Synthetic Biologics and Intrexon Corporation Enter Worldwide Exclusive Collaboration for Infectious Diseases

-- Collaboration Harnesses Monoclonal Antibodies to Address Unmet Medical Needs --

-- Joint Conference Call Scheduled for Today, Wednesday, August 8, 2012 at 5:00pm(ET)/2:00pm(PT) --

ROCKVILLE, Md. and SAN FRANCISCO, Aug. 8, 2012 /PRNewswire/ -- Synthetic Biologics, Inc. (NYSE Amex: SYN), a developer of synthetic biologics and innovative medicines for unmet medical needs, and Intrexon Corporation (Intrexon), a synthetic biology company that utilizes its proprietary technologies to provide control over cellular function, today entered into a second worldwide exclusive channel collaboration through which Synthetic Biologics intends to develop and commercialize a series of monoclonal antibody (mAb) therapies for the treatment of certain infectious diseases not adequately addressed by existing therapies. Utilizing Intrexon's comprehensive suite of proprietary technologies, including the mAbLogix™ platform for rapid discovery of fully human mAbs, Synthetic Biologics' initial efforts will target three infectious disease indications. The collaboration may optionally be expanded to include up to an additional five infectious disease indications. Synthetic Biologics intends to disclose selected indications from time to time as business and commercial considerations dictate.

Jeffrey Riley, Chief Executive Officer of Synthetic Biologics, Inc., stated, "Through this second worldwide exclusive collaboration, we are pleased to strengthen our relationship with Intrexon and develop new therapeutics for unmet medical needs, in an effort to build value for our shareholders. Intrexon has state-of-the-art technologies and efficient processes that have tremendous potential for the production of a broad spectrum of fully human antibodies. This expanded relationship gives us access to this paradigm-changing platform."

Saiid Zarrabian, President of Intrexon's Protein Production Division, said, "We are very pleased to expand our relationship with Synthetic Biologics. Intrexon is committed to building a molecular toolkit and the scientific expertise needed to take on the challenges of developing new treatments for unmet medical needs. Intrexon has state-of-the-art technologies and efficient processes that have tremendous potential for the production of a broad spectrum of fully human antibodies. This expanded relationship gives us access to this paradigm-changing platform."

Mr. Riley concluded, "We look forward to applying Intrexon's competencies to the development of a series of monoclonal antibodies for the treatment of infectious diseases that take a tremendous worldwide toll on human life, and to disclosing more about our discovery targets in the near future."

Under terms of the transaction agreements:

- Synthetic Biologics will have broad access within the target indications to Intrexon's comprehensive suite of proprietary technologies, including UltraVector®, DNA and RNA MOD engineering, protein engineering, transcription control chemistry, genome engineering, mAbLogix™ human antibodies, LEAP™-based cell processing and cell system engineering.
- Synthetic Biologics will issue to Intrexon approximately 3.6 million shares of its common stock as a technology access fee upon execution of the agreement; together with previously issued shares, immediately following this transaction Intrexon will own approximately 18% of Synthetic Biologics.
- Synthetic will pay to Intrexon an additional fee, in cash or additional shares of common stock, should it elect to broaden the collaboration beyond the three initial disease indications.
- Upon certain milestones (i.e., the filing of an Investigational New Drug application with the FDA and governmental approval/the initiation of commercial sales), Synthetic Biologics will pay Intrexon a milestone fee in cash or additional shares of common stock.
- Subject to certain expense allocations, Synthetic Biologics will pay Intrexon quarterly royalties in cash on annualized worldwide net sales.
If the NYSE Amex approval of the issuance of the securities described above is not received within 120 days of the date of the execution of the exclusive channel agreement, Intrexon has the right to terminate the exclusive channel collaboration.

Joint Synthetic Biologics/Intrexon Corporation Conference Call

Synthetic Biologics and Intrexon will hold a conference call this afternoon, Wednesday, August 8, 2012, at 5:00pm (ET)/2:00pm (PT). Jeffrey Riley, Chief Executive Officer of Synthetic Biologics and Saiid Zarrabian, President of Intrexon's Protein Production Division and Senior Vice President will host the call. Mr. Riley and Mr. Zarrabian will discuss the second worldwide exclusive channel collaboration through which Synthetic Biologics intends to develop and commercialize a platform of mAbs for the treatment of certain serious infectious diseases.

Interested parties should call toll free 1-800-860-2442 (U.S.) or 1-866-605-3852 (Canada), or from outside North America +1 412-858-4600, fifteen minutes before the start of the call to register and identify themselves as registrants of the 'Synthetic Biologics' Conference Call. Any registered caller on the toll free line may ask to be placed in the queue for the Question & Answer session. The call will be simulcast on the web at http://www.videonewswire.com/event.asp?id=88858. If you are unable to participate during the live conference call, the webcast will be available for replay at the same URL (http://www.videonewswire.com/event.asp?id=88858) for 30 days after the call.

About Monoclonal Antibodies

Acting as the body's army, antibodies are proteins generally found in the blood that detect and destroy invaders, such as viruses and bacteria and their associated toxins. Monoclonal antibodies (mAbs) are designed and made utilizing protein engineering and recombinant production technologies. The mAbs being developed under this collaboration are intended to supplement a patient's immune system by providing infected individuals with the means to specifically and rapidly neutralize and/or clear specific pathogens and toxins of interest in a process known as "passive immunity". Many infectious diseases are innately resistant to, or over time have developed increased resistance to, antibiotics and other drugs. Synthetic Biologics intends to utilize Intrexon's comprehensive suite of proprietary mAb design and recombinant protein production technologies to efficiently create potent candidate mAbs for human testing and use to specifically treat certain infectious diseases for which current therapies are unavailable or inadequate.

About Intrexon Corporation

Intrexon Corporation is a privately held biotechnology company focused on the industrial engineering of synthetic biology. Intrexon is deploying its extensive capabilities to rapidly design and produce novel and enhanced biological products and processes across multiple industry sectors, including: human therapeutics, protein production, industrial products, agricultural biotechnology, and animal science. The Company's advanced bioindustrial engineering platform enables Better DNA™ technology by combining revolutionary DNA control systems with corresponding advancements in modular transgene design, assembly, and optimization to enable unprecedented control over the function and output of living cells. More information about the Company is available at www.dna.com.

About Synthetic Biologics, Inc.

Synthetic Biologics is a biotechnology company focused on the development of product candidates to address serious diseases and unmet medical needs. Synthetic Biologics is developing the following synthetic biologic candidates: a series of monoclonal antibodies (mAbs) for the treatment of infectious diseases not adequately addressed by existing therapies and a synthetic DNA-based therapy for the treatment of pulmonary arterial hypertension (PAH) in collaboration with Intrexon. The Company is also developing drug candidates for the treatment of relapsing-remitting multiple sclerosis (MS), cognitive dysfunction in MS, amyotrophic lateral sclerosis (ALS) and fibromyalgia (partnered with Meda AB). For more information, please visit Synthetic Biologics' website at www.syntheticbiologics.com.

UltraVector®, mAbLogix™, and LEAP™ are registered trademarks of Intrexon Corporation.

This release includes forward-looking statements on Synthetic Biologics' current expectations and projections about future events. In some cases forward-looking statements can be identified by terminology such as "may," "should," "potential," "continue," "expects," "anticipates," "intends," "plans," "believes," "estimates," and similar expressions. These statements are based upon current beliefs, expectations and assumptions and are subject to a number of risks and uncertainties, many of which are difficult to predict and include statements regarding Synthetic Biologics’ intent to develop and commercialize monoclonal antibody therapies for infectious diseases and Synthetic Biologics'
belief that the new product opportunity and collaboration will build shareholder value. The forward-looking
statements are subject to risks and uncertainties that could cause actual results to differ materially from those set
forth or implied by any forward-looking statements. Important factors that could cause actual results to differ
materially from those reflected in Synthetic Biologics’ forward-looking statements include, among others, a failure of
Synthetic Biologics’ monoclonal antibodies for the treatment of infectious diseases to be successfully developed or
commercialized, a failure of the Intrexon's intellectual property to create potent candidate mAbs, an inability to obtain
regulatory approval of the infectious disease product candidates, a failure of the results of clinical trials to support
Synthetic Biologics' claims, a failure of the preclinical or clinical trials to proceed on schedules that are consistent
with Synthetic Biologics' current expectations or at all, Synthetic Biologics' inability to protect its intellectual property
and freedom to operate without interference of the patents of others, inability to maintain the effectiveness of the
exclusive collaboration agreement, its reliance on third parties to develop its product candidates, the insufficiency of
existing capital reserves to fund continued operations for a particular amount of time and uncertainties regarding
Synthetic Biologics' ability to fund continued operations for a particular amount of time and uncertainties regarding
Synthetic Biologics' ability to obtain additional financing to support its operations thereafter and other factors
described in Synthetic Biologics' report on Form 10-K/A for the year ended December 31, 2011 and any other filings
with the SEC. The information in this release is provided only as of the date of this release, and Synthetic Biologics
undertakes no obligation to update any forward-looking statements contained in this release on account of new
information, future events, or otherwise, except as required by law.

SOURCE Synthetic Biologics, Inc.