UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): May 16, 2019

GENOCEA BIOSCIENCES, INC.

(Exact name of registrant as specified in its charter)

Delaware	**001-36289**	**51-0596811**
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

Cambridge Discovery Park 100 Acorn Park Drive, 5th Floor Cambridge, MA	**02140**
(Address of principal executive offices)	(Zip Code)

(Registrant's telephone number, including area code): **(617) 876-8191**

Not Applicable

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading symbol(s)	Name of each exchange on which registered
Common stock, $0.001 per value per share	GNCA	NASDAQ Capital Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (230.405 of this chapter) or Rule 12b-2of the Securities Exchange Act of 1934 (§ 240 12b-2 of this chapter).

Emerging Growth Company ☒

If an emerging growth company, indicate by a 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 13(a) of the Exchange Act. ☒

Item 7.01 Regulation FD Disclosure.

On May 16, 2019, Genocea Biosciences, Inc. issued a press release announcing interim immunogenicity data from its GEN-009 neoantigen vaccine Phase 1/2a clinical trial. A copy of the press release, dated May 16, 2019, is attached to this Current Report on Form 8-K as Exhibit 99.1 and is incorporated herein by reference.

The information contained in this Item 7.01 of this Current Report on Form 8-K, including the exhibits attached hereto, is being furnished and shall not be deemed "filed" for any purpose, and shall not be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, regardless of any general incorporation language in any such filing.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

99.1	Press Release issued by Genocea Biosciences, Inc. on May 16, 2019

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

GENOCEA BIOSCIENCES, INC.

By: /s/ DIANTHA DUVALL

Diantha Duvall

Chief Financial Officer
(Principal Financial Officer)

Date: May 16, 2019

Contact:
Jennifer LaVin
617-715-6687
jennifer.lavin@genocea.com

Genocea Announces Positive Interim Immunogenicity Data from GEN-009 Neoantigen Vaccine Phase 1/2a Clinical Trial

Post-vaccination immune responses detected to 93% of vaccine neoantigens in first three patients analyzed

Additional data to be presented June 1st at ASCO 2019 and discussed on a conference call and webcast on June 3rd

CAMBRIDGE, Mass., May 16, 2019 – Genocea Biosciences, Inc. (NASDAQ: GNCA), a biopharmaceutical company developing personalized cancer immunotherapies, today announced the first clinical results from its ongoing Phase 1/2a trial for GEN-009, the company's lead neoantigen vaccine candidate. Genocea employs its ATLAS™ platform for patient-specific neoantigen selection, using each patient's own T cells to identify the neoantigens to which each patient mounts anti-tumor cytokine responses.

"To date, we have analyzed full immune response data from three patients following their priming series of three vaccinations and have detected immune responses to 93% of the total administered neoantigens, a response rate that would be best-in-class if seen across the full vaccinated cohort," said Tom Davis, M.D., Genocea's Chief Medical Officer. "We are studying a diverse group of patients and, despite this variability, we are seeing consistently broad immune responses, including *ex vivo* $CD8^+$ T cell responses, which have not previously been detected after monotherapy with a neoantigen vaccine. We expect to present more detailed immunogenicity and safety data from these and additional patients at the upcoming meeting of the American Society of Clinical Oncology (ASCO)."

ASCO POSTER SESSION: Developmental Immunotherapy and Tumor Immunobiology
Poster Board: #255 • *Abstract 2611

Title:	**A phase 1/2a study of GEN-009, a neoantigen vaccine based on autologous peptide immune responses**
Presenter:	Roger B. Cohen, M.D., University of Pennsylvania Perelman School of Medicine
Date:	Saturday, June 1, 8:00 AM - 11:00 AM Central Time
Location:	Hall A

*Note: The abstract was submitted prior to the availability of the immunogenicity data being reported today.

Conference Call and Webcast – June 3rd at 8:30 am ET
Genocea will host a conference call and webcast to discuss the clinical results presented at ASCO at 8:30 am ET on June 3, 2019. Interested participants may access the conference call by dialing (844) 826-0619 (domestic) or (315) 625-6883 (international) and referring to conference ID number 9068006. To join the live webcast, please visit the presentation page of the investor relations section of the Genocea website at https://ir.genocea.com/events-and-presentations. A webcast replay of the conference call will be available on the Genocea website beginning approximately two hours after the event and will be archived for 90 days.

About Genocea Biosciences, Inc.
Genocea is a biopharmaceutical company developing personalized cancer immunotherapies. Our unique ATLAS™ technology platform allows us to identify immunotherapy targets based on each person's tumor antigen-specific T cell responses. Using ATLAS, we can both optimize neoantigens for inclusion in our immunotherapies and exclude so-called "inhibitory" antigens that appear to exert an immunosuppressive effect on the patient. We are advancing complementary programs built from ATLAS insights: GEN-009, our neoantigen vaccine candidate for which we are conducting a Phase 1/2a clinical trial across a variety of solid tumor types, and GEN-011, our neoantigen-specific adoptive T cell therapy, for which we intend to file an Investigational New Drug Application in the first half of 2020. To learn more, please visit www.genocea.com

Forward-Looking Statements
This press release includes forward-looking statements, including statements relating to expectations of additional immunogenicity and safety data from our Phase 1/2a clinical trial for GEN-009 and intentions for filing an Investigational New Drug Application for GEN-011, within the meaning of the Private Securities Litigation Reform Act. Such forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied in such statements. Genocea cautions that these forward-looking statements are subject to numerous assumptions, risks and uncertainties that change over time. Applicable risks and uncertainties include those identified under the

heading "Risk Factors" included in Genocea's Annual Report on Form 10-K for the year ended December 31, 2018 and any subsequent SEC filings. These forward-looking statements speak only as of the date of this press release and Genocea assumes no duty to update forward-looking statements, except as may be required by law.

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