

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

SCHEDULE 13D

Under the Securities Exchange Act of 1934
(Amendment No. 2)*

Targacept, Inc.

(Name of Issuer)

Common Stock, \$.001 par value per share

(Title of Class of Securities)

87611R306

(CUSIP Number)

Louis S. Citron, Esq.
New Enterprise Associates
1954 Greenspring Drive, Suite 600
Timonium, MD 21093
(410) 842-4000

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

March 6, 2015

(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 (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.

1	NAMES OF REPORTING PERSONS. I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY).	
	New Enterprise Associates 10, Limited Partnership	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS) (a) <input type="radio"/> (b) <input type="radio"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) WC	
5	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="radio"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware Limited Partnership	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0 shares
	8	SHARED VOTING POWER 4,563,512 shares
	9	SOLE DISPOSITIVE POWER 0 shares
	10	SHARED DISPOSITIVE POWER 4,563,512 shares
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 4,563,512 shares	
12	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="radio"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 13.3%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) PN	

1	NAMES OF REPORTING PERSONS. I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY).	
	NEA Partners 10, Limited Partnership	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS) (a) <input type="radio"/> (b) <input type="radio"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) AF	
5	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="radio"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware Limited Partnership	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0 shares
	8	SHARED VOTING POWER 4,563,512 shares
	9	SOLE DISPOSITIVE POWER 0 shares
	10	SHARED DISPOSITIVE POWER 4,563,512 shares
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 4,563,512 shares	
12	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="radio"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 13.3%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) PN	

1	NAMES OF REPORTING PERSONS. I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY).	
	Michael James Barrett	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS) (a) <input type="radio"/> (b) <input type="radio"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) AF	
5	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="radio"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION United States citizen	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 57,500 shares
	8	SHARED VOTING POWER 4,563,512 shares
	9	SOLE DISPOSITIVE POWER 57,500 shares
	10	SHARED DISPOSITIVE POWER 4,563,512 shares
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 4,621,012 shares	
12	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="radio"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 13.5%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) IN	

1	NAMES OF REPORTING PERSONS. I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY).	
	Peter J. Barris	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS) (a) <input type="radio"/> (b) <input type="radio"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) AF	
5	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="radio"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION United States citizen	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0 shares
	8	SHARED VOTING POWER 4,563,512 shares
	9	SOLE DISPOSITIVE POWER 0 shares
	10	SHARED DISPOSITIVE POWER 4,563,512 shares
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 4,563,512 shares	
12	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="radio"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 13.3%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) IN	

1	NAMES OF REPORTING PERSONS. I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY).	
	Scott D. Sandell	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS) (a) <input type="radio"/> (b) <input type="radio"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) AF	
5	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="radio"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION United States citizen	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 0 shares
	8	SHARED VOTING POWER 4,563,512 shares
	9	SOLE DISPOSITIVE POWER 0 shares
	10	SHARED DISPOSITIVE POWER 4,563,512 shares
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 4,563,512 shares	
12	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="radio"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 13.3%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) IN	

Schedule 13D

Item 1. Security and Issuer.

This Amendment No. 2 ("Amendment No. 2") relates to the Common Stock, \$.001 par value (the "Common Stock") of Targacept, Inc. (the "Issuer") having its principal executive office at 100 North Main Street, Suite 1510, Winston-Salem, NC 27101.

Certain terms used but not defined herein shall have the meanings assigned thereto in the Schedule 13D. Except as specifically provided herein, this Amendment No. 2 does not modify any of the information previously reported on the Schedule 13D.

Item 2. Identity and Background.

This statement is being filed by New Enterprise Associates 10, Limited Partnership ("NEA 10"), NEA Partners 10, Limited Partnership ("NEA Partners 10"), which is the sole general partner of NEA 10, and Michael James Barrett ("Barrett"), Peter J. Barris ("Barris") and Scott D. Sandell ("Sandell"), (collectively, the "General Partners") and C. Richard Kramlich ("Kramlich"), Charles W. Newhall III ("Newhall"), Mark W. Perry ("Perry") and Eugene A. Trainor III ("Trainor"). The General Partners are the individual general partners of NEA Partners 10. The persons named in this paragraph are referred to individual herein as a "Reporting Person" and collectively as the "Reporting Persons."

The address of the principal business office of NEA 10 and NEA Partners 10 is New Enterprise Associates, 1954 Greenspring Drive, Suite 600, Timonium, MD 21093. The address of the principal business office of Barrett and Barris is New Enterprise Associates, 5425 Wisconsin Ave., Suite 800, Chevy Chase, MD 20815. The address of the principal business office of Sandell is New Enterprise Associates, 2855 Sand Hill Road, Menlo Park, California 94025.

The principal business of NEA 10 is to invest in and assist growth-oriented businesses located principally in the United States. The principal business of NEA Partners 10 is to act as the sole general partner of NEA 10. The principal business of each of the General Partners is to act as a general partner of NEA Partners 10 and a number of affiliated partnerships with similar businesses.

During the five years prior to the date hereof, none of the Reporting Persons has been convicted in a criminal proceeding or has 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.

Each of NEA 10 and NEA Partners 10 is a limited partnership organized under the laws of the State of Delaware. Each of the General Partners is a United States citizen.

Item 5. Interest in Securities of the Issuer.

- (a) As of March 6, 2015, NEA 10 is the record owner of 4,563,512 shares of Common Stock (the "NEA 10 Shares"). As the sole general partner of NEA 10, NEA Partners 10 may be deemed to own beneficially the NEA 10 Shares. As the individual general partners of NEA Partners 10, each of the General Partners also may be deemed to own beneficially the NEA 10 Shares.

Additionally, Barrett holds options to purchase 57,500 shares, which are exercisable within 60 days (the "Barrett Option Shares"). As a result, Barrett may be deemed to own beneficially the Barrett Shares in addition to the NEA 10 Shares for a total of 4,621,012 shares of Common Stock.

The percentage of outstanding Common Stock of the Issuer which may be deemed to be beneficially owned by each Reporting Person is set forth on Line 13 of such Reporting Person's cover sheet. The percentage set forth on the cover sheets for each Reporting Person other than Barrett was calculated based on the 34,311,435 shares of Common Stock (the "10-Q Shares") reported to be outstanding as of October 31, 2014 in the Issuer's Form 10-Q filed November 6, 2014. The percentage set forth on the cover sheet for Barrett is calculated based on 34,368,935 shares, which includes the 10-Q Shares and the Barrett Option Shares. Each of the Reporting Persons disclaims beneficial ownership of the Shares other than those shares, if any, which such person owns of record.

(b) Regarding the number of shares as to which such person has:

- (i) sole power to vote or to direct the vote: See line 7 of cover sheets.
- (ii) shared power to vote or to direct the vote: See line 8 of cover sheets.
- (iii) sole power to dispose or to direct the disposition: See line 9 of cover sheets.
- (iv) shared power to dispose or to direct the disposition: See line 10 of cover sheets.

(c) Except as set forth, none of the Reporting Persons has effected any transaction in the Common Stock during the last 60 days.

(d) No other person 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, Shares beneficially owned by any of the Reporting Persons.

(e) Each of Kramlich, Newhall, Perry and Trainor have ceased to own beneficially five percent (5%) or more of the Issuer's Common Stock as a result of ceasing to be a General Partner of NEA Partners 10.

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

On March 5, 2015, NEA 10 entered into a certain Voting Agreement with the Issuer and Catalyst Biosciences, Inc., the form of which is attached as Exhibit 10.1 to the Issuer's Form 8-K filed March 6, 2015.

Item 7. Material to be Filed as Exhibits.

Exhibit 1 – Agreement regarding filing of joint Schedule 13D.

Exhibit 2 – Power of Attorney regarding filings under the Securities Exchange Act of 1934, as amended.

SIGNATURE

After reasonable inquiry and to the best of its knowledge and belief, each of the undersigned certifies that the information set forth in this statement is true, complete and correct.

Date: March 17, 2015

NEW ENTERPRISE ASSOCIATES 10,
LIMITED PARTNERSHIP

By: NEA PARTNERS 10, LIMITED PARTNERSHIP
General Partner

By: _____ *
Peter J. Barris
General Partner

NEA PARTNERS 10, LIMITED PARTNERSHIP

By: _____ *
Peter J. Barris
General Partner

*
Michael James Barrett

*
Peter J. Barris

*
C. Richard Kramlich

*
Charles W. Newhall III

*
Scott D. Sandell

*/s/ Louis S. Citron _____
Louis S. Citron
As attorney-in-fact

This Amendment No. 2 to Schedule 13D was executed by Louis S. Citron on behalf of the individuals listed above pursuant to Powers of Attorney, copies of which are attached as Exhibit 2.

AGREEMENT

Pursuant to Rule 13d-1(k)(1) under the Securities Exchange Act of 1934, the undersigned hereby agree that only one statement containing the information required by Schedule 13D need be filed with respect to the ownership by each of the undersigned of shares of stock of Targacept, Inc.

EXECUTED this 17th day of March, 2015.

NEW ENTERPRISE ASSOCIATES 10,
LIMITED PARTNERSHIP

By: NEA PARTNERS 10, LIMITED PARTNERSHIP
General Partner

By: _____ *
Peter J. Barris
General Partner

NEA PARTNERS 10, LIMITED PARTNERSHIP

By: _____ *
Peter J. Barris
General Partner

*
Michael James Barrett

*
Peter J. Barris

*
C. Richard Kramlich

*
Charles W. Newhall III

*
Scott D. Sandell

*/s/ Louis S. Citron
Louis S. Citron
As attorney-in-fact

This Agreement relating to Schedule 13D was executed by Louis S. Citron on behalf of the individuals listed above pursuant to Powers of Attorney, copies of which are attached hereto as Exhibit 2.

EXHIBIT 2

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that the undersigned hereby constitutes and appoints Louis S. Citron, Timothy Schaller, Sasha Keough and Stephanie Brecher, and each of them, with full power to act without the others, his or her true and lawful attorney-in-fact, with full power of substitution, to sign any and all instruments, certificates and documents that may be necessary, desirable or appropriate to be executed on behalf of himself as an individual or in his or her capacity as a direct or indirect general partner, director, officer or manager of any partnership, corporation or limited liability company, pursuant to section 13 or 16 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and any and all regulations promulgated thereunder, and to file the same, with all exhibits thereto, and any other documents in connection therewith, with the Securities and Exchange Commission, and with any other entity when and if such is mandated by the Exchange Act or by the Financial Industry Regulatory Authority, granting unto said attorney-in-fact full power and authority to do and perform each and every act and thing necessary, desirable or appropriate, fully to all intents and purposes as he or she might or could do in person, thereby ratifying and confirming all that said attorney-in-fact, or his or her substitutes, may lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, this Power of Attorney has been signed as of the 1st day of August, 2013.

/s/ M. James Barrett
M. James Barrett

/s/ Peter J. Barris
Peter J. Barris

/s/ Forest Baskett
Forest Baskett

/s/ Rohini Chakravarthy
Rohini Chakravarthy

/s/ Patrick Chung
Patrick Chung

/s/ Ryan Drant
Ryan Drant

/s/ Anthony A. Florence
Anthony A. Florence

/s/ Robert Garland
Robert Garland

/s/ Paul Hsiao
Paul Hsiao

/s/ Patrick J. Kerins
Patrick J. Kerins

/s/ Suzanne King
Suzanne King

/s/ Krishna S. Kolluri
Krishna S. Kolluri

/s/ C. Richard Kramlich
C. Richard Kramlich

/s/ Edward Mathers
Edward Mathers

/s/ David M. Mott
David M. Mott

/s/ John M. Nehra
John M. Nehra

/s/ Charles W. Newhall III
Charles W. Newhall III

/s/ Jason R. Nunn
Jason R. Nunn

/s/ Jon Sakoda
Jon Sakoda

/s/ Scott D. Sandell
Scott D. Sandell

/s/ Peter W. Sonsini
Peter W. Sonsini

/s/ A. Brooke Seawell
A. Brooke Seawell

/s/ Ravi Viswanathan
Ravi Viswanathan

/s/ Paul E. Walker
Paul E. Walker

/s/ Harry Weller
Harry Weller