Grant Awarded to Synthetic Biologics' Academic Collaborator to Fund Further Evaluation of Monoclonal Antibody for the Prevention of Whooping Cough (Pertussis)

-- The University of Texas at Austin Receives Grant from the Bill & Melinda Gates Foundation --

Rockville, Md. and Austin, Texas, Oct. 21, 2015 /prNewswire/ -- Synthetic Biologics, Inc. (NYSE MKT: SYN), a clinical-stage company focused on developing therapeutics to protect the microbiome while targeting pathogen-specific diseases, and its Pertussis academic collaborator, The University of Texas at Austin (UT Austin), today announced a grant award of $400,000 to evaluate the potential of Synthetic Biologics' monoclonal antibody, hu1B7, to prevent Pertussis in non-human primates and provide support for its potential clinical application.

Through its Exclusive Channel Collaboration with Intrexon Corporation (NYSE: XON) and academic researchers at UT Austin, Synthetic Biologics is currently developing SYN-005, a combination of two humanized antibodies that includes hu1B7, for the treatment of critically ill infants with Pertussis. The Gates Foundation has awarded a grant to UT Austin to generate preclinical proof-of-concept data to test the hypothesis that antibody administration at birth may also have a role in the prevention of Pertussis. Jennifer Maynard, Ph.D., the principal investigator of the grant, will test this hypothesis by using hu1B7 provided by Synthetic Biologics.

Developing a Pertussis prophylaxis is an urgent unmet medical need. According to the World Health Organization, Pertussis is responsible for up to 300,000 deaths each year, primarily among infants during the first four months of life. Administration of hu1B7 at birth has the potential to provide four months of prophylaxis and to save thousands of lives each year.

Dr. Jennifer Maynard, associate professor in the McKetta Department of Chemical Engineering at UT Austin, has conducted research to develop Pertussis therapies for more than a decade. Upon notification of the grant award, Dr. Maynard stated, "We are thrilled to be working with the Gates Foundation. This grant provides the opportunity to translate our academic efforts into a potential life-saving Pertussis prevention for infants throughout the world."

"It's a privilege to work with our collaborators to address the global re-emergence of Pertussis as a rising public health concern," noted Jeffrey Riley, CEO of Synthetic Biologics. "We believe Synthetic Biologics' novel prophylactic and therapeutic monoclonal antibody approaches have long-term potential to both protect newborns from Pertussis and treat newborns with Pertussis."

About Pertussis (whooping cough)

Pertussis is a highly contagious disease caused by the bacteria Bordetella pertussis (B. pertussis) with symptoms that include severe coughing and subsequent breathing difficulties. Antibiotic use does not have a major effect on the disease course because, while it can eliminate the B. pertussis bacteria from the respiratory tract, it does not neutralize pertussis toxin. This secreted toxin is a major cause of disease virulence as it paralyzes the immune system, causes the white blood cell count to increase (sometimes to levels that block blood flow through the lungs), and predisposes infants to severe pneumonia. Synthetic Biologics' monoclonal antibodies, including hu1B7, are designed to neutralize pertussis toxin.
About Intrexon Corporation

Intrexon Corporation (NYSE: XON) is Powering the Bioindustrial Revolution with Better DNA™ to create biologically-based products that improve the quality of life and the health of the planet. The Company's integrated technology suite provides its partners across diverse markets with industrial-scale design and development of complex biological systems delivering unprecedented control, quality, function, and performance of living cells. We call our synthetic biology approach Better DNA®, and we invite you to discover more at www.dna.com.

About Synthetic Biologics, Inc.

Synthetic Biologics, Inc. (NYSE MKT: SYN) is a microbiome-focused, clinical-stage company developing therapeutics to protect the microbiome while targeting pathogen-specific diseases. The Company's lead candidates in Phase 2 development include SYN-004 which is designed to protect the gut microbiome from the effects of certain commonly used intravenous (IV) antibiotics for the prevention of C. difficile infection and antibiotic-associated diarrhea (AAD), and SYN-010 which is intended to reduce the impact of methane producing organisms in the gut microbiome to treat the underlying cause of irritable bowel syndrome with constipation (IBS-C). In addition, the Company is developing a Phase 2 oral estriol drug for the treatment of relapsing-remitting multiple sclerosis (MS) and cognitive dysfunction in MS, and in collaboration with Intrexon Corporation (NYSE: XON), monoclonal antibodies for the prevention and treatment of Pertussis and biotherapeutics for the treatment of phenylketonuria (PKU). For more information, please visit Synthetic Biologics' website at www.syntheticbiologics.com.

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 the prophylactic and therapeutic potential of SYN-005 to prevent and treat Pertussis in infants the potential for SYN-005 to provide prophylaxis and save thousands of lives annually, and the size of the potential market. 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, the additional preclinical and clinical studies and results not meeting expectations, the inability to commence and complete clinical trials when expected and other factors described in Synthetic Biologics' report on Form 10-K for the year ended December 31, 2014 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.

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