Targacept and Catalyst Biosciences Enter Definitive Merger Agreement Creating a Protease-Based Hemostasis and Anti-Complement Company

Merger combines Catalyst's protease therapeutics pipeline and the financial resources of both companies

Creates a well-funded company to develop important new treatment options for patients with bleeding disorders and complement-mediated diseases

Conference Call on Friday, March 6th, at 8:30 a.m. Eastern Standard Time

Winston-Salem, NC and South San Francisco, CA – March 5, 2015 – Targacept, Inc. (NASDAQ: TRGT) and Catalyst Biosciences, Inc., a privately held biopharmaceutical company, jointly announced today that they have entered into a definitive agreement to merge the two companies. The combined entity, to be named Catalyst Biosciences, Inc., is expected to create a financially strong company 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 NASDAQ listing with the symbol CBIO, will have:

- A pipeline of protease therapeutics including PF-05280602 (formerly CB 813d), an engineered Factor VIIa (FVIIa) drug candidate that successfully completed a Phase 1 clinical trial and is being developed by Pfizer Inc. under license from Catalyst. 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 Pfizer-sponsored Factor VIIa program in severe hemophilia A & B and inhibitor patients;

- Immediate committed capital to the combined entity expected to include cash and cash equivalents of approximately $40 million at the closing of the transaction; and
- For existing Targacept shareholders, a special dividend prior to closing of approximately $20 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.

“This merger establishes a well-capitalized public company with resources to advance our unique protease-based product candidates through multiple future value inflection points,” said Nassim Usman, Ph.D., Chief Executive Officer of Catalyst. “In addition to our Factor VIIa program we will also have sufficient resources to initiate and complete a planned proof-of-concept study of CB 2679d, a next-generation Factor IX for hemophilia B patients, as well as further develop of our novel Factor Xa variant and our anti-complement programs.”

As part of the proposed transaction, the stockholders of Catalyst will initially own approximately 65 percent of the combined company, and the operations of both companies will be combined. Targacept cash remaining in the combined company will be $35 million, along with an anticipated $5 million of cash from Catalyst. In addition to retaining common stock representing approximately 35 percent of the combined company, current Targacept stockholders will receive a dividend of an aggregate of $37 million in non-interest bearing redeemable convertible notes and approximately $20 million in cash. The notes will be convertible into the combined company’s common stock at any time within two years after closing at the noteholders’ discretion. The conversion price of the notes is equal to $1.31, which represents 130 percent of the negotiated per-share value of Targacept’s assets following the anticipated distribution of the dividend of approximately $20 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 two-year conversion period. If the redeemable convertible notes are fully converted, an additional $37 million held in escrow would be made available to the combined company within the first two years following closing, and on a pro-forma basis as of the anticipated closing date, the former Targacept stockholders would own approximately 49 percent of the outstanding capital of the combined company. The initial ownership percentages are subject to adjustment based on Catalyst’s cash balance at closing.

“This transaction with Catalyst reflects the continued commitment of Targacept’s Board of Directors and management team to deliver value to Targacept stockholders, and make a difference in patients’ lives,” said Dr. Stephen A. Hill, President and Chief Executive Officer of Targacept. “The proposed transaction

employs an innovative structure that is designed to optimize stockholder value for both Catalyst and Targacept. Substantial capital is committed to the combined entity, potential additional capital is earmarked for future investment into the combined company if the notes are converted, and a special dividend is provided for existing Targacept stockholders at the closing."

The boards of directors of both companies have unanimously approved the proposed merger, which is subject to customary closing conditions, including approval by the stockholders of each of Targacept and Catalyst. Voting agreements supporting the transaction have been signed by shareholders representing approximately 43 percent of Targacept's common stock and 84 percent of Catalyst's voting stock.

About the Combined Company

If the merger is consummated, Targacept's name will be changed to Catalyst Biosciences, Inc., and Targacept will apply to change its ticker symbol on the NASDAQ Global Select Market to "CBIO". Catalyst's CEO Nassim Usman, Ph.D., will become the President and CEO of the combined company and the other Catalyst executive officers will assume their respective positions in the combined company, with select Targacept executives remaining involved on a transitional basis.

The seven-member Board of Directors of the combined company will be comprised of current Catalyst directors Dr. Harold E. Selick, Dr. Jeff Himawan, and Augustine Lawlor, as well as Dr. Usman, and current Targacept directors John P. Richard, Errol B. DeSouza, Ph.D. and Dr. Hill. Dr. Selick will serve as the new chairman of the board.

Additional Information About the Transaction

Current Targacept stockholders will retain rights to any monetization of Targacept's neuronal nicotinic receptor (NNR) assets for a period of two years following the closing, to the extent these assets are not sold or otherwise disposed of prior to the closing.

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 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.

Conference Call Information

Dr. Hill and Dr. Usman will host a conference call and webcast to discuss the proposed merger on March 6, 2015, at 8:30 a.m. Eastern Time (5:30 a.m. Pacific Time).

To access the live conference call, please dial +1(800) 299-8538 from the U.S. and Canada or +1(617) 786-2902 internationally, and use the passcode 88076227.

To access the live and subsequently archived webcast of the conference call, go to the Investor Relations section of Targacept's website at website at www.targacept.com. A replay of the webcast will be available on the Company's website until close of business on April 3, 2015.

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 including Pfizer and ISU Abxis (Seoul, 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
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 Targacept's definitive Proxy Statement in connection with its 2014 Annual Meeting of Shareholders filed with the SEC on April 18, 2014 and incorporated by reference in Targacept's Annual Report on Form 10-K for the year ended December 31, 2013, which was filed with the SEC on March 14, 2014. 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 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 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 disposition, if any, of Targacept's NNR assets and any value that might be realized as a result; 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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