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 14, 2015 (May 13, 2015)

TARGACEPT, INC.
(Exact name of registrant as specified in its charter)

Delaware	**000-51173**	**56-2020050**
(State or other jurisdiction of incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**

100 North Main Street, Suite 1510
Winston-Salem, North Carolina **27101**
(Address of principal executive offices) **(Zip Code)**

(336) 480–2100
Registrant's telephone number, including area code

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))

Item 1.01 Entry into a Material Definitive Agreement.

As previously reported, Targacept, Inc. ("***Targacept***" or the "***Company***"), Talos Merger Sub, Inc. ("***Merger Sub***"), a Delaware corporation and a wholly owned subsidiary of Targacept, and Catalyst Biosciences, Inc., a Delaware corporation ("***Catalyst***"), entered into an Agreement and Plan of Merger on March 5, 2015, as amended on May 6, 2015 ("***Merger Agreement***"), pursuant to which, among other things, subject to the satisfaction or waiver of the conditions set forth in the Merger Agreement, Merger Sub will merge with and into Catalyst, with Catalyst becoming a wholly owned subsidiary of Targacept and the surviving corporation of the merger (the "***Merger***").

On May 13, 2015, Targacept, Merger Sub, and Catalyst entered into an amendment to the Merger Agreement to, among other things, adjust the exchange ratio calculation and the pre-closing dividend, including the terms of the redeemable convertible notes described below ("***Amendment***"). Subject to the terms and conditions of the Amendment, it is currently anticipated that at the closing of the Merger, each outstanding share of Catalyst common stock will be converted into the right to receive approximately 0.28 - 0.32 shares of common stock of the Company, as compared to the right to receive approximately 0.40-0.49 shares of common stock of the Company under the Merger Agreement prior to the Amendment. The actual exchange ratio will be adjusted to account for additional shares that Catalyst may issue before closing and for Catalyst's actual cash balance at closing, and subject to the payment of cash in lieu of fractional shares. Immediately following the effective time of the Merger, Catalyst stockholders are expected to own approximately 58% of the combined company, as compared to owning approximately 65% of the combined company under the Merger Agreement prior to the Amendment.

In addition, pursuant to the terms of the Amendment, and prior to the closing of the Merger, Targacept is expected to pay a dividend to its stockholders of approximately $37 million in aggregate principal amount of redeemable convertible notes, which notes will be convertible into common stock of the combined company, and approximately $19 million in cash, subject to adjustment as described in the Amendment (the "***Pre-Closing Dividend***"). The Amendment provides that the notes will be convertible or redeemable at any time within 30 months after closing at the noteholder's discretion, as compared to a 24 month period to maturity under the Merger Agreement prior to the Amendment. If the redeemable convertible notes are fully converted into Targacept common stock, Targacept stockholders would own approximately 57% of the combined company on a pro-forma basis as of the anticipated closing date, as compared to approximately 49% of the combined company on a pro-forma basis under the Merger Agreement prior to the Amendment. Any NNR Therapeutics™ assets not sold or otherwise disposed of prior to the closing date will remain with the combined company, rather than being placed in a liquidating trust for the benefit of Targacept stockholders.

The other material provisions of the Merger Agreement remain unchanged.

Also in connection with the Amendment, (i) the officers, directors and certain stockholders of Targacept holding approximately 41% of the outstanding common stock of Targacept have each entered into an amended voting agreement in favor of Catalyst, and (ii) certain officers, directors and stockholders of Catalyst owning or controlling approximately 82% of Catalyst's voting stock have each entered into an amended voting agreement in favor of Targacept (collectively, the "***Support Agreements***"). The Support Agreements place certain restrictions on the transfer of the shares of Targacept and Catalyst held by the

respective signatories thereto and covenants on the voting of such shares in favor of approving the transactions contemplated by the Merger Agreement, as amended by the Amendment, and against any actions that could adversely affect the consummation of the Merger.

The foregoing description of the (i) Amendment and the transactions contemplated thereby and (ii) the Support Agreements and the transactions contemplated thereby, in each case, do not purport to be complete and are qualified in their entirety by reference to the Amendment, which is filed as Exhibit 10.1 hereto and which is incorporated herein by reference, and to the form of Targacept Voting Agreement and the form of Catalyst Voting Agreement, which are filed as Exhibits 10.2 and 10.3, respectively, hereto and which are incorporated herein by reference. The Amendment has been filed to provide information to investors regarding its terms. It is not intended to provide any other factual information about Targacept, Catalyst or Merger Sub, their respective businesses, or the actual conduct of their respective businesses during the period prior to the consummation of the Merger or the other transactions contemplated by the Merger Agreement, as amended by the Amendment. The Amendment and this summary should not be relied upon as disclosure about Targacept, Catalyst or Merger Sub. None of Targacept's stockholders or any other third parties should rely on the representations, warranties and covenants or any descriptions thereof as characterizations of the actual state of facts or conditions of Targacept, Catalyst, Merger Sub or any of their respective subsidiaries or affiliates. The Amendment contains representations and warranties that are the product of negotiations among the parties thereto and that the parties made to, and solely for the benefit of, each other as of specified dates. The assertions embodied in those representations and warranties are subject to qualifications and limitations agreed to by the respective parties and are also qualified in important part by confidential disclosure schedules delivered in connection with the Merger Agreement. The representations and warranties may have been made for the purpose of allocating contractual risk between the parties to the agreements instead of establishing these matters as facts, and may be subject to standards of materiality applicable to the contracting parties that differ from those applicable to investors.

Additional Information about the Merger and Where to Find More Information

In connection with the merger, Targacept and Catalyst intend to file relevant materials with the Securities and Exchange Commission, or the SEC, including a registration statement on Form S-4 that will contain a prospectus and a proxy statement/information statement. Investors and security holders of Targacept and Catalyst are urged to read these materials when they become available because they will contain important information about Targacept, Catalyst and the merger. The proxy statement, information statement, prospectus and other relevant materials (when they become available), and any other documents filed by Targacept with the SEC, may be obtained free of charge at the SEC web site at www.sec.gov. In addition, investors and security holders may obtain free copies of the documents filed with the SEC by Targacept by directing a written request to: Targacept, Inc., 100 North Main Street, Winston-Salem, North Carolina 27101, Attention: Chief Financial Officer. Investors and security holders are urged to read the proxy statement, prospectus and other relevant materials when they become available before making any voting or investment decision with respect to the merger.

This communication shall not constitute an offer to sell or the solicitation of an offer to sell or the solicitation of an offer to buy any securities, nor shall there be any sale of securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior

to registration or qualification under the securities laws of any such jurisdiction. No offering of securities shall be made except by means of a prospectus meeting the requirements of Section 10 of the Securities Act of 1933, as amended.

Participants in the Solicitation

Targacept and its directors and executive officers and Catalyst and its directors and executive officers may be deemed to be participants in the solicitation of proxies from the stockholders of Targacept in connection with the proposed transaction. Information regarding the special interests of these directors and executive officers in the merger will be included in the proxy statement/prospectus referred to above. Additional information regarding the directors and executive officers of Targacept is also included in Part III of Targacept's Annual Report on Form 10-K for the year ended December 31, 2014, which was filed with the SEC on March 16, 2015. These documents are available free of charge at the SEC web site (www.sec.gov) and from the Chief Financial Officer at Targacept at the address above.

Item 5.02. Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers.

On May 13, 2015, the Company terminated the employment of Scott N. Cullison, Vice President, Business Development of the Company, effective May 31, 2015. Under the Company's previously disclosed employment agreement with Mr. Cullison dated October 8, 2014, Mr. Cullison will receive severance benefits consistent with a termination other than for just cause in connection with but prior to an anticipated change in control of the Company, within the meaning of the employment agreement. Mr. Cullison's termination was not due to any disagreement relating to the Company's operations, policies or practices.

Item 8.01 Other Events

On May 14, 2015, Targacept issued a joint press release with Catalyst announcing that the companies have entered into the Amendment. A copy of the joint press release is attached hereto as Exhibit 99.1 and is incorporated by reference herein.

Item 9.01 Financial statements and Exhibits

(d) The following exhibits are furnished with this report:

Exhibit Number	Description
10.1	Amendment No. 2 to Agreement and Plan of Merger by and among Targacept, Inc., Talos Merger Sub, Inc., and Catalyst Biosciences, Inc. dated May 13, 2015.
10.2	Form of Targacept Voting Agreement dated as of May 13, 2015 entered into by and among Targacept, Catalyst and certain stockholders of Targacept as amended.
10.3	Form of Catalyst Voting Agreement dated as of May 13, 2015 entered into by and among Catalyst, Targacept and certain stockholders of Catalyst as amended.
99.1	Joint Press Release dated May 14, 2015.

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.

TARGACEPT, INC.

Date: May 14, 2015

/s/ Patrick C. Rock

Patrick C. Rock
Senior Vice President, General Counsel and Secretary

EXHIBIT INDEX

Exhibit Number	Description
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10.2	Form of Targacept Voting Agreement dated as of May 13, 2015 entered into by and among Targacept, Catalyst and certain stockholders of Targacept as amended.
10.3	Form of Catalyst Voting Agreement dated as of May 13, 2015 entered into by and among Catalyst, Targacept and certain stockholders of Catalyst as amended.
99.1	Joint Press Release dated May 14, 2015.

Exhibit 10.1

AMENDMENT NO. 2 TO

AGREEMENT AND PLAN OF MERGER

THIS AMENDMENT NO. 2 TO AGREEMENT AND PLAN OF MERGER (this "Amendment"), is made and entered into as of May 13, 2015, by and among Targacept, Inc., a Delaware corporation ("Talos"), Talos Merger Sub, Inc., a Delaware corporation (the "Merger Sub"), and Catalyst Biosciences, Inc., a Delaware corporation (the "Company"), as amended. All capitalized terms used but not defined herein shall have the meanings set forth in the Merger Agreement (as defined below).

RECITALS

A. The Parties have entered into that certain Agreement and Plan of Merger, dated as of March 5, 2015, as amended by that certain Amendment No. 1 thereto dated May 6, 2015 (the "Merger Agreement"), providing for, among other things, the merger of the Merger Sub with and into the Company, with the Company surviving as a wholly-owned subsidiary of Talos.

B. Pursuant to Section 10.2 of the Merger Agreement, the Parties wish to amend the Merger Agreement as set forth in this Amendment for the purpose of effectuating a change to the calculation of the Company Percentage and to make such other changes as are set forth herein.

C. In order to induce the Company to enter into this Amendment and to cause the Merger to be consummated, certain stockholders of Talos listed on Schedule A-1 hereto are executing amended voting agreements in favor of the Company concurrently with the execution and delivery of this Amendment in substantially the form attached hereto as Exhibit B-1 (the "Talos Voting Agreements").

D. In order to induce Talos and Merger Sub to enter into this Amendment and to cause the Merger to be consummated, certain stockholders of the Company listed on Schedule A-2 hereto are executing voting agreements in favor of Talos concurrently with the execution and delivery of this Amendment in substantially the form attached hereto as Exhibit B-2 (the "Company Voting Agreements" and, together with the Talos Voting Agreements, the "Voting Agreements").

NOW, THEREFORE, in consideration of the foregoing and the respective representations, warranties, covenants and agreements set forth herein and in the Merger Agreement, subject to the conditions set forth in the Merger Agreement, and intending to be legally bound hereby, the Parties agree as follows:

1. Amended Definitions. The following definitions in Exhibit A of the Merger Agreement are hereby amended and restated in their entirety to read as follows:

"**Company Cash Balance**" means (A) the cash and cash equivalents of the Company (excluding any amount paid after March 5, 2015 pursuant to either the Research and License Agreement, dated June 29, 2009, by and between the Company and Wyeth LLC, acting through its Wyeth Pharmaceuticals Division, as amended, related to work prior to the date hereof or the License and Collaboration Agreement, dated September 16, 2013,

by and between the Company and ISU Abxis, as amended) less (B) the sum of (i) any unpaid Company Transaction Expenses and (ii) any unpaid pre-Closing liabilities or obligations relating to the Company's pre-Closing business operations, other than payroll expenses, other budgeted expenses in the Ordinary Course of Business and payables in the Ordinary Course of Business.

"**Company Minimum Cash Amount**" means $3,500,000; provided, however, such amount shall be reduced by $150,000 for each week after July 29, 2015 up to the Effective Time.

"**Company Percentage**" means 100% multiplied by a fraction, (i) the numerator of which is equal to $48,000,000 minus the Company Cash Shortfall or plus the Company Cash Surplus, as applicable, and (ii) the denominator of which is equal to $83,000,000 minus the Company Cash Shortfall or plus the Company Cash Surplus, as applicable.

"**Company Target Cash Balance**" means $5,000,000; provided, however, such amount shall be reduced by $150,000 for each week after July 29, 2015 up to the Effective Time.

2. Extension of Stated Maturity Date of Notes. The Form of Indenture in Exhibit E of the Merger Agreement (the "Form of Indenture") is hereby amended and restated as follows:

A. The definition of "Stated Maturity Date" in Section 1.01 of the Form of Indenture is hereby amended and restated in its entirety to read as follows:

"Stated Maturity Date" means [ ], 2018 [30 months from the date of issuance], which is the date that all principal on all Outstanding Securities is due and payable.

B. Section 2 of Exhibit A of the Form of Indenture is hereby amended and restated in its entirety to read as follows:

The Company promises to pay on , 2018 [the 30 month anniversary of the date of the Indenture] (the "Stated Maturity Date") the principal amount set forth on Schedule I of this Security to the registered Holder of this Security in the Security Register. This Security will not bear interest.

C. Section 2 of Exhibit B of the Form of Indenture is hereby amended and restated in its entirety to read as follows:

The Company promises to pay on , 2018 [the 30 month anniversary of the date of the Indenture] (the "Stated Maturity Date") the principal amount of $ to the registered Holder of this Security in the Security Register. This Security will not bear interest.

3. NNR Assets. The Parties have agreed that Talos will retain any NNR Assets that have not been disposed of by Talos prior to the Effective Time. Accordingly, the Parties agreed to additional amendments to the Merger Agreement, as follows:

A. In Section 5.9(d) of the Merger Agreement, the first sentence shall be deleted.

B. In Section 5.17 of the Merger Agreement, the words ", the Pre-Closing Cash Dividend Amount, and the beneficial interests in the Trust as further described on Schedule B" shall be replaced with the words "and the Pre-Closing Cash Dividend amount" and the words "; and provided further that the beneficial interests in the Trust shall not be part of the Pre-Closing Dividend if, prior to the Talos Cash Determination Date, Talos sells or otherwise disposes of the NNR Assets" shall be deleted.

C. Section 5.21 of the Merger Agreement shall be deleted in its entirety.

D. The defined term "Minimum Talos Cash Balance" shall be amended to remove "(plus $1,500,000 if the NNR Assets are retained by the Company as of the Closing)".

E. The defined terms "NNR Restricted Cash Account" and "Trust" shall be deleted in their entirety.

F. In the definition of "Talos Cash Balance", the following words shall be deleted: "net costs of Talos with respect to any disposition of any or all NNR Assets and liabilities relating thereto and".

G. Schedule B shall be deleted in its entirety.

4. Mutual Non-Solicitation. The Company and Talos shall, and shall cause each of their respective Subsidiaries and their respective Representatives to, immediately cease and cause to be terminated any and all existing activities, discussions or negotiations with any Person conducted prior to the date hereof with respect to, or that may reasonably be expected to lead to, a Company Acquisition Proposal or Talos Acquisition Proposal, including any activities, discussions or negotiations arising after the date of the Merger Agreement. Notwithstanding the foregoing, nothing in this Amendment shall be deemed to limit or otherwise affect either the Company's ability to take any action permitted under the Merger Agreement in response to an unsolicited bona fide written Company Acquisition Proposal received from any Person after the date hereof or Talos' ability to take any action permitted under the Merger Agreement in response to an unsolicited bona fide written Talos Acquisition Proposal received from any Person after the date hereof.

5. Representations and Warranties. Each Party represents and warrants to the other as follows: (a) such Party has all requisite corporate power and authority to enter into this Amendment; (b) the execution and delivery of this Amendment has been duly authorized by all necessary corporate action on the part of such Party; and (c) this Amendment has been duly executed and delivered by such Party and constitutes a valid and binding obligation of such Party, enforceable against such Party in accordance with its terms, subject to bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and similar laws of general applicability relating to or affecting creditors' rights and to general equitable principles. Talos further acknowledges and agrees that the termination by Wyeth of the Research and License Agreement, dated June 29, 2009, by and between the Company and Wyeth LLC, acting through

its Wyeth Pharmaceuticals Division, as amended, does not constitute a breach by the Company of any representation, warranty or covenant of the Company contained in the Merger Agreement and shall not be taken into account in determining whether there has occurred, a Company Material Adverse Effect.

6. References. All references to the Merger Agreement (including "hereof," "herein," "hereunder," "hereby" and "this Agreement") shall refer to the Merger Agreement as amended.

7. Effect on the Merger Agreement. Except as specifically amended by this Amendment, the Merger Agreement, as amended, shall remain in full force and effect. This Amendment and the matters set forth herein shall be governed by the terms and conditions of the Merger Agreement, as amended hereby, which are incorporated by reference into this Amendment. Each Party agrees that the Merger Agreement, as amended by this Amendment and that certain Amendment No. 1 thereto dated May 6, 2015, constitutes the complete and exclusive statement of the agreement between the Parties, and supersedes all prior proposals and understandings, oral and written, relating to the subject matter contained herein. If there is any conflict between the terms and provisions of this Amendment and the terms and provisions of the Merger Agreement, the terms and provisions of this Amendment shall govern.

8. Amendment. This Amendment shall not be amended, supplemented, modified or rescinded except in a writing signed by the Parties.

9. Governing Law. This Amendment shall be governed and construed in accordance with the laws of the State of Delaware without regard for the conflicts of laws principles thereof that might otherwise refer construction or interpretation of this Amendment to the substantive law of another jurisdiction.

10. Counterparts. This Amendment may be executed in counterparts (which counterparts may be delivered by facsimile or other commonly used electronic means), each of which shall be considered one and the same agreement and shall become effective when all counterparts have been signed by each of the Parties and delivered to the other Parties, it being understood that all Parties need not sign the same counterpart.

IN WITNESS WHEREOF, the Parties have caused this Amendment to be signed by their respective officers thereunto duly authorized, all as of the date first set forth above.

TARGACEPT, INC.

By: /s/ Stephen A. Hill
Name: Stephen A. Hill
Title: Chief Executive Officer

TALOS MERGER SUB, INC.

By: /s/ Patrick Rock
Name: Patrick Rock
Title: President

CATALYST BIOSCIENCES, INC.

By: /s/ Nassim Usman Ph.D.
Name: Nassim Usman Ph.D.
Title: Chief Executive Officer

Exhibit 10.2

AMENDED AND RESTATED

VOTING AGREEMENT

among:

TARGACEPT, INC.,
a Delaware corporation;

CATALYST BIOSCIENCES, INC.
a Delaware corporation; and

the undersigned Stockholder

Dated as of May 13, 2015

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AMENDED AND RESTATED

VOTING AGREEMENT

THIS AMENDED AND RESTATED VOTING AGREEMENT ("Agreement"), dated as of May 13, 2015, is made by and among Targacept, Inc., a Delaware corporation ("Targacept"), Catalyst Biosciences, Inc., a Delaware corporation (the "Company"), and the undersigned holder ("Stockholder") of shares of capital stock (the "Shares") of Targacept.

WHEREAS, Targacept, Talos Merger Sub, Inc., a Delaware corporation and a wholly owned subsidiary of Targacept ("Merger Sub"), and the Company, entered into an Agreement and Plan of Merger, dated as of March 5, 2015 (the "Original Merger Agreement"), which Original Merger Agreement was amended as of May 6, 2015 ("Amendment No. 1 to the Merger Agreement") and May 13, 2015 ("Amendment No. 2 to the Merger Agreement"), providing for the merger of Merger Sub with and into the Company (the "Merger"); the Original Merger Agreement, as amended by Amendment No. 1 to the Merger Agreement and Amendment No. 2 to the Merger Agreement, is referred to herein as the "Merger Agreement";

WHEREAS, Stockholder entered into that certain Voting Agreement, dated as of March 5, 2015 (the "Original Voting Agreement"), with Targacept and Catalyst, as an inducement and a condition to the willingness of Targacept, Merger Sub and the Company to enter into the Original Merger Agreement on March 5, 2015, and in consideration of the substantial expenses incurred and to be incurred by them in connection therewith;

WHEREAS, Targacept and the Company intend that the Pre-Closing Dividend (as defined in the Merger Agreement) shall have been declared as of a record date, and paid to holders of Targacept Common Stock, prior to the closing of the Merger, which declaration and payment of the Pre-Closing Dividend is a material inducement for the Stockholders to execute this Agreement;

WHEREAS, Stockholder beneficially owns and has sole or shared voting power with respect to the number of Shares, and holds stock options or other rights to acquire the number of Shares indicated opposite Stockholder's name on Schedule 1 attached hereto;

WHEREAS, as an inducement and a condition to the willingness of Targacept, Merger Sub and the Company to enter into Amendment No. 2 to the Merger Agreement, and in consideration of the substantial expenses incurred and to be incurred by them in connection therewith, Stockholder has agreed to enter into and perform this Agreement; and

WHEREAS, all capitalized terms used in this Agreement without definition herein shall have the meanings ascribed to them in the Merger Agreement.

NOW, THEREFORE, in consideration of, and as a condition to, Targacept's, Merger Sub's and the Company's entering into the Merger Agreement and proceeding with the transactions contemplated thereby, and in consideration of the expenses incurred and to be incurred by them in connection therewith, Stockholder, Targacept and the Company agree as follows:

1. Agreement to Vote Shares. Stockholder agrees that, prior to the Expiration Date (as defined in Section 2 below), at any meeting of the stockholders of Targacept or any adjournment or postponement thereof, or in connection with any written consent of the stockholders of Targacept, with respect to approval of the Merger as contemplated by the Merger Agreement and adoption of the Merger Agreement or any Targacept Acquisition Proposal, Stockholder shall:

(a) appear at such meeting or otherwise cause the Shares and any New Shares (as defined in Section 3 below) to be counted as present thereat for purposes of calculating a quorum;

(b) vote (or cause to be voted), or deliver a written consent (or cause a written consent to be delivered) covering all of the Shares and any New Shares that such Stockholder shall be entitled to so vote: (i) in favor of the approval of (A) the issuance of the shares of Targacept Common Stock by virtue of the Merger as contemplated by the Merger Agreement, and (B) an amendment to the Targacept Charter to effect the Reverse Stock Split; and (ii) against any Targacept Acquisition Proposal.

2. Expiration Date. As used in this Agreement, the term "Expiration Date" shall mean the earlier to occur of (a) the Effective Time, (b) such date and time as the Merger Agreement shall be terminated pursuant to Section 9 thereof or otherwise, (c) the occurrence of a Company Material Adverse Effect or (d) upon mutual written agreement of the parties to terminate this Agreement. Upon termination or expiration of this Agreement, no party shall have any further obligations or liabilities under this Agreement; *provided, however*, such termination or expiration shall not relieve any party from liability for any willful breach of this Agreement or acts of bad faith prior to termination hereof.

3. Additional Purchases. Stockholder agrees that any shares of capital stock or other equity securities of Targacept that Stockholder purchases or with respect to which Stockholder otherwise acquires sole or shared voting power after the execution of this Agreement and prior to the Expiration Date, whether by the exercise of any stock options or otherwise ("New Shares"), shall be subject to the terms and conditions of this Agreement to the same extent as if they constituted the Shares.

4. Agreement to Retain Shares. From and after the date hereof until the Expiration Date, Stockholder shall not, directly or indirectly, (a) sell, assign, transfer, tender, or otherwise dispose of (including, without limitation, by the creation of any Liens (as defined in Section 5(c) below) on) any Shares, (b) deposit any Shares into a voting trust or enter into a voting agreement or similar arrangement with respect to such Shares or grant any proxy or power of attorney with respect thereto (other than this Agreement), (c) enter into any contract, option, commitment or other arrangement or understanding with respect to the direct or indirect sale, transfer, assignment or other disposition of (including, without limitation, by the creation of any Liens on) any Shares, or (d) take any action that would make any representation or warranty of Stockholder contained herein untrue or incorrect or have the effect of preventing or disabling Stockholder from performing Stockholder's obligations under this Agreement. Notwithstanding the foregoing, Stockholder may make (a) transfers by will or by operation of law or other transfers for estate-planning purposes, in which case this Agreement shall bind the transferee and

transferee shall sign a voting agreement in substantially the form hereof, (b) with respect to such Stockholder's Targacept Stock Options which expire on or prior to the Expiration Date, transfers, sale, or other disposition of Shares to Targacept as payment for the (i) exercise price of such Stockholder's Targacept Stock Options and (ii) taxes applicable to the exercise of such Stockholder's Targacept Stock Options, (c) if Stockholder is a partnership or limited liability company, a transfer to one or more partners or members of Stockholder or to an affiliated corporation, trust or other business entity under common control with Stockholder, or if Stockholder is a trust, a transfer to a beneficiary, provided that in each such case the applicable transferee has signed a voting agreement in substantially the form hereof relating to the transferred Shares, (d) any transfer to another holder of the capital stock of the Company that has signed a voting agreement in substantially the form hereof relating to the transferred Shares, (e) any transfer to a person if, as a condition precedent to the transfer, such person executes and delivers to the Company an agreement containing voting and transfer provisions with respect to the Shares so transferred that are substantially identical in all material respects to those set forth in this Agreement; and (f) as the Company may otherwise agree in writing in its sole discretion.

5. Representations and Warranties of Stockholder. Stockholder hereby represents and warrants to Targacept and the Company as follows:

(a) Stockholder has the full power and authority to execute and deliver this Agreement and to perform Stockholder's obligations hereunder;

(b) this Agreement has been duly executed and delivered by or on behalf of Stockholder and, to Stockholder's knowledge and assuming this Agreement constitutes a valid and binding agreement of the Company and Targacept, constitutes a valid and binding agreement with respect to Stockholder, enforceable against Stockholder in accordance with its terms, except as enforcement may be limited by general principles of equity whether applied in a court of law or a court of equity and by bankruptcy, insolvency and similar laws affecting creditors' rights and remedies generally;

(c) except as set forth on Schedule 1, Stockholder beneficially owns the number of Shares indicated opposite such Stockholder's name on Schedule 1, and will own any New Shares, free and clear of any liens, claims, charges or other encumbrances or restrictions of any kind whatsoever other than repurchase rights of the Company with respect to Targacept Restricted Stock Awards ("Liens"), and has sole or shared, and otherwise unrestricted, voting power with respect to such Shares and none of the Shares is subject to any voting trust or other agreement, arrangement or restriction with respect to the voting of the Shares, except as contemplated by this Agreement;

(d) the execution and delivery of this Agreement by Stockholder does not, and the performance by Stockholder of his or her obligations hereunder and the compliance by Stockholder with any provisions hereof will not, violate or conflict with, result in a material breach of or constitute a default (or an event that with notice or lapse of time or both would become a material default) under, or give to others any rights of termination, amendment, acceleration or cancellation of, or result in the creation of any Liens on any Shares pursuant to, any agreement, instrument, note, bond, mortgage, contract, lease, license, permit or other obligation or any order, arbitration award, judgment or decree to which Stockholder is a party or

by which Stockholder is bound, or any law, statute, rule or regulation to which Stockholder is subject or, in the event that Stockholder is a corporation, partnership, trust or other entity, any bylaw or other organizational document of Stockholder; and

(e) the execution and delivery of this Agreement by Stockholder does not, and the performance of this Agreement by Stockholder does not and will not, require any consent, approval, authorization or permit of, or filing with or notification to, any governmental or regulatory authority by Stockholder except for applicable requirements, if any, of the Exchange Act, and except where the failure to obtain such consents, approvals, authorizations or permits, or to make such filings or notifications, would not prevent or delay the performance by Stockholder of his or her obligations under this Agreement in any material respect.

6. Irrevocable Proxy. Subject to the penultimate sentence of this Section 6, by execution of this Agreement, Stockholder does hereby appoint the Company with full power of substitution and resubstitution, as Stockholder's true and lawful attorney and irrevocable proxy, to the fullest extent of the undersigned's rights with respect to the Shares, to vote, or give consent with respect to, each of such Shares solely with respect to the matters set forth in Section 1 hereof until the earlier of (a) the Expiration Date or (b) the date on which any term or provision of the Merger Agreement described in Section 24(a) hereof is amended, waived or otherwise modified (the "Proxy Termination Date"). Stockholder intends this proxy to be irrevocable and coupled with an interest hereunder until the Proxy Termination Date and hereby revokes any proxy previously granted by Stockholder with respect to the Shares. Notwithstanding anything contained herein to the contrary, this irrevocable proxy shall automatically terminate upon the Proxy Termination Date. The Stockholder hereby revokes any proxies previously granted and represents that none of such previously-granted proxies are irrevocable.

7. No Solicitation. From and after the date hereof until the Expiration Date, Stockholder shall not (a) initiate, solicit, seek or knowingly encourage or support any inquiries, proposals or offers that constitute or may reasonably be expected to lead to, a Targacept Acquisition Proposal, (b) engage or participate in, or knowingly facilitate, any discussions or negotiations regarding any inquiries, proposals or offers that constitute, or may reasonably be expected to lead to, a Targacept Acquisition Proposal, (c) furnish to any Person other than the Company any non-public information that could reasonably be expected to be used for the purposes of formulating any Targacept Acquisition Proposal, (d) enter into any letter of intent, agreement in principle or other similar type of agreement relating to a Targacept Acquisition Proposal, or enter into any agreement or agreement in principle requiring Targacept to abandon, terminate or fail to consummate the transactions contemplated hereby, (e) initiate a stockholders' vote or action by consent of the Targacept's stockholders with respect to a Targacept Acquisition Proposal, (f) except by reason of this Agreement, become a member of a "group" (as such term is defined in Section 13(d) of the Exchange Act) with respect to any voting securities of Targacept that takes any action in support of a Targacept Acquisition Proposal or (g) propose or agree to do any of the foregoing. In the event that Stockholder is a corporation, partnership, trust or other entity, it shall not permit any of its Subsidiaries or Affiliates to, nor shall it authorize any officer, director or representative of Stockholder, or any of its Subsidiaries or Affiliates to, undertake any of the actions contemplated by this Section 7.

8. Release; No Legal Actions. The undersigned Stockholder acknowledges that the release of certain claims by stockholders of Targacept against the Company, Targacept, Merger Sub and their respective affiliates constitutes a material inducement for the completion of the transactions contemplated by the Merger Agreement and that the Company, Targacept and Merger Sub would not enter into the Merger Agreement without being released from such claims by the undersigned Stockholder. Effective as of the Effective Time, the undersigned Stockholder, and, to the extent within the undersigned's control, each of the undersigned's equity holders and each of their respective subsidiaries, affiliates, employees, agents, advisors, heirs, legal representatives, successors and assigns (each, a "Releasor"), hereby completely releases, acquits and forever discharges, to the fullest extent permitted by law Targacept and its respective affiliates (including the Company, as the surviving company) and each of its current, former and future officers, directors, employees, agents, advisors, successors and assigns (each, a "Releasee"), from any and all losses, liabilities, suits, actions, debts or rights, whether fixed or contingent, known or unknown, matured or unmatured (collectively, "Losses"), arising out of, relating to, or in any manner connected with any facts, events or circumstances, or any actions taken, at or prior to the Effective Time (the "Release Date") that any Releasor ever had or now has against the Releasees ("Released Matters"), excluding any Losses arising out of, relating to, or in any manner connected with the Merger Agreement and the transactions contemplated thereby. Notwithstanding anything to the contrary in this Agreement, nothing herein shall release the Company or any of its Affiliates of obligations to the undersigned Stockholder with respect to (A) any employment or consulting agreement, (B) any other employment-related obligations of the Company or any of its Affiliates, (C) vested retirement benefits, (D) any rights that cannot be waived as a matter of law, (E) any indemnification obligations to the undersigned Stockholder under the Company's or any of its Affiliates' bylaws, certificate of incorporation, or other organizational documents, or under Delaware law or otherwise, or (F) any rights relating to the undersigned's relationship with the Company or any of its Affiliates (other than as a stockholder). The undersigned hereby waives the provisions of section 1542 of the California Civil Code, or any successor thereto, which currently states: "A general release does not extend to claims which the creditor does not know or suspect to exist in his favor at the time of executing the release, which if known by him must have materially affected his settlement with the debtor." Effective as of the Release Date, the undersigned Stockholder shall not, and, to the extent within the undersigned's control, shall not cause or permit its equity holders or any of their respective Subsidiaries, Affiliates, employees, agents, advisors, heirs, legal representatives, successors and assigns, to assert any claims against the Releasees in respect of any Released Matters. The undersigned Stockholder acknowledges that it would be difficult to fully compensate Targacept or any of its Affiliates (including the Surviving Company) for damages resulting from any breach by him/her/it of the provisions of this release. Accordingly, in the event of any actual or threatened breach of such provisions, Targacept and its Affiliates (including the Surviving Company) shall (in addition to any other remedies which it may have) be entitled to seek temporary and/or permanent injunctive relief to enforce such provisions and recover attorneys' fees and costs for same. The undersigned Stockholder further acknowledges that this release constitutes a material inducement to Targacept to complete the transactions contemplated by the Merger Agreement and Targacept will be relying on the enforceability of this release in completing such transactions contemplated by the Merger Agreement.

9. Other Remedies; Specific Performance. Except as otherwise provided herein, any and all remedies herein expressly conferred upon a party will be deemed cumulative with, and

not exclusive of, any other remedy conferred hereby, or by Law or equity upon such party, and the exercise by a party of any one remedy will not preclude the exercise of any other remedy. The parties hereto agree that irreparable damage would occur in the event that any of the provisions of this Agreement were not performed in accordance with their specific terms or were otherwise breached. It is accordingly agreed that the parties shall be entitled to an injunction or injunctions to prevent breaches of this Agreement and to enforce specifically the terms and provisions hereof in any court of the United States or any state having jurisdiction, this being the addition to any other remedy to which they are entitled at Law or in equity.

10. Directors and Officers. This Agreement shall apply to Stockholder solely in Stockholder's capacity as a stockholder of Targacept and/or holder of options to purchase shares of Targacept Common Stock and not in such Stockholder's capacity as a director, officer or employee of Targacept or any of its Subsidiaries or in such Stockholder's capacity as a trustee or fiduciary of any employee benefit plan or trust. Notwithstanding any provision of this Agreement to the contrary, nothing in this Agreement shall (or require Stockholder to attempt to) limit or restrict a director and/or officer of Targacept in the exercise of his or her fiduciary duties consistent with the terms of the Merger Agreement as a director and/or officer of Targacept or in his or her capacity as a trustee or fiduciary of any employee benefit plan or trust or prevent or be construed to create any obligation on the part of any director and/or officer of Targacept or any trustee or fiduciary of any employee benefit plan or trust from taking any action in his or her capacity as such director, officer, trustee and/or fiduciary.

11. No Ownership Interest. Nothing contained in this Agreement shall be deemed to vest in the Company any direct or indirect ownership or incidence of ownership of or with respect to any Shares. All rights, ownership and economic benefits of and relating to the Shares shall remain vested in and belong to Stockholder, and the Company does not have authority to manage, direct, superintend, restrict, regulate, govern, or administer any of the policies or operations of Targacept or exercise any power or authority to direct Stockholder in the voting of any of the Shares, except as otherwise provided herein.

12. Termination. This Agreement shall terminate and shall have no further force or effect as of the Expiration Date. Notwithstanding the foregoing, nothing set forth in this Section 12 or elsewhere in this Agreement shall relieve either party hereto from any liability, or otherwise limit the liability of either party from any liability for any intentional breach of any obligation or other provision contained in this Agreement.

13. Further Assurances. Stockholder shall, from time to time, execute and deliver, or cause to be executed and delivered, such additional or further consents, documents and other instruments as the Company or Targacept may reasonably request for the purpose of effectively carrying out the transactions contemplated by this Agreement and the Merger Agreement.

14. Disclosure. Stockholder hereby agrees that Targacept and the Company may publish and disclose in the Registration Statement, any resale registration statement relating thereto (including all documents and schedules filed with the SEC), the Proxy Statement, any prospectus filed with any regulatory authority in connection with the Merger and any related documents filed with such regulatory authority and as otherwise required by Law, such Stockholder's identity and ownership of Shares and the nature of such Stockholder's

commitments, arrangements and understandings under this Agreement and may further file this Agreement as an exhibit to the Registration Statement or prospectus or in any other filing made by Targacept or the Company as required by Law or the terms of the Merger Agreement, including with the SEC or other regulatory authority, relating to the Merger.

15. Notice. All notices and other communications hereunder shall be in writing and shall be deemed given if delivered personally or sent by overnight courier (providing proof of delivery) or by facsimile transmission (providing confirmation of transmission) to the Company or Targacept, as the case may be, in accordance with Section 10.8 of the Merger Agreement and to each Stockholder at its address set forth on Schedule 1 attached hereto (or at such other address for a party as shall be specified by like notice).

16. Severability. Any term or provision of this Agreement that is invalid or unenforceable in any situation in any jurisdiction shall not affect the validity or enforceability of the remaining terms and provisions of this Agreement or the validity or enforceability of the offending term or provision in any other situation or in any other jurisdiction. If a final judgment of a court of competent jurisdiction declares that any term or provision of this Agreement is invalid or unenforceable, the Parties hereto agree that the court making such determination shall have the power to limit such term or provision, to delete specific words or phrases or to replace such term or provision with a term or provision that is valid and enforceable and that comes closest to expressing the intention of the invalid or unenforceable term or provision, and this Agreement shall be valid and enforceable as so modified. In the event such court does not exercise the power granted to it in the prior sentence, the Parties hereto agree to replace such invalid or unenforceable term or provision with a valid and enforceable term or provision that will achieve, to the extent possible, the economic, business and other purposes of such invalid or unenforceable term or provision.

17. Assignability. This Agreement shall be binding upon, and shall be enforceable by and inure solely to the benefit of, the parties hereto and their respective successors and assigns; *provided, however*, that neither this Agreement nor any of a party's rights or obligations hereunder may be assigned or delegated by such party without the prior written consent of the other parties hereto, and any attempted assignment or delegation of this Agreement or any of such rights or obligations by such party without the other party's prior written consent shall be void and of no effect. Nothing in this Agreement, express or implied, is intended to or shall confer upon any Person (other than the parties hereto) any right, benefit or remedy of any nature whatsoever under or by reason of this Agreement.

18. No Waivers. No waivers of any breach of this Agreement extended by the Company or Targacept to Stockholder shall be construed as a waiver of any rights or remedies of the Company or Targacept, as applicable, with respect to any other stockholder of Targacept who has executed an agreement substantially in the form of this Agreement with respect to Shares held or subsequently held by such stockholder or with respect to any subsequent breach of the Stockholder or any other such stockholder of Targacept. No waiver of any provisions hereof by any party shall be deemed a waiver of any other provisions hereof by any such party, nor shall any such waiver be deemed a continuing waiver of any provision hereof by such party.

19. Applicable Law; Jurisdiction. This Agreement shall be governed by, and construed in accordance with, the Laws of the State of Delaware, regardless of the Laws that might otherwise govern under applicable principles of conflicts of Laws. In any action or proceeding between any of the parties arising out of or relating to this Agreement, each of the parties: (i) irrevocably and unconditionally consents and submits to the exclusive jurisdiction and venue of the Court of Chancery of the State of Delaware or to the extent such court does not have subject matter jurisdiction, the Superior Court of the State of Delaware or the United States District Court for the District of Delaware, (ii) agrees that all claims in respect of such action or proceeding shall be heard and determined exclusively in accordance with clause (i) of this Section 19, (iii) waives any objection to laying venue in any such action or proceeding in such courts, (iv) waives any objection that such courts are an inconvenient forum or do not have jurisdiction over any party, and (v) agrees that service of process upon such party in any such action or proceeding shall be effective if notice is given in accordance with Section 15 of this Agreement.

20. Waiver of Jury Trial. The parties hereto hereby waive any right to trial by jury with respect to any action or proceeding related to or arising out of this Agreement, any document executed in connection herewith and the matters contemplated hereby and thereby.

21. No Agreement Until Executed. Irrespective of negotiations among the parties or the exchanging of drafts of this Agreement, this Agreement shall not constitute or be deemed to evidence a contract, agreement, arrangement or understanding between the parties hereto unless and until (a) the Targacept Board has approved, for purposes of any applicable anti-takeover laws and regulations and any applicable provision of the Targacept Charter, the transactions contemplated by the Merger Agreement, (b) the Merger Agreement is executed by all parties thereto, and (c) this Agreement is executed by all parties hereto.

22. Entire Agreement; Counterparts; Exchanges by Facsimile. This Agreement amends and restates the Original Voting Agreement in its entirety, and, accordingly, the parties acknowledge that the Original Voting Agreement is terminated and no longer in effect. This Agreement and the other agreements referred to in this Agreement constitute the entire agreement and supersede all prior agreements (including the Original Voting Agreement) and understandings, both written and oral, among or between any of the parties with respect to the subject matter hereof and thereof. This Agreement may be executed in several counterparts, each of which shall be deemed an original and all of which shall constitute one and the same instrument. The exchange of a fully executed Agreement (in counterparts or otherwise) by all parties by facsimile or electronic transmission via ".pdf" shall be sufficient to bind the parties to the terms and conditions of this Agreement.

23. Amendment. This Agreement may not be amended, supplemented or modified, and no provisions hereof may be modified or waived, except by an instrument in writing signed on behalf of each party hereto.

24. Definition of Merger Agreement. For purposes of this Agreement, the term "Merger Agreement" includes Amendment No. 1 to the Merger Agreement and Amendment No. 2 to the Merger Agreement and may include the Merger Agreement as further amended or modified as long as such further amendments or modifications (a) do not constitute an

amendment, waiver or modification of Section 1.5 (Conversion of Shares), Section 5.17 (Pre-Closing Dividend), Section 5.18 (Determination of Targacept Cash Balance), Section 5.19 (Determination of Company Cash Balance), Section 5.20 (Redeemable Convertible Notes Principal) or Section 6.5 (Pre-Closing Dividend), or otherwise to the form of consideration, Exchange Ratio or calculation of the Pre-Closing Dividend, whether or not such sections are actually amended, waived or modified; or (b) have been agreed to in writing by Stockholder.

25. Construction.

(a) For purposes of this Agreement, whenever the context requires: the singular number shall include the plural, and vice versa; the masculine gender shall include the feminine and neuter genders; the feminine gender shall include the masculine and neuter genders; and the neuter gender shall include masculine and feminine genders.

(b) The parties hereto agree that any rule of construction to the effect that ambiguities are to be resolved against the drafting party shall not be applied in the construction or interpretation of this Agreement.

(c) As used in this Agreement, the words “include” and “including,” and variations thereof, shall not be deemed to be terms of limitation, but rather shall be deemed to be followed by the words “without limitation.”

(d) Except as otherwise indicated, all references in this Agreement to “Sections,” “Exhibits” and “Schedules” are intended to refer to Sections of this Agreement and Exhibits and Schedules to this Agreement, respectively.

(e) The bold-faced headings contained in this Agreement are for convenience of reference only, shall not be deemed to be a part of this Agreement and shall not be referred to in connection with the construction or interpretation of this Agreement.

[*Remainder of Page has Intentionally Been Left Blank*]

EXECUTED as of the date first above written.

STOCKHOLDER

By: _____

Name: _____

Title: _____

EXECUTED as of the date first above written.

TARGACEPT, INC.

By: _____

Name: _____

Title: _____

CATALYST BIOSCIENCES, INC.

By: _____

Name: _____

Title: _____

SCHEDULE 1

AMENDED AND RESTATED

VOTING AGREEMENT

among:

CATALYST BIOSCIENCES, INC.,
a Delaware corporation;

TARGACEPT, INC.,
a Delaware corporation; and

the undersigned Stockholder

Dated as of May 13, 2015

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AMENDED AND RESTATED

VOTING AGREEMENT

THIS AMENDED AND RESTATED VOTING AGREEMENT ("Agreement"), dated as of May 13, 2015, is made by and among Targacept, Inc., a Delaware corporation ("Targacept"), Catalyst Biosciences, Inc., a Delaware corporation (the "Company"), and the undersigned holder ("Stockholder") of shares of capital stock (the "Shares") of the Company.

WHEREAS, Targacept, Talos Merger Sub, Inc., a Delaware corporation and a wholly owned subsidiary of Targacept ("Merger Sub"), and the Company, entered into an Agreement and Plan of Merger, dated as of March 5, 2015 (the "Original Merger Agreement"), which Original Merger Agreement was amended as of May 6, 2015 ("Amendment No. 1 to the Merger Agreement") and May 13, 2015 ("Amendment No. 2 to the Merger Agreement"), providing for the merger of Merger Sub with and into the Company (the "Merger"); the Original Merger Agreement, as amended by Amendment No. 1 to the Merger Agreement and Amendment No. 2 to the Merger Agreement, is referred to herein as the "Merger Agreement";

WHEREAS, Stockholder beneficially owns and has sole or shared voting power with respect to the number of Shares, and holds stock options or other rights to acquire the number of Shares indicated opposite Stockholder's name on Schedule 1 attached hereto;

WHEREAS, Stockholder entered into that certain Voting Agreement, dated as of March 5, 2015 (the "Original Voting Agreement"), with Targacept and Catalyst, as an inducement and a condition to the willingness of Targacept, Merger Sub and the Company to enter into the Original Merger Agreement on March 5, 2015, and in consideration of the substantial expenses incurred and to be incurred by them in connection therewith;

WHEREAS, as an inducement and a condition to the willingness of Targacept, Merger Sub and the Company to enter into Amendment No. 2 to the Merger Agreement, and in consideration of the substantial expenses incurred and to be incurred by them in connection therewith, Stockholder has agreed to enter into and perform this Agreement; and

WHEREAS, all capitalized terms used in this Agreement without definition herein shall have the meanings ascribed to them in the Merger Agreement.

NOW, THEREFORE, in consideration of, and as a condition to, Targacept's, Merger Sub's and the Company's entering into the Merger Agreement and proceeding with the transactions contemplated thereby, and in consideration of the expenses incurred and to be incurred by them in connection therewith, Stockholder, Targacept and the Company agree as follows:

1. Agreement to Vote Shares. Stockholder agrees that, prior to the Expiration Date (as defined in Section 2 below), at any meeting of the stockholders of the Company or any adjournment or postponement thereof, or in connection with any written consent of the stockholders of the Company, with respect to the Merger, the Merger Agreement or any Company Acquisition Proposal, Stockholder shall:

(a) appear at such meeting or otherwise cause the Shares and any New Shares (as defined in Section 3 below) to be counted as present thereat for purposes of calculating a quorum;

(b) vote (or cause to be voted), or deliver a written consent (or cause a written consent to be delivered) covering all of the Shares and any New Shares that such Stockholder shall be entitled to so vote: (i) in favor of adoption and approval of the Merger; (ii) against any action or agreement that, to the knowledge of Stockholder, would reasonably be expected to result in a breach in any material respect of any covenant, representation or warranty or any other obligation or agreement of the Company or any of its Subsidiaries or Affiliates under the Merger Agreement or that would reasonably be expected to result in any of the conditions to any Party's obligations under the Merger Agreement not being fulfilled; and (iii) against any Company Acquisition Proposal, or any agreement, transaction or other matter that is intended to, or would reasonably be expected to, impede, interfere with, delay, postpone, discourage or materially and adversely affect the consummation of the Merger and all other transactions contemplated by the Merger Agreement. The Stockholder shall not take or commit or agree to take any action inconsistent with the foregoing.

2. Expiration Date. As used in this Agreement, the term "Expiration Date" shall mean the earlier to occur of (a) the Effective Time, (b) such date and time as the Merger Agreement shall be terminated pursuant to Section 9 thereof or otherwise, or (c) the occurrence of a Company Material Adverse Effect or (d) upon mutual written agreement of the parties to terminate this Agreement. Upon termination or expiration of this Agreement, no party shall have any further obligations or liabilities under this Agreement; provided, however, such termination or expiration shall not relieve any party from liability for any willful breach of this Agreement or acts of bad faith prior to termination hereof.

3. Additional Purchases. Stockholder agrees that any shares of capital stock or other equity securities of the Company that Stockholder purchases or with respect to which Stockholder otherwise acquires sole or shared voting power after the execution of this Agreement and prior to the Expiration Date, whether by the exercise of any stock options or otherwise ("New Shares"), shall be subject to the terms and conditions of this Agreement to the same extent as if they constituted the Shares.

4. Agreement to Retain Shares. From and after the date hereof until the Expiration Date, Stockholder shall not, directly or indirectly, (a) sell, assign, transfer, tender, or otherwise dispose of (including, without limitation, by the creation of any Liens (as defined in Section 5(c) below) on) any Shares, (b) deposit any Shares into a voting trust or enter into a voting agreement or similar arrangement with respect to such Shares or grant any proxy or power of attorney with respect thereto (other than this Agreement), (c) enter into any contract, option, commitment or other arrangement or understanding with respect to the direct or indirect sale, transfer, assignment or other disposition of (including, without limitation, by the creation of any Liens on) any Shares, or (d) take any action that would make any representation or warranty of Stockholder contained herein untrue or incorrect or have the effect of preventing or disabling Stockholder from performing Stockholder's obligations under this Agreement. Notwithstanding the foregoing, Stockholder may make

(a) transfers by will or by operation of law or other transfers for estate-planning purposes, in which case this Agreement shall bind the transferee and transferee shall sign a voting agreement in substantially the form hereof, (b) with respect to such Stockholder's Company Options which expire on or prior to the Expiration Date, transfers, sale, or other disposition of Shares to the Company as payment for the (i) exercise price of such Stockholder's Company Options and (ii) taxes applicable to the exercise of such Stockholder's Company Options, (c) if Stockholder is a partnership or limited liability company, a transfer to one or more partners or members of Stockholder or to an affiliated corporation, trust or other business entity under common control with Stockholder, or if Stockholder is a trust, a transfer to a beneficiary, provided that in each such case the applicable transferee has signed a voting agreement in substantially the form hereof relating to the transferred Shares, (d) any transfer to another holder of the capital stock of the Company that has signed a voting agreement in substantially the form hereof relating to the transferred Shares, and (e) as Targacept may otherwise agree in writing in its sole discretion.

5. Representations and Warranties of Stockholder. Stockholder hereby represents and warrants to Targacept and the Company as follows:

(a) Stockholder has the full power and authority to execute and deliver this Agreement and to perform Stockholder's obligations hereunder;

(b) this Agreement has been duly executed and delivered by or on behalf of Stockholder and, to Stockholder's knowledge and assuming this Agreement constitutes a valid and binding agreement of the Company and Targacept, constitutes a valid and binding agreement with respect to Stockholder, enforceable against Stockholder in accordance with its terms, except as enforcement may be limited by general principles of equity whether applied in a court of law or a court of equity and by bankruptcy, insolvency and similar laws affecting creditors' rights and remedies generally;

(c) except as set forth on Schedule 1, Stockholder beneficially owns the number of Shares indicated opposite such Stockholder's name on Schedule 1, and will own any New Shares, free and clear of any liens, claims, charges or other encumbrances or restrictions of any kind whatsoever ("Liens"), and has sole or shared, and otherwise unrestricted, voting power with respect to such Shares and none of the Shares is subject to any voting trust or other agreement, arrangement or restriction with respect to the voting of the Shares, except as contemplated by this Agreement;

(d) the execution and delivery of this Agreement by Stockholder does not, and the performance by Stockholder of his or her obligations hereunder and the compliance by Stockholder with any provisions hereof will not, violate or conflict with, result in a material breach of or constitute a default (or an event that with notice or lapse of time or both would become a material default) under, or give to others any rights of termination, amendment, acceleration or cancellation of, or result in the creation of any Liens on any Shares pursuant to, any agreement, instrument, note, bond, mortgage, contract, lease, license, permit or other obligation or any order, arbitration award, judgment or decree to which Stockholder is a party or by which Stockholder is bound, or any law,

statute, rule or regulation to which Stockholder is subject or, in the event that Stockholder is a corporation, partnership, trust or other entity, any bylaw or other organizational document of Stockholder; and

(e) the execution and delivery of this Agreement by Stockholder does not, and the performance of this Agreement by Stockholder does not and will not, require any consent, approval, authorization or permit of, or filing with or notification to, any governmental or regulatory authority by Stockholder except for applicable requirements, if any, of the Exchange Act, and except where the failure to obtain such consents, approvals, authorizations or permits, or to make such filings or notifications, would not prevent or delay the performance by Stockholder of his or her obligations under this Agreement in any material respect.

6. Irrevocable Proxy. Subject to the penultimate sentence of this Section 6, by execution of this Agreement, Stockholder does hereby appoint Targacept with full power of substitution and resubstitution, as Stockholder's true and lawful attorney and irrevocable proxy, to the fullest extent of the undersigned's rights with respect to the Shares, to vote, or give consent with respect to, each of such Shares solely with respect to the matters set forth in Section 1 hereof. Stockholder intends this proxy to be irrevocable and coupled with an interest hereunder until the Expiration Date and hereby revokes any proxy previously granted by Stockholder with respect to the Shares. Notwithstanding anything contained herein to the contrary, this irrevocable proxy shall automatically terminate upon the Expiration Date of this Agreement. The Stockholder hereby revokes any proxies previously granted and represents that none of such previously-granted proxies are irrevocable.

7. No Solicitation. From and after the date hereof until the Expiration Date, Stockholder shall not (a) initiate, solicit, seek or knowingly encourage or support any inquiries, proposals or offers that constitute or may reasonably be expected to lead to, a Company Acquisition Proposal, (b) engage or participate in, or knowingly facilitate, any discussions or negotiations regarding any inquiries, proposals or offers that constitute, or may reasonably be expected to lead to, a Company Acquisition Proposal, (c) furnish to any Person other than the Company any non-public information that could reasonably be expected to be used for the purposes of formulating any Company Acquisition Proposal, (d) enter into any letter of intent, agreement in principle or other similar type of agreement relating to a Company Acquisition Proposal, or enter into any agreement or agreement in principle requiring the Company to abandon, terminate or fail to consummate the transactions contemplated hereby, (e) initiate a stockholders' vote or action by consent of the Company's stockholders with respect to a Company Acquisition Proposal, (f) except by reason of this Agreement, become a member of a "group" (as such term is defined in Section 13(d) of the Exchange Act) with respect to any voting securities of the Company that takes any action in support of a Company Acquisition Proposal or (g) propose or agree to do any of the foregoing. In the event that Stockholder is a corporation, partnership, trust or other entity, it shall not permit any of its Subsidiaries or Affiliates to, nor shall it authorize any officer, director or representative of Stockholder, or any of its Subsidiaries or Affiliates to, undertake any of the actions contemplated by this Section 7.

8. Waiver of Appraisal Rights; Release; No Legal Actions.

(a) The Stockholder hereby waives, and agrees not to exercise or assert, any appraisal rights under applicable law, including Section 262 of the DGCL in connection with the Merger.

(b) The undersigned Stockholder acknowledges that the release of certain claims by stockholders of the Company against the Company, Targacept, Merger Sub and their respective affiliates constitutes a material inducement for the completion of the transactions contemplated by the Merger Agreement and that the Company, Targacept and Merger Sub would not enter into the Merger Agreement without being released from such claims by the undersigned Stockholder. The undersigned Stockholder, and, to the extent within the undersigned's control, each of the undersigned's equity holders and each of their respective subsidiaries, affiliates, employees, agents, advisors, heirs, legal representatives, successors and assigns (each, a "Releasor"), hereby completely releases, acquits and forever discharges, to the fullest extent permitted by law, the Company, Targacept, Merger Sub, the Surviving Corporation and their respective affiliates and each of their respective current, former and future officers, directors, employees, agents, advisors, successors and assigns (each, a "Releasee"), from any and all losses, liabilities, suits, actions, debts or rights, whether fixed or contingent, known or unknown, matured or unmatured, arising out of, relating to, or in any manner connected with any facts, events or circumstances, or any actions taken, at or prior to the effective time of the Merger (the "Effective Time") that any Releasor ever had or now has against the Releasees ("Released Matters"), excluding any rights of the Releasor under the Merger Agreement. Notwithstanding anything to the contrary in this Agreement, nothing herein shall release the Company or any of its Affiliates of obligations to the undersigned Stockholder with respect to (A) any employment or consulting agreement, (B) any other employment-related obligations of the Company or any of its Affiliates, (C) vested retirement benefits, (D) any rights that cannot be waived as a matter of law, (E) any indemnification obligations to the undersigned Stockholder under the Company's or any of its Affiliates' bylaws, certificate of incorporation, or other organizational documents, or under Delaware law or otherwise, or (F) any rights relating to the undersigned's relationship with the Company or any of its Affiliates (other than as a stockholder). The undersigned hereby waives the provisions of section 1542 of the California Civil Code, or any successor thereto, which currently states: "A general release does not extend to claims which the creditor does not know or suspect to exist in his favor at the time of executing the release, which if known by him must have materially affected his settlement with the debtor." Effective as of the Effective Time, the undersigned Stockholder shall not, and, to the extent within the undersigned's control, shall not cause or permit its equity holders or any of their respective Subsidiaries, Affiliates, employees, agents, advisors, heirs, legal representatives, successors and assigns, to assert any claims against the Releasees in respect of any Released Matters. The undersigned Stockholder acknowledges that it would be difficult to fully compensate Targacept or any of its Affiliates (including the Surviving Corporation) for damages resulting from any breach by him/her/it of the provisions of this release. Accordingly, in the event of any actual or threatened breach of such provisions, Targacept and its Affiliates (including the Surviving Corporation) shall (in addition to any other remedies which it may have) be entitled to seek temporary and/or permanent injunctive relief to enforce such

provisions and recover attorneys' fees and costs for same. The undersigned Stockholder further acknowledges that this release constitutes a material inducement to Targacept to complete the transactions contemplated by the Merger Agreement and Targacept will be relying on the enforceability of this release in completing such transactions contemplated by the Merger Agreement.

(c) The Stockholder will not in its capacity as a stockholder of the Company bring, commence, institute, maintain, prosecute or voluntarily aid any Legal Proceeding which (i) challenges the validity or seeks to enjoin the operation of any provision of this Agreement or (ii) alleges that the execution and delivery of this agreement by the Stockholder, either alone or together with the other voting agreements and proxies to be delivered in connection with the execution of the Merger Agreement, or the approval of the Merger Agreement by the Board of Directors of the Company, constitutes a breach of any fiduciary duty of the Board of Directors of the Company or any member thereof.

9. Other Remedies; Specific Performance. Except as otherwise provided herein, any and all remedies herein expressly conferred upon a party will be deemed cumulative with, and not exclusive of, any other remedy conferred hereby, or by Law or equity upon such party, and the exercise by a party of any one remedy will not preclude the exercise of any other remedy. The parties hereto agree that irreparable damage would occur in the event that any of the provisions of this Agreement were not performed in accordance with their specific terms or were otherwise breached. It is accordingly agreed that the parties shall be entitled to an injunction or injunctions to prevent breaches of this Agreement and to enforce specifically the terms and provisions hereof in any court of the United States or any state having jurisdiction, this being the addition to any other remedy to which they are entitled at Law or in equity.

10. Directors and Officers. This Agreement shall apply to Stockholder solely in Stockholder's capacity as a stockholder of the Company and/or holder of options to purchase shares of Company Common Stock and/or holder of warrants to purchase shares of Company Common Stock and not in such Stockholder's capacity as a director, officer or employee of the Company or any of its Subsidiaries or in such Stockholder's capacity as a trustee or fiduciary of any employee benefit plan or trust. Notwithstanding any provision of this Agreement to the contrary, nothing in this Agreement shall (or require Stockholder to attempt to) limit or restrict a director and/or officer of the Company in the exercise of his or her fiduciary duties consistent with the terms of the Merger Agreement as a director and/or officer of the Company or in his or her capacity as a trustee or fiduciary of any employee benefit plan or trust or prevent or be construed to create any obligation on the part of any director and/or officer of the Company or any trustee or fiduciary of any employee benefit plan or trust from taking any action in his or her capacity as such director, officer, trustee and/or fiduciary.

11. No Ownership Interest. Nothing contained in this Agreement shall be deemed to vest in Targacept any direct or indirect ownership or incidence of ownership of or with respect to any Shares. All rights, ownership and economic benefits of and relating to the Shares shall remain vested in and belong to Stockholder, and Targacept does not have authority to manage, direct, superintend, restrict, regulate, govern, or administer any of the policies or operations of the Company or exercise any power or authority to direct Stockholder in the voting of any of the Shares, except as otherwise provided herein.

12. Termination. This Agreement shall terminate and shall have no further force or effect as of the Expiration Date. Notwithstanding the foregoing, nothing set forth in this Section 12 or elsewhere in this Agreement shall relieve either party hereto from any liability, or otherwise limit the liability of either party from any liability for any intentional breach of any obligation or other provision contained in this Agreement.

13. Further Assurances. Stockholder shall, from time to time, execute and deliver, or cause to be executed and delivered, such additional or further consents, documents and other instruments as the Company or Targacept may reasonably request for the purpose of effectively carrying out the transactions contemplated by this Agreement and the Merger Agreement.

14. Disclosure. Stockholder hereby agrees that Targacept and the Company may publish and disclose in the Registration Statement, any resale registration statement relating thereto (including all documents and schedules filed with the SEC), the Proxy Statement, any prospectus filed with any regulatory authority in connection with the Merger and any related documents filed with such regulatory authority and as otherwise required by Law, such Stockholder's identity and ownership of Shares and the nature of such Stockholder's commitments, arrangements and understandings under this Agreement and may further file this Agreement as an exhibit to the Registration Statement or prospectus or in any other filing made by Targacept or the Company as required by Law or the terms of the Merger Agreement, including with the SEC or other regulatory authority, relating to the Merger.

15. Notice. All notices and other communications hereunder shall be in writing and shall be deemed given if delivered personally or sent by overnight courier (providing proof of delivery) or by facsimile transmission (providing confirmation of transmission) to the Company or Targacept, as the case may be, in accordance with Section 10.8 of the Merger Agreement and to each Stockholder at its address set forth on Schedule 1 attached hereto (or at such other address for a party as shall be specified by like notice).

16. Severability. Any term or provision of this Agreement that is invalid or unenforceable in any situation in any jurisdiction shall not affect the validity or enforceability of the remaining terms and provisions of this Agreement or the validity or enforceability of the offending term or provision in any other situation or in any other jurisdiction. If a final judgment of a court of competent jurisdiction declares that any term or provision of this Agreement is invalid or unenforceable, the Parties hereto agree that the court making such determination shall have the power to limit such term or provision, to delete specific words or phrases or to replace such term or provision with a term or provision that is valid and enforceable and that comes closest to expressing the intention of the invalid or unenforceable term or provision, and this Agreement shall be valid and enforceable as so modified. In the event such court does not exercise the power granted to it in the prior sentence, the Parties hereto agree to replace such invalid or unenforceable term or provision with a valid and enforceable term or provision that will achieve, to the extent possible, the economic, business and other purposes of such invalid or unenforceable term or provision.

17. Assignability. This Agreement shall be binding upon, and shall be enforceable by and inure solely to the benefit of, the parties hereto and their respective successors and assigns; provided, however, that neither this Agreement nor any of a party's rights or obligations hereunder may be assigned or delegated by such party without the prior written consent of the other parties hereto, and any attempted assignment or delegation of this Agreement or any of such rights or obligations by such party without the other party's prior written consent shall be void and of no effect. Nothing in this Agreement, express or implied, is intended to or shall confer upon any Person (other than the parties hereto) any right, benefit or remedy of any nature whatsoever under or by reason of this Agreement.

18. No Waivers. Except as set forth in Section 23, no waivers of any breach of this Agreement extended by the Company or Targacept to Stockholder shall be construed as a waiver of any rights or remedies of the Company or Targacept, as applicable, with respect to any other stockholder of the Company who has executed an agreement substantially in the form of this Agreement with respect to Shares held or subsequently held by such stockholder or with respect to any subsequent breach of the Stockholder or any other such stockholder of the Company. No waiver of any provisions hereof by any party shall be deemed a waiver of any other provisions hereof by any such party, nor shall any such waiver be deemed a continuing waiver of any provision hereof by such party.

19. Applicable Law; Jurisdiction. This Agreement shall be governed by, and construed in accordance with, the Laws of the State of Delaware, regardless of the Laws that might otherwise govern under applicable principles of conflicts of Laws. In any action or proceeding between any of the parties arising out of or relating to this Agreement, each of the parties: (i) irrevocably and unconditionally consents and submits to the exclusive jurisdiction and venue of the Court of Chancery of the State of Delaware or to the extent such court does not have subject matter jurisdiction, the Superior Court of the State of Delaware or the United States District Court for the District of Delaware, (ii) agrees that all claims in respect of such action or proceeding shall be heard and determined exclusively in accordance with clause (i) of this Section 19, (iii) waives any objection to laying venue in any such action or proceeding in such courts, (iv) waives any objection that such courts are an inconvenient forum or do not have jurisdiction over any party, and (v) agrees that service of process upon such party in any such action or proceeding shall be effective if notice is given in accordance with Section 15 of this Agreement.

20. Waiver of Jury Trial. The parties hereto hereby waive any right to trial by jury with respect to any action or proceeding related to or arising out of this Agreement, any document executed in connection herewith and the matters contemplated hereby and thereby.

21. No Agreement Until Executed. Irrespective of negotiations among the parties or the exchanging of drafts of this Agreement, this Agreement shall not constitute or be deemed to evidence a contract, agreement, arrangement or understanding between the

parties hereto unless and until (a) the Board of Directors of the Company has approved, for purposes of any applicable anti-takeover laws and regulations and any applicable provision of the Company Charter, the transactions contemplated by the Merger Agreement, (b) the Merger Agreement is executed by all parties thereto, and (c) this Agreement is executed by all parties hereto.

22. Entire Agreement; Counterparts; Exchanges by Facsimile. This Agreement amends and restates the Original Voting Agreement in its entirety, and, accordingly the parties acknowledge that the Original Voting Agreement is terminated and no longer in effect. This Agreement and the other agreements referred to in this Agreement constitute the entire agreement and supersede all prior agreements (including the Original Voting Agreement) and understandings, both written and oral, among or between any of the parties with respect to the subject matter hereof and thereof. This Agreement may be executed in several counterparts, each of which shall be deemed an original and all of which shall constitute one and the same instrument. The exchange of a fully executed Agreement (in counterparts or otherwise) by all parties by facsimile or electronic transmission via ".pdf" shall be sufficient to bind the parties to the terms and conditions of this Agreement.

23. Amendment. This Agreement may not be amended, supplemented or modified, and no provisions hereof may be modified or waived, except by an instrument in writing signed on behalf of each party hereto. In the event that securities held by any other holder (the "Other Holder") subject to a similar voting agreement in connection with the Merger is released from the restrictions of such voting agreement, the Shares held by the Stockholder shall likewise automatically be released from the restrictions contained herein in the same proportion as those securities released for the Other Holder.

24. Definition of Merger Agreement. For purposes of this Agreement, the term "Merger Agreement" includes Amendment No. 1 to the Merger Agreement and Amendment No. 2 to the Merger Agreement and may include the Merger Agreement as further amended or modified as long as such further amendments or modifications (a) do not (i) change the form of consideration or (ii) change the Exchange Ratio in a manner adverse to Stockholder, or (b) have been agreed to in writing by Stockholder.

25. Construction.

(a) For purposes of this Agreement, whenever the context requires: the singular number shall include the plural, and vice versa; the masculine gender shall include the feminine and neuter genders; the feminine gender shall include the masculine and neuter genders; and the neuter gender shall include masculine and feminine genders.

(b) The parties hereto agree that any rule of construction to the effect that ambiguities are to be resolved against the drafting party shall not be applied in the construction or interpretation of this Agreement.

(c) As used in this Agreement, the words "include" and "including," and variations thereof, shall not be deemed to be terms of limitation, but rather shall be deemed to be followed by the words "without limitation."

(d) Except as otherwise indicated, all references in this Agreement to "Sections," "Exhibits" and "Schedules" are intended to refer to Sections of this Agreement and Exhibits and Schedules to this Agreement, respectively.

(e) The bold-faced headings contained in this Agreement are for convenience of reference only, shall not be deemed to be a part of this Agreement and shall not be referred to in connection with the construction or interpretation of this Agreement.

[*Remainder of Page has Intentionally Been Left Blank*]

EXECUTED as of the date first above written.

STOCKHOLDER

By: _____

Name: _____

Title: _____

[Signature Page to Company Voting Agreement]

EXECUTED as of the date first above written.

TARGACEPT, INC.

By: _____

Name: _____

Title: _____

CATALYST BIOSCIENCES, INC.

By: _____

Name: _____

Title: _____

SCHEDULE 1

Exhibit 99.1

Targacept and Catalyst Biosciences Amend Definitive Merger Agreement

Winston-Salem, NC and South San Francisco, CA – May 14, 2015 – Targacept, Inc. (NASDAQ: TRGT) and Catalyst Biosciences, Inc., a privately held biopharmaceutical company, jointly announced that they have entered into an amendment to the definitive agreement to merge the two companies. Targacept and Catalyst previously announced entering into the definitive merger agreement on March 5, 2015. On April 6, 2015, Targacept disclosed the termination, effective June 1, 2015, of the research and license agreement between Catalyst and Wyeth LLC (a wholly owned subsidiary of Pfizer), which governs the development and commercialization of Catalyst's lead product candidate CB 813d/PF-05280602, an engineered Factor VIIa in development for severe hemophilia A and B. The amended agreement between Targacept and Catalyst considers the effect on the combined company of the termination of Catalyst's research and license agreement with Wyeth.

The boards of directors of both companies have unanimously approved the amendment to the merger agreement, which is subject to customary closing conditions, including approval by the stockholders of each of Targacept and Catalyst. Shareholders representing approximately 41 percent of Targacept's common stock and 82 percent of Catalyst's voting stock have signed voting agreements supporting the transaction.

The agreement has been amended to reflect the following revised terms:

- Targacept stockholders would retain common stock representing approximately 42 percent of the combined company, as compared to approximately 35 percent under the original agreement;
- Targacept stockholders would own, on a pro-forma basis, approximately 57 percent of the outstanding capital of the combined company if the redeemable convertible notes to be issued to Targacept stockholders as a component of a pre-closing dividend are fully converted to common stock, as compared to 49 percent under the original agreement;
- A 30-month period for Targacept stockholders to convert the $37 million of redeemable convertible notes into the combined company's common stock or redeem them for cash, as compared to a 24-month period under the original agreement; and
- Any NNR Therapeutics™ assets not sold or otherwise disposed of prior to the closing date will remain with the combined company, rather than being placed in a liquidating trust for the benefit of Targacept stockholders.

As announced on March 5, 2015, as part of the proposed merger, the operations of both companies will be combined. Targacept cash remaining in the combined company will be approximately $35 million, along with approximately $5 million of cash anticipated from Catalyst. In addition to retaining common stock representing approximately 42 percent of the combined company, Targacept stockholders will receive a dividend of an aggregate of $37 million in non-interest bearing redeemable convertible notes and approximately $19 million in cash. The notes will be convertible into the combined company's common stock or redeemable for cash at any time after closing through 30 months from closing, at the noteholders' discretion. The conversion price of the notes is equal to $1.31 per share, which represents 130 percent of the negotiated per-share value of Targacept's assets following the anticipated distribution of the dividend of approximately $19 million in cash and $37 million principal amount of the notes. The conversion price is subject to adjustment in the event of a reverse stock split of the combined company's common stock. The combined company will establish an escrow fund of cash sufficient

for repayment of any notes that are not converted to stock during the conversion period. If the redeemable convertible notes are fully converted prior to their expiration, the amount held in escrow would be made available to the combined company, and on a pro-forma basis as of the anticipated closing date, the former Targacept stockholders would own approximately 57% of the outstanding capital of the combined company. The initial ownership percentages are subject to adjustment based on Catalyst's cash balance at closing.

Additional Information About the Proposed Merger

Stifel, Nicolaus & Company, Incorporated is acting as exclusive financial advisor to Targacept and Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. is serving as its legal counsel. Morrison & Foerster LLP is serving as legal counsel for Catalyst.

About the Combined Company

If the proposed merger is completed, the combined entity, to be named Catalyst Biosciences, Inc., is expected to create a financially strong company engaged to harness the catalytic power of engineered human proteases to develop next-generation biopharmaceuticals with improved efficacy and therapeutic index to treat major diseases.

The combined company, with an anticipated listing on the NASDAQ Global Select Market under the symbol CBIO, will have:

- A pipeline of protease therapeutics including CB 813d/PF-05280602, an engineered Factor VIIa (FVIIa) drug candidate that successfully completed a Phase 1 clinical trial. PF-05280602 is designed to address an established approximately $1.5 billion hemophilia market by potentially enabling lower and fewer doses of an engineered Factor VIIa to control bleeding episodes and to potentially achieve effective prophylaxis in hemophilia inhibitor patients;
- Four additional promising drug candidates including: an improved Factor IX (FIX) for hemophilia B, an engineered Factor Xa (FXa) that can potentially be used for both hemophilia and the control of bleeding in non-hemophilia patients, and two novel proteases for the treatment of complement-mediated disorders;
- News flow from drug development programs including Phase 1 data from the Factor VIIa program in severe hemophilia A and B and inhibitor patients;
- Immediate committed capital expected to include cash and cash equivalents of approximately $40 million upon completion of the proposed merger; and
- For existing Targacept shareholders, a special dividend prior to closing of approximately $19 million in cash and redeemable convertible notes with an aggregate principal amount of $37 million, which provides the potential for future capital investment in the company.

Catalyst's CEO Nassim Usman, Ph.D., will become the President and CEO of the combined company and the other Catalyst executive officers, Ed Madison, Ph.D., CSO and Fletcher Payne, CFO will assume their respective positions in the combined company. The seven-member board of directors of the combined company will be comprised of current Catalyst directors Harold E. Selick, Ph.D., Jeff Himawan, Ph.D., and Augustine Lawlor, as well as Dr. Usman, and current Targacept directors John P. Richard, Errol B. DeSouza, Ph.D. and Dr. Stephen A. Hill. Dr. Selick will serve as the new chairman of the board.

About Hemophilia & Hemostasis

Hemophilia is a rare and serious bleeding disorder that results from a genetic or an acquired deficiency of a protein required for normal blood coagulation, such as Factor VIII (hemophilia A) or Factor IX (hemophilia B). The worldwide prevalence of hemophilia is estimated at approximately 300,000 patients and, according to the

National Hemophilia Foundation, approximately 75 percent of patients receive inadequate treatment of their disorder. Hemophilia patients suffer from spontaneous bleeding episodes that often occur repeatedly in "target joints", especially the knees, ankles and elbows. This internal bleeding may, in some cases, become life threatening and frequently damages joints, organs, and tissues over time.

Hemophilia A: A significant number of hemophilia A patients develop neutralizing antibodies ("inhibitors") against factor VIII and become refractory to standard factor replacement treatment. One of the treatment options for these patients is Factor VIIa, a protease that can both initiate blood clotting and, at high doses, "bypass" the factor VIII-dependent step in coagulation. Hemophilia A is four times as common as hemophilia B.

Hemophilia B: Hemophilia B patients can also develop neutralizing antibodies and become refractory to factor replacement therapy. Factor VIIa treatment is also effective in treating these patients.

Currently, Factor VIIa therapy can, in some patients, require multiple injections to treat a bleeding episode due to Factor VIIa's limited potency as a "bypass" agent and short half-life. Current worldwide sales of Factor VIIa are approximately $1.5 billion annually. Catalyst has created a FVIIa with pre-clinical properties that suggest increased potency and duration than currently approved FVIIa, NovoSeven®. Similarly, Catalyst's other coagulation factors, FIX and FXa have also been engineered to be more potent, longer acting, and safer than other approved factors or those in clinical trials.

About Anti-Complement

Like blood coagulation, the human complement system is a complex series of biological processes and cascades that are regulated naturally by proteases. Disruption of the complement system, either by genetic mutations or inappropriate activation, as occurs in certain transplant and myocardial surgeries and ocular diseases such as age-related macular degeneration (AMD), can produce substantial inflammatory tissue damage that causes significant pathology. Catalyst's lead complement programs are directed at complement factor C3, an attractive pharmaceutical intervention point as C3 is at the nexus of the complement system and common to all three pathways of activation.

About Catalyst

Catalyst Biosciences is developing the next generation of biopharmaceuticals by engineering proteases in the fields of hemostasis and anti-complement. Catalyst is focusing its product development efforts on drug candidates for hemophilia, age-related macular degeneration and inflammation. To date, Catalyst has established multiple discovery research and product development agreements, currently with ISU Abxis (Seoul, South Korea). Catalyst is privately held and backed by leading venture firms including Essex Woodlands Health Ventures, HealthCare Ventures, Johnson & Johnson Innovation – JJDC, Inc., Morgenthaler Ventures, Rosetta Capital and Sofinnova Ventures. For more information, please visit www.catbio.com.

About Targacept

Targacept has historically focused on developing NNR Therapeutics™ to treat patients suffering from serious nervous system and gastrointestinal/genitourinary diseases and disorders. Targacept is dedicated to building health and restoring independence for patients. For more information, please visit www.targacept.com.

Safe Harbor

Additional Information about the Merger and Where to Find More Information

On March 6, 2015, Targacept filed an 8-K reporting that Targacept and Catalyst Biosciences, Inc. had entered into an Agreement and Plan of Merger dated as of March 5, 2015. In connection with the merger, Targacept has filed relevant materials with the Securities and Exchange Commission, or the SEC, and Targacept and Catalyst intend to file additional relevant materials with the SEC, including a registration statement on Form S-4 that will contain a prospectus and a joint proxy statement. Investors and security holders of Targacept and Catalyst are urged to read these materials when they become available because they will contain important information about Targacept, Catalyst and the merger. The proxy statement, prospectus and other relevant materials (when they become available), and any other documents filed by Targacept with the SEC, may be obtained free of charge at the SEC web site at www.sec.gov. In addition, investors and security holders may obtain free copies of the documents filed with the SEC by Targacept by directing a written request to: Targacept, Inc., 100 North Main Street, Winston-Salem, North Carolina 27101, Attention: Chief Financial Officer. Investors and security holders are urged to read the proxy statement, prospectus and other relevant materials when they become available before making any voting or investment decision with respect to the merger.

This communication shall not constitute an offer to sell or the solicitation of an offer to sell or the solicitation of an offer to buy any securities, nor shall there be any sale of securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction. No offering of securities shall be made except by means of a prospectus meeting the requirements of Section 10 of the Securities Act of 1933, as amended.

Participants in the Solicitation

Targacept and its directors and executive officers and Catalyst and its directors and executive officers may be deemed to be participants in the solicitation of proxies from the shareholders of Targacept in connection with the proposed transaction. Information regarding the special interests of these directors and executive officers in the merger will be included in the proxy statement/ prospectus referred to above. Additional information regarding the directors and executive officers of Targacept is also included in Part III of Targacept's Annual Report on Form 10-K for the year ended December 31, 2014, which was filed with the SEC on March 16, 2015. These documents are available free of charge at the SEC web site (www.sec.gov) and from the Chief Financial Officer at Targacept at the address above.

Note Regarding Forward-Looking Statements

This press release contains forward-looking statements that involve substantial risks and uncertainties. All statements, other than statement of historical facts, included in this press release regarding our strategy, future operations, future financial position, future revenue, projected expense, prospects, plans and objectives of management are forward-looking statements. Examples of such statements include, but are not limited to, statements relating to the structure, timing and completion of Targacept's proposed merger with Catalyst Biosciences, including the proposed dividend in connection therewith; the potential conversion of the convertible notes to be issued as part of the transaction; the combined organization's continued listing on NASDAQ after the proposed merger; our expectations regarding the capitalization, resources and ownership structure of the combined organization; the nature, strategy and focus of the combined organization; the development, potential benefits and commercial potential of any product candidates, including PF-05280602; the executive and board structure of the combined organization; and expectations regarding voting by Targacept and Catalyst stockholders. Targacept or Catalyst may not actually achieve the plans, carry out the intentions or meet the expectations or projections disclosed in Targacept's forward-looking statements and you should not place undue reliance on these forward-looking statements. Actual results or events could differ materially from the plans,

intentions expectations and projections disclosed in the forward-looking statements. Various important factors could cause actual results or events to differ materially from the forward-looking statements that Targacept makes, including the risks described in the “Risk Factors” section of Targacept’s periodic reports filed with the SEC. Targacept does not assume any obligation to update any forward-looking statements, except as required by law.

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