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

SCHEDULE 13G

**Under the Securities Exchange Act of 1934
(Amendment No. 1)***

Genocea Biosciences, Inc.

(Name of Issuer)

Common Stock, \$0.001 par value per share
(Title of Class of Securities)

372427104
(CUSIP Number)

December 31, 2019
(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- Rule 13d-1(b)
- Rule 13d-1(c)
- Rule 13d-1(d)

*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 the disclosures provided in a prior cover page.

The information required in 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 (however, see the Notes).

**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 control number.**

CUSIP No. 372427104	
1. Names of Reporting Persons. GlaxoSmithKline plc	
2. Check the Appropriate Box if a Member of a Group (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3. SEC Use Only	
4. Citizenship or Place of Organization England and Wales	
Number of Shares Beneficially Owned by Each Reporting Person With:	5. Sole Voting Power 3,676,767 ⁽¹⁾
	6. Shared Voting Power 0
	7. Sole Dispositive Power 3,676,767 ⁽¹⁾
	8. Shared Dispositive Power 0
9. Aggregate Amount Beneficially Owned by Each Reporting Person 3,676,767 ⁽¹⁾	
10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares <input type="checkbox"/>	
11. Percent of Class Represented by Amount in Row (9) 7.7% ⁽²⁾	
12. Type of Reporting Person CO	

(1) Shares held directly by S.R. One Limited, an indirect wholly-owned subsidiary of the Reporting Person. Includes warrants exercisable for 310,883 shares of Common Stock (the "Warrants").

(2) Based upon (i) 47,336,130 shares of the Common Stock outstanding as of November 8, 2019, upon the closing of the Issuer's -offering, as reported in the Issuer's prospectus supplement dated November 8 (the "Final Prospectus") filed with the Securities and Exchange Commission (the "SEC") on November 8, 2019 pursuant to Rule 424(b)(5) of the Securities Act of 1933, as amended and (ii) 310,883 shares of Common Stock issuable upon exercise of the Warrants.

CUSIP No. 372427104

ITEM 1.

- (a) Name of Issuer:
Genocea Biosciences, Inc. (the "Company")
- (b) Address of Issuer's Principal Executive Offices:
100 Acorn Park Drive
Cambridge, Massachusetts 02140

ITEM 2.

- (a) Name of Person Filing:
GlaxoSmithKline plc.
- (b) Address of Principal Business Office, or if None, Residence:
980 Great West Road
Brentford
Middlesex
TW8 9GS
England
- (c) Citizenship:
England and Wales
- (d) Title of Class of Securities:
Common Stock, par value \$0.001 (the "Common Stock")
- (e) CUSIP Number:
372427104

ITEM 3. IF THIS STATEMENT IS FILED PURSUANT TO SS.240.13d-1(b) OR 240.13d-2(b) OR (c), CHECK WHETHER THE PERSON FILING IS A:

Not Applicable

ITEM 4. OWNERSHIP.

The information in items 1 and 5 through 11 on the cover page of this Schedule 13G is hereby incorporated by reference.

CUSIP No. 372427104

ITEM 5. OWNERSHIP OF FIVE PERCENT OR LESS OF A CLASS.

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following [].

ITEM 6. OWNERSHIP OF MORE THAN FIVE PERCENT ON BEHALF OF ANOTHER PERSON

S.R. One, Limited*	3,676,767	7.7%
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*Shares held directly by S.R. One Limited, an indirect wholly-owned subsidiary of Reporting Person.

ITEM 7. IDENTIFICATION AND CLASSIFICATION OF THE SUBSIDIARY WHICH ACQUIRED THE SECURITY BEING REPORTED ON BY THE PARENT HOLDING COMPANY.

Not Applicable

ITEM 8. IDENTIFICATION AND CLASSIFICATION OF MEMBERS OF THE GROUP.

Not Applicable

ITEM 9. NOTICE OF DISSOLUTION OF GROUP.

Not Applicable

ITEM 10. CERTIFICATIONS.

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having such purpose or effect, other than activities solely in connection with a nomination under § 240.14a-11.

13G/A1

CUSIP No. 372427104

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.

February 14, 2020

By: /s/ Victoria A. Whyte

Name: Victoria A. Whyte

Title: Authorized Signatory
