

OMB APPROVAL	
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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

1. Name and Address of Reporting Person* <u>New Enterprise Associates 16, L.P.</u> <hr/> (Last) (First) (Middle) 1954 GREENSPRING DRIVE SUITE 600 <hr/> (Street) TIMONIUM MD 21093 <hr/> (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <u>GENOCEA BIOSCIENCES, INC. [GNCA]</u>	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director <input checked="" type="checkbox"/> 10% Owner Officer (give title below) Other (specify below)
	3. Date of Earliest Transaction (Month/Day/Year) <u>02/14/2019</u>	
4. If Amendment, Date of Original Filed (Month/Day/Year)		

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	02/14/2019		P ⁽¹⁾		9,948,269	A	\$0.4713	34,948,269	D ⁽²⁾	

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)	
				Code	V	(A)	(D)	Date Exercisable	Expiration Date						Title
Warrant to Purchase Common Stock	\$0.5656	02/14/2019		P ⁽¹⁾		2,487,067		02/14/2019	02/14/2024	Common Stock	2,487,067	\$0.125	2,487,067	D ⁽²⁾	

1. Name and Address of Reporting Person*
New Enterprise Associates 16, L.P.

 (Last) (First) (Middle)
 1954 GREENSPRING DRIVE
 SUITE 600

 (Street)
 TIMONIUM MD 21093

 (City) (State) (Zip)

1. Name and Address of Reporting Person*
NEA Partners 16, L.P.

 (Last) (First) (Middle)
 1954 GREENSPRING DRIVE
 SUITE 600

 (Street)
 TIMONIUM MD 21093

 (City) (State) (Zip)

1. Name and Address of Reporting Person*		
NEA 16 GP, LLC		
(Last)	(First)	(Middle)
1954 GREENSPRING DRIVE SUITE 600		
(Street)		
TIMONIUM	MD	21093
(City) (State) (Zip)		

Explanation of Responses:

- Acquired from the issuer pursuant to a Subscription Agreement dated February 11, 2019, with a closing date of February 14, 2019.
- The shares are directly held by New Enterprise Associates 16, L.P. ("NEA 16"), and indirectly held by NEA Partners 16, L.P. ("NEA Partners"), the sole general partner of NEA 16, NEA 16 GP, LLC ("NEA 16 GP"), the sole general partner of NEA Partners 16, and the individual managers of NEA 16 GP (NEA Partners 16, NEA 16 GP and the individual managers of NEA 16 GP, together, the "Indirect Reporting Persons"). The individual managers of NEA 16 GP are Peter J. Barris, Forest Baskett, Ali Behbahani, Carmen Chang, Anthony A. Florence, Jr., Mohamad Makhzoumi, Josh Makower, David M. Mott, Scott D. Sandell and Peter W. Sonsini. The Indirect Reporting Persons disclaim beneficial ownership within the meaning of Section 16 of the Securities Exchange Act of 1934, as amended, or otherwise of such portion of the shares of the Issuer held by NEA 16 in which the Indirect Reporting Persons have no pecuniary interest.

Remarks:

/s/ Sasha Keough, attorney-in- 02/19/2019
fact

** Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

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 Number.