

GENOCEA BIOSCIENCES, INC.  
Form SC 13D  
February 14, 2014  
**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**  
**Washington, D.C. 20549**

**SCHEDULE 13D**

**Under the Securities Exchange Act of 1934**  
**(Amendment No. \_\_\_\_\_)\***

GENOCEA BIOSCIENCES, INC.

(Name of Issuer)

Common Stock, Par Value \$0.001

(Title of Class of Securities)

372427 10 4

(CUSIP Number)

Victoria A. Whyte

GlaxoSmithKline plc

980 Great West Road

Brentford, Middlesex TW8 9GS

England

Telephone: +44 (0)208 047 5000

(Name, Address and Telephone Number of Person  
Authorized to Receive Notices and Communications)

February 5, 2014

(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box.

**Note:** Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See §240.13d-7 for other parties to whom copies are to be sent.

\* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act.

- NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)
1. GlaxoSmithKline plc  
CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP  
(see instructions)
  2. (a)  
(b)
  3. SEC USE ONLY
  4. SOURCE OF FUNDS (see instructions)  
WC
  5. CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e)  
CITIZENSHIP OR PLACE OF ORGANIZATION
  6. England and Wales

- |     |                          |
|-----|--------------------------|
|     | SOLE VOTING POWER        |
| 7.  | 1,671,667 (1)            |
|     | SHARED VOTING POWER      |
| 8.  | -0-                      |
|     | SOLE DISPOSITIVE POWER   |
| 9.  | 1,671,667 (1)            |
|     | SHARED DISPOSITIVE POWER |
| 10. | -0-                      |
- NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH

11. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
1,671,667 (1)
12. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES  
(see instructions)
13. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)  
9.7% (2)
14. TYPE OF REPORTING PERSON (see instructions)

CO

Footnotes:

- (1) Shares of Common Stock are held of record by S.R. One, Limited, an indirect, wholly-owned subsidiary of the Reporting Person, issued on February 10, 2014.
- (2) Based on 17,217,104 shares of Common Stock outstanding as of February 10, 2014.

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Item 1. Security and Issuer.

This statement on Schedule 13D (this “Statement”) relates to the shares of Common Stock, par value \$0.001 per share (the “Common Stock”), of Genocea Biosciences, Inc., a Delaware corporation (the “Issuer”). The Issuer’s principal executive offices are located at Cambridge Discovery Park, 100 Acorn Park Drive, 5th Floor, Cambridge, Massachusetts 02140.

**Item 2. Identity and Background.**

This Statement is being filed on behalf of GlaxoSmithKline plc, a public limited company incorporated under the laws of England and Wales. GlaxoSmithKline plc and its subsidiaries constitute a major global healthcare group engaged in the creation, discovery, development, manufacture and marketing of pharmaceutical and consumer health-related products with its principal offices located at 980 Great West Road, Brentford, Middlesex TW8 9GS, England. Set forth in Schedule 1 to this Statement are the name, business address and present principal occupation or employment and citizenship of each executive officer and director of GlaxoSmithKline plc. The Common Stock which is the subject of this Statement is held of record held by S.R. One, Limited (“S.R. One”), an indirect, wholly-owned subsidiary of GlaxoSmithKline plc.

During the last five years prior to the date hereof, neither GlaxoSmithKline plc nor, to the best knowledge of GlaxoSmithKline plc, any of the other persons with respect to whom information is given in response to this Item 2 has been convicted in a criminal proceeding or been a party to a civil proceeding ending in a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws, or finding any violation with respect to such laws.

**Item 3. Source or Amount of Funds or Other Consideration.**

S.R. One acquired from the Issuer 143,773 shares of Common Stock on February 10, 2014 pursuant to the Issuer’s initial public offering (the “IPO”). The total consideration paid by S.R. One for these shares was \$1,725,276, and such consideration was obtained from the working capital of S.R. One. S.R. One also acquired 1,527,894 shares of Common Stock on February 10, 2014 upon the conversion of (i) 9,230,769 shares of Series A Preferred Stock of the Issuer (the “Series A Preferred”) into 775,694 shares of Common Stock, (ii) 4,099,231 shares of Series B Preferred Stock of the Issuer (the “Series B Preferred”) into 344,473 shares of Common Stock, and (iii) 4,851,958 shares of Series C Preferred Stock of the Issuer (the “Series C Preferred” and, together with the Series A Preferred and the Series B Preferred, the “Preferred Stock”) into 407,727 shares of Common Stock, at the closing of the IPO. The conversion ratio was one share of Common Stock for every 11.9 shares of Preferred Stock.

**Item 4. Purpose of Transaction.**

A. Board Member

In February 2009, S.R. One appointed Simeon J. George, M.D., Vice President of S.R. One, to the board of directors of the Issuer pursuant to an investor rights agreement which terminated upon closing of the IPO. At the request of the Issuer, Dr. George currently remains on the Issuer’s board of directors. As of the IPO, S.R. One does not have the right to appoint or remove a director.

B. Registration Rights Agreement

On October 21, 2013, the Issuer, S.R. One and certain other investors entered into the Fourth Amended and Restated Registration Rights Agreement (the “Registration Rights Agreement”), a copy of which is attached as Exhibit 1 hereto. The registration rights granted to S.R. One pursuant to the Registration Rights Agreement include the following:

**Demand Registration Rights.** Following the date that is 180 days after the closing of the IPO, the holders of at least a majority of the Registrable Shares (as defined in the Registration Rights Agreement) may require the Issuer to file a registration statement under the Securities Act of 1933, as amended (the “Securities Act”), at the Issuer’s expense with respect to the resale of their Registrable Shares so long as the aggregate value of the securities to be sold under the registration statement is reasonably anticipated to be at least \$5,000,000, and the Issuer is required to use its best efforts to effect such registration.

**Piggyback Registration Rights.** If the Issuer proposes to register any of its Common Stock under the Securities Act for its own account or the account of any other holder, the holders of Registrable Shares are entitled to notice of such registration and to request that the Issuer include the Registrable Shares for resale on such registration statement, subject to the right of any underwriter to limit the number of shares included in such registration.

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Form S-3 Registration Rights. After the expiration of the 180-day period following the closing of the IPO, one or more holders of Registrable Shares will have the right to demand that the Issuer file a registration statement on Form S-3 so long as the aggregate value of the securities to be sold under the registration statement is reasonably anticipated to be at least \$3,000,000, subject to certain exceptions.

C. Lockup Agreement

S.R. One and certain other investors each entered into a lock up agreement (the “Lock Up Agreement”), a copy of which is attached as Exhibit 2 hereto, with Citigroup Global Markets Inc. and Cowen and Company, LLC (both in their capacity as representatives of the underwriters for the IPO) (the “Representatives”).

Pursuant to the Lockup Agreement, S.R. One has agreed that for a period of 180 days following the date of the underwriting agreement, it will not, without the prior written consent of the Representatives, offer, sell, contract to sell, pledge, or otherwise dispose of (or enter into a transaction which is designed to, or may reasonably be expected to result in the disposition of), directly or indirectly, including the filing of a registration statement with the Securities and Exchange Commission in respect of, or establish or increase a put equivalent position or liquidate or decrease a call equivalent position with respect to, any shares of capital stock of the Issuer or any securities convertible into, or exercisable or exchangeable for such capital stock, subject to specified exceptions, which include but are not limited to transactions relating to shares of Common Stock acquired by S.R. One in the IPO or in open market transactions subsequent to the closing of the IPO.

D. General

Other than as described above, S.R. One has no plans or proposals that would result in:

- a. the acquisition by any person of additional securities of the Issuer, or the disposition of securities of the Issuer;
- b. an extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving the Issuer or any of its subsidiaries;
- c. a sale or transfer of a material amount of assets of the Issuer or any of its subsidiaries;
- d. any change in the present board of directors or management of the Issuer, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the board;
- e. any material change in the present capitalization or dividend policy of the Issuer;
- f. any other material change in the Issuer’s business or corporate structure including but not limited to, if the Issuer is a registered closed-end investment company, any plans or proposals to make any changes in its investment policy for which a vote is required by Section 13 of the Investment Company Act of 1940;
- g. changes in the Issuer’s charter, bylaws or instruments corresponding thereto or other actions which may impede the acquisition of control of the Issuer by any person;
- h. causing a class of securities of the Issuer to be delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association;
- i. a class of equity securities of the Issuer becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Act; or
- j. any action similar to any of those enumerated above.

S.R. One expects to review from time to time its investment in the Issuer and may, depending on the Issuer’s business, assets, operations, financial condition, prospects and other factors, as well as (and subject to) the terms of the contracts described in Item 6 of this Schedule: (i) purchase additional shares of Common Stock, options or other securities of the Issuer in the open market, in privately negotiated transactions or otherwise; (ii) sell all or a portion of the shares of Common Stock, options or other securities now beneficially owned or hereafter acquired by it; (iii) propose one or more directors for the Issuer’s board of directors; (iv) engage in discussions, negotiations or enter into other transactions with a view to obtaining direct or indirect control of the Issuer; (v) acquire assets of the Issuer and its subsidiaries; and (vi) engage in such other proposals as S.R. One may deem appropriate under the circumstances, including plans or proposals which may relate to, or could result in, any of the matters referred to in clauses (a)

through (j), above.

Also, consistent with its investment intent, S.R. One may engage in communications with, without limitation, one or more shareholders of the Issuer, one or more officers of the Issuer and/or one or more members of the board of directors of the Issuer regarding the Issuer, including but not limited to its operations, governance and control.

**Item 5. Interest in Securities of the Issuer.**



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- a. GlaxoSmithKline plc beneficially owns 1,671,667 shares of Common Stock, which represents 9.7% of the 17,217,104 shares of Common Stock outstanding as of February 10, 2014.
- b. GlaxoSmithKline plc has the sole power to vote or direct the vote, and the sole power to dispose or to direct the disposition of all 1,671,667 shares of Common Stock described in Item 5a above.
- c. Except as described herein, no transaction in shares of Common Stock were effected during the past 60 days by GlaxoSmithKline plc.
- d. No person, other than GlaxoSmithKline plc, is known to have the right to receive or the power to direct the receipt of dividends from, or any proceeds from the sale of, the shares of Common Stock beneficially owned by GlaxoSmithKline plc.
- e. Not applicable.

**Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer.**

Except as disclosed in Item 4 of this Statement, there are no contracts, arrangements, understandings or relationships (legal or otherwise) between GlaxoSmithKline plc or S.R. One and any other person with respect to any securities of the Company.

**Item 7. Material to Be Filed as Exhibits.**

Descriptions of documents set forth on this Schedule are qualified in their entirety by reference to the exhibits listed in this Item 7.

Exhibit Name

- |   |  |
|---|--|
| 1 | Fourth Amended and Restated Registration Rights Agreement by and among the Issuer and the parties listed therein dated as of October 21, 2013, a copy of which is incorporated herein by reference from Exhibit 4.5 to the registration statement on Form S-1 originally filed by the Issuer on December 23, 2013, as amended. |
| 2 | Lockup Agreement by and among S.R. One, Citigroup Global Markets Inc. and Cowen and Company, LLC, dated as of October 21, 2013.  |

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**SIGNATURE**

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Date: February 14, 2014

GLAXOSMITHKLINE PLC

By: /s/ Simon Dingemans

Name: Simon Dingemans

Title: Chief Financial Officer

## SCHEDULE 1

| Name                       | Business Address  | Principal Occupation or Employment   | Citizenship               |
|----------------------------|---|--|---------------------------|
| Board of Directors         | 980 Great West Road   |  |                           |
| Sir Andrew Witty           | Brentford<br>Middlesex, England<br>TW8 9GS<br>980 Great West Road | Executive Director and Chief Executive Officer                                   | British                   |
| Simon Dingemans            | Brentford<br>Middlesex, England<br>TW8 9GS<br>980 Great West Road | Executive Director and Chief Financial Officer                                   | British                   |
| Dr. Moncef Slaoui          | Brentford<br>Middlesex, England<br>TW8 9GS<br>980 Great West Road | Executive Director and<br>Chairman Global Research & Development<br>and Vaccines | Moroccan, Belgian &<br>US |
| Sir Christopher Gent       | Brentford<br>Middlesex, England<br>TW8 9GS<br>980 Great West Road | Chairman and Company Director  | British                   |
| Professor Sir Roy Anderson | Brentford<br>Middlesex, England<br>TW8 9GS<br>980 Great West Road | Company Director   | British                   |
| Dr. Stephanie Burns        | Brentford<br>Middlesex, England<br>TW8 9GS<br>980 Great West Road | Company Director   | US                        |
| Stacey Cartwright          | Brentford<br>Middlesex, England<br>TW8 9GS                        | Company Director   | British                   |

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980 Great West Road

|                     |   |                  |         |
|---------------------|---|------------------|---------|
| Judy Lewent         | Brentford<br>Middlesex, England<br>TW8 9GS<br>980 Great West Road | Company Director | US      |
| Sir Deryck Maughan  | Brentford<br>Middlesex, England<br>TW8 9GS<br>980 Great West Road | Company Director | British |
| Dr. Daniel Podolsky | Brentford<br>Middlesex, England<br>TW8 9GS<br>980 Great West Road | Company Director | US      |
| Tom de Swaan        | Brentford<br>Middlesex, England<br>TW8 9GS<br>980 Great West Road | Company Director | Dutch   |
| Sir Robert Wilson   | Brentford<br>Middlesex, England<br>TW8 9GS<br>980 Great West Road | Company Director | British |
| Lynn Elsenhans      | Brentford<br>Middlesex, England<br>TW8 9GS<br>980 Great West Road | Company Director | US      |
| Jing Ulrich         | Brentford<br>Middlesex, England<br>TW8 9GS                        | Company Director | US      |

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| Name                        | Business Address  | Principal Occupation or Employment  | Citizenship               |
|-----------------------------|---|---|---------------------------|
|                             | 980 Great West Road   |   |                           |
| Hans Wijers                 | Brentford<br>Middlesex, England<br>TW8 9GS                        | Company Director  | Dutch                     |
| Corporate<br>Executive Team | 980 Great West Road   |   |                           |
| Sir Andrew Witty            | Brentford<br>Middlesex, England<br>TW8 9GS<br>980 Great West Road | Executive Director and Chief Executive Officer  | British                   |
| Simon Dingemans             | Brentford<br>Middlesex, England<br>TW8 9GS<br>980 Great West Road | Executive Director and Chief Financial Officer  | British                   |
| Dr. Moncef Slaoui           | Brentford<br>Middlesex, England<br>TW8 9GS<br>980 Great West Road | Executive Director Chairman and Global Research & Development and Vaccines              | Moroccan,<br>Belgian & US |
| Simon Bicknell              | Brentford<br>Middlesex, England<br>TW8 9GS<br>5 Crescent Drive,   | Senior Vice President, Governance, Ethics and Assurance and Company Secretary (interim) | British                   |
| Deirdre Connelly            | Philadelphia, PA<br>19112<br>150 Beach Road                       | President, North America Pharmaceuticals  | US                        |
| Abbas Hussain               | 22-00 Gateway West<br>189720<br>Singapore                         | President, Europe, Japan & Emerging Markets & Asia Pacific                              | British                   |

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|                      |                        |   |         |
|----------------------|------------------------|---|---------|
|                      | Five Moore Drive       |   |         |
|                      | PO Box 13398           |   |         |
| William Louv         | Research Triangle Park | Senior Vice President, Core Business Services | US      |
|                      | North Carolina 27709   |   |         |
|                      | 980 Great West Road    |   |         |
|                      | Brentford              |   |         |
| David Redfern        | Middlesex, England     | Chief Strategy Officer                        | British |
|                      | TW8 9GS                |   |         |
|                      | 980 Great West Road    |   |         |
|                      | Brentford              | Senior Vice President,                        |         |
| Claire Thomas        | Middlesex, England     | Human Resources                               | British |
|                      | TW8 9GS                |   |         |
|                      | 980 Great West Road    |   |         |
|                      | Brentford              |   |         |
| Philip Thomson       | Middlesex, England     | Senior Vice President, Global Communications  | British |
|                      | TW8 9GS                |   |         |
|                      | 5 Crescent Drive       |   |         |
|                      | Philadelphia, PA       |   |         |
| Daniel Troy          |                        | Senior Vice President & General Counsel       | US      |
|                      | 19112                  |   |         |
|                      | 980 Great West Road    |   |         |
|                      | Brentford              |   |         |
| Dr. Patrick Vallance | Middlesex, England     | President, Pharmaceuticals R&D                | British |
|                      | TW8 9GS                |   |         |
|                      | 980 Great West Road    |   |         |
|                      | Brentford              |   |         |
| Emma Walmsley        | Middlesex, England     | President, Consumer Healthcare Worldwide      | British |
|                      | TW8 9GS                |   |         |
| Roger Connor         | 980 Great West Road    | President, Global Manufacturing & Supply      | British |
|                      | Brentford              |   |         |

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Middlesex, England

TW8 9GS