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): July 25, 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, including zip code)

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

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))

Title of each class	Trading symbol(s)	Name of each exchange on which registered
Common stock, $0.001 par 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 2.02 Results of Operations and Financial Condition.

On July 25, 2019, Genocea Biosciences, Inc. (the "Company") announced its financial results for the second quarter ended June 30, 2019. A full text of the press release issued in connection with the announcement is furnished as Exhibit 99.1 to this Current Report on Form 8-K.

The information contained in this Current Report on Form 8-K, including Exhibit 99.1 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, except as expressly set forth by specific reference in such filing.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

99.1	Press Release issued by Genocea Biosciences, Inc. on July 25, 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: July 25, 2019

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

Genocea Provides Corporate Update, Including Second-Quarter 2019 Financial Results

Initiated Part B of Phase 1/2a clinical trial of neoantigen vaccine candidate GEN-009; Plans to present additional GEN-009 immunogenicity data at ESMO 2019

Conference call today at 8:30 am ET

CAMBRIDGE, Mass., July 25, 2019 - Genocea Biosciences, Inc. (NASDAQ: GNCA), a biopharmaceutical company developing personalized cancer immunotherapies, today reported its operating and financial results for the quarter ended June 30, 2019. Genocea has initiated Part B of its Phase 1/2a clinical trial testing the safety, immunogenicity, and efficacy of its lead neoantigen vaccine candidate GEN-009 in combination with standard-of-care checkpoint inhibitors. The company also announced plans to present additional GEN-009 immunogenicity data at this year's meeting of the European Society for Medical Oncology (ESMO), taking place from September 27th through October 1st, 2019 in Barcelona, Spain.

"Our presentation of GEN-009 immunogenicity data at ASCO 2019 marked a significant milestone for Genocea," said Chip Clark, Genocea president & CEO. "These best-in-class data showcased our unique ATLAS™ platform and its ability to identify each patient's neoantigens of pre-existing T cell responses, as well as the amplification of anti-tumor cytokine responses to these neoantigens with GEN-009. These data gave us confidence to initiate Part B of our Phase 1/2a clinical trial, which we designed to demonstrate that such broad and strong anti-tumor immune responses lead to tumor shrinkage in cancer patients treated with GEN-009 and a checkpoint inhibitor."

Second Quarter 2019 Operational Highlights

- Completed a public equity financing, raising $42.3 million, including the full exercise of the underwriters' over-allotment option.
- Presented best-in-class immunogenicity results for GEN-009 at the annual meeting of the American Society of Clinical Oncology (ASCO 2019); the poster presentation was selected by ASCO's *Journal of Clinical Oncology* as one of the Top 10 Featured Immuno-oncology Abstracts.
- Entered into a research collaboration with Iovance exploring the use of Genocea's ATLAS neoantigen screening platform in the development of neoantigen-targeted TIL (tumor-infiltrating lymphocyte) products.
- Presented additional ATLAS data at the 2019 Annual Meeting of the American Association for Cancer Research (AACR 2019). The poster highlighted the potential use of ATLAS as a tool to predict the advanced melanoma patients for whom checkpoint therapy might prove beneficial.

Second Quarter 2019 Financial Results

- Cash position: As of June 30, 2019, cash and cash equivalents were $58.7 million versus $26.4 million as of December 31, 2018.
- Research and Development (R&D) expenses: R&D expenses were $6.8 million for the quarter ended June 30, 2019, compared to $5.3 million for the same period in 2018.
- General and Administrative (G&A) expenses: G&A expenses were $3.2 million for the quarter ended June 30, 2019, compared to $4.5 million for the same period in 2018.
- Net loss: Net loss was $6.5 million for the quarter ended June 30, 2019, compared to a net loss of $4.4 million for the quarter ended June 30, 2018.

Guidance

Genocea expects that its existing cash and cash equivalents are sufficient to support its operations into the first quarter of 2021.

Conference Call

Genocea will host a conference call and webcast today at 8:30 am ET. Interested participants may access the conference call by dialing (844) 826-0619 (domestic) or (315) 625-6883 (international) and referring to conference ID number 7395079. 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 the near-term milestones for GEN-009 and GEN-011 and the period for which existing cash will be able to fund operations, 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.

(Tables follow)

GENOCEA BIOSCIENCES, INC.

CONDENSED CONSOLIDATED BALANCE SHEETS (UNAUDITED)

(In thousands)

	June 30, 2019	December 31, 2018
Cash and cash equivalents	$ 58,670	$ 26,361
Other assets	12,092	4,754
Total assets	$ 70,762	$ 31,115
Debt, current and long-term	$ 13,732	$ 14,822
Accounts payable, accrued expenses and other liabilities	13,203	5,486
Warrant liability	5,389	3,472
Total liabilities	32,324	23,780
Stockholders' equity	38,438	7,335
Total liabilities and stockholders' equity	$ 70,762	$ 31,115

GENOCEA BIOSCIENCES, INC.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (UNAUDITED)

(In thousands, except per share data)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Operating expenses:				
Research and development	$ 6,849	$ 5,316	$ 13,309	$ 12,591
General and administrative	3,217	4,472	6,234	7,581
Total operating expenses	10,066	9,788	19,543	20,172
Loss from operations	(10,066)	(9,788)	(19,543)	(20,172)
Other income (expense):				
Change in fair value of warrants	3,870	5,498	(1,917)	199
Interest expense, net	(299)	(148)	(602)	(355)
Total other income (expense)	3,571	5,350	(2,519)	(156)
Net loss	$ (6,495)	$ (4,438)	$ (22,062)	$ (20,328)
Net loss per share - basic and diluted	$ (0.42)	$ (0.42)	$ (1.57)	$ (2.07)
Weighted-average number of common shares used in computing net loss per share	15,344	10,693	14,035	9,804