Soligenix Investor Relations

Soligenix Advances Collaboration with IDT Biologika
Supported with NIAID Contract Funding of up to $24.7 million

Princeton, NJ – December 20, 2016 – Soligenix, Inc. (Nasdaq: SNGX) (Soligenix or the Company), a late-stage biopharmaceutical company focused on developing and commercializing products to treat rare diseases where there is an unmet medical need, announced today that it has extended its collaboration with IDT Biologika (hereafter referred to as IDT) for the manufacture of RiVax™, the Company's proprietary heat-stable ricin toxin vaccine. Under the terms of the collaboration, Soligenix will scale-up the formulation/filling processes and continue development and validation of analytical methods established at IDT to advance the program towards a commercially viable scalable technology for the RiVax™ vaccine product compliant with current Good Manufacturing Practices (cGMPs).

Soligenix has been developing RiVax™, in conjunction with its heat stabilization technology, ThermoVax®, as a heat-stable biodefense vaccine. RiVax™ has demonstrated both 100% protection in a preclinical model of lethal ricin exposure and stability up to 1 year at 40 degrees Celsius (104 degrees Fahrenheit) facilitating storage and distribution at ambient temperature. RiVax™ is being developed as a safe and effective biodefense vaccine which does not require cold chain shipment and storage.

The RiVax™ project has been funded with Federal funds of up to $24.7 million over the next 6 years, if all contract options are exercised. The collaboration between Soligenix and IDT is specifically funded by Contract No. HHSN272201400039C from the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health (NIH).

"We are pleased to be working with Soligenix on the manufacture of thermostable RiVax™, supported by this contract from NIAID. We believe that IDT provides an excellent combination of manufacturing and vaccine expertise/capabilities to add to the Soligenix team to advance this critical program forward," stated Ralf Pfirmann, PhD, Chief Executive Officer, of IDT Biologika.

"This collaboration with IDT advances our effort to develop an effective, first-in-class vaccine against ricin toxin exposure in combination with our thermostabilization technology," stated Christopher J. Schaber, PhD, President and Chief Executive Officer of Soligenix. "Collaborating with NIAID and IDT is an important step in advancing the development of our ThermoVax® technology platform. Soligenix intends to use this innovative technology to develop a heat stable ricin toxin vaccine capable of achieving the goals of the US Government's Strategic National Stockpile program."

About Ricin Toxin

Ricin toxin is a plant toxin and potential biological weapon because of its stability, high potency, and availability as a by-product of castor oil production. Ricin comes in many forms like powder, mist, or pellet. Ricin can also be dissolved in water and other liquids. The US Centers for Disease Control and Prevention (CDC) estimates the lethal dose in humans is about the size of a grain of salt. Ricin toxin illness causes tissue necrosis and general organ failure leading to death within several days of exposure. Ricin is especially toxic when inhaled. Ricin works by getting inside the cells of the body and preventing the cells from making the proteins it needs. Without the proteins, cells die, which is eventually harmful to the whole body.

There are currently no effective treatments for ricin poisoning. The successful development of an effective vaccine against ricin toxin may act as a deterrent against the actual use of ricin as a biological weapon and could be used in rapid deployment scenarios in the event of a biological attack.

About RiVax™

RiVax™ is Soligenix's proprietary recombinant subunit vaccine developed to protect against exposure to ricin toxin. With RiVax™, Soligenix is a world leader in the area of ricin toxin vaccine research.

RiVax™ contains a genetically altered version of a RTA chain containing two mutations that inactivate the toxicity of the ricin molecule. A Phase 1A clinical trial was conducted with a formulation of RiVax™ that did not contain an adjuvant. This trial revealed dose dependent seroconversion as well as lack of toxicity of the molecule when administered intramuscularly to human volunteers. The adjuvant-free formulation of RiVax™ induced toxin neutralizing antibodies that lasted up to 127 days after the third vaccination in several individuals. To increase the longevity and magnitude of toxin neutralizing antibodies, RiVax™ was formulated with an adjuvant of aluminum salts (known colloquially as Alum) for a Phase 1B clinical trial. Alum is an adjuvant that is used in many human vaccines, including most vaccines used in infants. The results of the Phase 1B study indicated that Alum-adjuvanted RiVax™ was safe and well tolerated, and induced greater ricin neutralizing antibody levels in humans than adjuvant-free RiVax™. In preclinical animal studies, the Alum

formulation of RiVax™ also induced higher titers and longer lasting antibodies than the adjuvant-free vaccine. Vaccination with the Alum-adjuvanted RiVax™ formulation in a large animal model provided 100% protection ($p<0.0001$) against acute exposure to aerosolized ricin, the most lethal route of exposure for ricin. The protected animals also had no signs of gross lung damage, a serious and enduring ramification with long-term consequences for survivors of ricin exposure.

The development of RiVax™ has been sponsored through a series of grants and contracts from both the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health, and the FDA, which were granted to Soligenix and to the University of Texas Southwestern (UTSW) where the vaccine originated. To date, Soligenix and Dr. Ellen Vitetta and colleagues at UTSW have collectively received approximately $50 million in grant and contract funding from NIAID for development of RiVax™ and related vaccine technologies. RiVax™ would potentially be added to the Strategic National Stockpile and dispensed in the event of a terrorist attack.

About ThermoVax®

ThermoVax® is a technology that is designed to eliminate the standard cold chain production, distribution and storage logistics required for most vaccines. Cold chain requirements add considerable cost to the production and storage of current conventional vaccines. According to the Biopharma Cold Chain Sourcebook of 2010, more than 90% of all vaccines (with a total value of $20.6 billion) require shipment through cold chain. Elimination of the cold chain would also enhance the utility of these vaccines for emerging markets and for other applications requiring but lacking reliable cold chain capabilities. Further, the World Health Organization (WHO) reports that as much as 50% of all global vaccine doses are wasted due, in part, to excursions outside required temperature ranges. NIAID has also highlighted the priority of technologies for biodefense vaccines that focus on broad spectrum approaches including vaccine adjuvants and temperature stabilization for long shelf life, rapid onset of immunity, and surge capacity for production. For vaccines that are intended for long-term stockpiling, such as for use in biodefense or in pandemic situations, the utilization of ThermoVax® has the potential to facilitate easier storage and distribution of strategic national stockpile vaccines in emergency situations.

The technology utilizes precise lyophilization of protein immunogens with conventional aluminum adjuvants in combination with secondary adjuvants for rapid onset of protective immunity with the fewest number of vaccinations. RiVax™ is extremely labile in liquid form requiring careful management under refrigerated conditions at 4 degrees Celsius (39 degrees Fahrenheit). By employing ThermoVax® during the final formulation, it is possible to produce stable and potent vaccines that are capable of withstanding temperatures at least as high as 40 degrees Celsius (104 degrees Fahrenheit) for up to one year.

The underlying technology has been developed by Drs. John Carpenter and Theodore Randolph at the University of Colorado.

About IDT Biologika

IDT Biologika is an innovative life science company headquartered in Dessau, Germany with extensive expertise in research, development and manufacturing of vaccines, and in addition providing fill, finish and packaging services for antibodies and proteins. It has expanded its longstanding activity in vaccine development for Phase 1 and Phase 2 clinical projects for the human vaccine market through its recently acquired Rockville, Maryland, USA facility. The company also operates vaccine development and manufacturing facilities in Riems, Germany and Cambridge, Canada and sales offices for its own animal health vaccines and biologics product portfolio in Denmark, the Netherlands, France, Spain, China and Canada. IDT Biologika is a portfolio company of the Klocke Group. The Klocke portfolio companies specialize in contract manufacturing and packaging of pharmaceuticals and cosmetic products. More information can be found at www.idt-biologika.com.

About Soligenix, Inc.

Soligenix is a late-stage biopharmaceutical company focused on developing and commercializing products to treat rare diseases where there is an unmet medical need. Our BioTherapeutics business segment is developing SGX301 as a novel photodynamic therapy utilizing safe visible light for the treatment of cutaneous T-cell lymphoma, our first-in-class innate defense regulator (IDR) technology, dusquetide (SGX942) for the treatment of oral mucositis in head and neck cancer, and proprietary formulations of oral beclomethasone 17,21-dipropionate (BDP) for the prevention/treatment of gastrointestinal (GI) disorders characterized by severe inflammation including pediatric Crohn's disease (SGX203) and acute radiation enteritis (SGX201).

Our Vaccines/BioDefense business segment includes active development programs for RiVax™, our ricin toxin vaccine candidate, OrbeShield®, our GI acute radiation syndrome therapeutic candidate and SGX943, our melioidosis therapeutic candidate. The development of our vaccine programs incorporates the use of our proprietary heat stabilization platform technology, known as ThermoVax®. Currently, this business segment is

supported with government grant and contract funding from the National Institute of Allergy and Infectious Diseases (NIAID) and the Biomedical Advanced Research and Development Authority (BARDA).

For further information regarding Soligenix, Inc., please visit the Company's website at www.soligenix.com.

This press release may contain forward-looking statements that reflect Soligenix, Inc.'s current expectations about its future results, performance, prospects and opportunities, including but not limited to, potential market sizes, patient populations and clinical trial enrollment. Statements that are not historical facts, such as "anticipates," "estimates," "believes," "hopes," "intends," "plans," "expects," "goal," "may," "suggest," "will," "potential," or similar expressions, are forward-looking statements. These statements are subject to a number of risks, uncertainties and other factors that could cause actual events or results in future periods to differ materially from what is expressed in, or implied by, these statements. Soligenix cannot assure you that it will be able to successfully develop, achieve regulatory approval for or commercialize products based on its technologies, particularly in light of the significant uncertainty inherent in developing therapeutics and vaccines against bioterror threats, conducting preclinical and clinical trials of therapeutics and vaccines, obtaining regulatory approvals and manufacturing therapeutics and vaccines, that product development and commercialization efforts will not be reduced or discontinued due to difficulties or delays in clinical trials or due to lack of progress or positive results from research and development efforts, that it will be able to successfully obtain any further funding to support product development and commercialization efforts, including grants and awards, maintain its existing grants which are subject to performance requirements, enter into any biodefense procurement contracts with the US Government or other countries, that it will be able to compete with larger and better financed competitors in the biotechnology industry, that changes in health care practice, third party reimbursement limitations and Federal and/or state health care reform initiatives will not negatively affect its business, or that the US Congress may not pass any legislation that would provide additional funding for the Project BioShield program. These and other risk factors are described from time to time in filings with the Securities and Exchange Commission, including, but not limited to, Soligenix's reports on Forms 10-Q and 10-K. Unless required by law, Soligenix assumes no obligation to update or revise any forward-looking statements as a result of new information or future events.
