein by reference).
- Form of Common Stock Certificate (previously filed as Exhibit 4.1 to the registration statement on Form S-1 (File No. 333-193043) and incorporated herein by reference).
- Genocea Biosciences, Inc. 2014 Equity Incentive Plan (previously filed as Exhibit 10.15 to the registration statement on Form S-1 (File No. 333-193043) and incorporated herein by reference).
- 5.1 Opinion of Ropes & Gray LLP (filed herewith).
- 23.1 Consent of Ernst & Young LLP (filed herewith).
- 23.2 Consent of Ropes & Gray LLP (included in the opinion filed as Exhibit 5.1).
- 24.1 Powers of Attorney (included on the signature page in Part II).