

Praesens Foundation, Institut Pasteur, Institut Pasteur de Dakar, University of Nebraska Medical Center, Twist Bioscience Consortium Win Prix Galien MedStartUp Award

October 24, 2019

-- Consortium Developed an Integrated Solution for Better Preparedness and Faster Response to Outbreaks and Epidemics in High-Risk Areas --

BRUSSELS & PARIS & SOUTH SAN FRANCISCO, Calif. & OMAHA, Neb.--(BUSINESS WIRE)--Oct. 24, 2019-- The Praesens Foundation, the Institut Pasteur, the Institut Pasteur de Dakar, University of Nebraska Medical Center and Twist Bioscience Corporation (NASDAQ: TWST) today announced that the consortium is the winner of the Prix Galien MedStartUp award in the category: 'Best Collaboration Dedicated to the Developing or Underserved Populations Worldwide'. The consortium works together to develop, quantify and scale up a range of innovative solutions on the continent of Africa to ensure better preparedness and response to infectious disease outbreaks. This includes assays to rapidly identify pathogens developed for and by low and middle income countries that are not necessarily addressed by the traditional diagnostic players and will benefit the communities that need it most.

"Past and recent disease outbreaks of Ebola, SARS, MERS-CoV, Zika and Dengue, have shown that infectious diseases continue to affect many lives while also representing social, economic, and national security threats that can quickly evolve into global health crises¹, causing major human suffering and imposing enormous economic damage," said Dr. Rudi Pauwels, Founder and President of Praesens Foundation. "A case in point was the 2014-2016 Ebola outbreak in West Africa that cost \$32.6 billion and resulted in the loss of 11,000 lives²."

Based on field observations, the Praesens Foundation together with Institut Pasteur de Dakar developed a Mobile Biosafety Lab, which aims to provide an innovative and open platform for the immediate detection and identification of pathogens in clinical samples of patients living in hard to reach regions with very limited to non-existent healthcare infrastructure. The Mobile Biosafety Lab can easily be moved and redeployed between different sites, avoiding transportation of infectious clinical samples to centralized laboratories which is useful during an epidemic investigation or when conducting surveillance campaigns as proven in the field for over two years in Senegal.

It is important to identify outbreaks as early as possible in order to decrease the burden on the healthcare system and the local economy. Globalization has connected the world but has also increased the spread of infectious disease making it crucial to adopt a syndromic approach to detect and differentiate both known and unknown pathogens and co-infections in clinical settings while safeguarding the affordability & access of these assays to the communities who need it most.

"Using the commercially available pan viral panel capable of detecting approximately 800 different viruses provides an economical and practical approach for identifying potential epidemics and outbreaks worldwide. Due to the uniformity and sensitivity of the custom DNA capture panels, we have been able to efficiently trace the spread of disease and the pattern of mutation for several different viral outbreaks," stated Michael Wiley, Ph.D., Assistant Professor at the University of Nebraska Medical Center, College of Public Health.

"The Twist Pan-Viral Panel has been used to expedite and consolidate the process of disease identification and patient tracking to help characterize the viruses causing outbreaks," said Emily M. Leproust, Ph.D., CEO and co-founder of Twist Bioscience. "Some examples include the Institut Pasteur de Dakar, Senegal, Noguchi Memorial Institute for Medical Research in Accra, Ghana, and Institut National de Recherche Biomédicale in Kinshasa, Democratic Republic of the Congo among others. We are pleased to partner with this incredible group as a critical part of the solution to the growing healthcare and financial burden of outbreaks and epidemics."

"The research conducted at the Institut Pasteur, and within its international network, unravels the fundamental mechanisms of life, advances scientific knowledge and leads to cutting-edge medical applications. Through its multidisciplinary and transversal approach to research, it promotes discovery and innovation," said Dr. Isabelle Buckle, Executive Vice President, Technology Transfer and Industrial Partnerships for the Institut Pasteur. "Combining all these technologies and competences into one integrated solution, based on a decentralized approach with complementary qualitative diagnostic tools ranging from low-cost rapid diagnostic tests to point-of-care in both fixed and mobile diagnostic capabilities, will meet the local needs and ultimately benefit the patients."

About the Prix Galien - MedStartUp Prize

Co-founded by the Galien Foundation and Business France, the Prix Galien – MedStartUp encourages and rewards the most promising startups in healthcare formed through international partnerships. The program brings together innovators and stakeholders to facilitate rapid adoption and encourages the diffusion of new technologies to improve the state of human health.

About Business France

Business France is the national agency supporting the international development of the French economy, responsible for fostering export growth by French businesses, as well as promoting and facilitating international investment in France. It promotes France's companies, business image and nationwide attractiveness as an investment location, and runs the "VIE" international internship program.

Founded on January 1, 2015 through a merger between UBIFRANCE and the Invest in France Agency, Business France has 1,500 personnel, both in France and in 70 countries throughout the world, who work with a network of public- and private-sector partners. www.businessfrance.fr

About the Galien Foundation

The Galien Foundation fosters, recognizes and rewards excellence in scientific innovation to improve the state of human health. Our vision is to be the catalyst for the development of the next generation of innovative treatment and technologies that will impact human health and save lives.

The Foundation oversees and directs activities in the USA for the Prix Galien, an international award that recognizes outstanding achievements in improving the human condition through the development of innovative therapies. The Prix Galien was created in France in 1970 in honor of Galen, the father of medical science and modern pharmacology. Worldwide, the Prix Galien is regarded as the equivalent of the Nobel Prize in biopharmaceutical and medical technology research.

For more information, visit www.galienfoundation.org.

About the University of Nebraska Medical Center

We are <u>Nebraska Medicine</u> and <u>UNMC</u>. Our mission is to lead the world in transforming lives to create a healthy future for all individuals and communities through premier educational programs, innovative research and extraordinary patient care.

About Twist Bioscience Corporation

Twist Bioscience is a leading and rapidly growing synthetic biology company that has developed a disruptive DNA synthesis platform to industrialize the engineering of biology. The core of the platform is a proprietary technology that pioneers a new method of manufacturing synthetic DNA by "writing" DNA on a silicon chip. Twist is leveraging its unique technology to manufacture a broad range of synthetic DNA-based products, including synthetic genes, tools for next-generation sequencing (NGS) preparation, and antibody libraries for drug discovery and development. Twist is also pursuing longer-term opportunities in digital data storage in DNA and biologics drug discovery. Twist makes products for use across many industries including healthcare, industrial chemicals, agriculture and academic research.

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Twist Bioscience's products are for Research Use Only. Any diagnostic applications of Twist Bioscience products must be conducted by an approved genomics laboratory meeting any applicable laws and governmental regulatory requirements

About Praesens Foundation

Praesens Foundation created by biotech entrepreneur Dr. Rudi Pauwels aims to develop, provide and implement the use of integrated solutions to improve rapid response capabilities and surveillance in areas regularly affected by infectious diseases.

Based on field observations of local needs and driven by a system-focused approach, it developed a connected and autonomous, truck-based, mobile biosafety laboratory (MBS-Lab) that includes an isolator for safe handling of biological and clinical samples and a range of innovative diagnostic tools. The MBS-Lab aims to provide an innovative and open platform for the immediate detection and identification of pathogens in clinical samples of patients, including those who live in hard-to-reach regions with very limited to non-existent healthcare infrastructure.

For more information, visit: www.praesensfoundation.org

About the Institut Pasteur and the Institut Pasteur International Network

The Institut Pasteur, a non-profit foundation with recognized charitable status set up by Louis Pasteur in 1887, is today an internationally renowned center for biomedical research with a network of 32 institutes worldwide. In the pursuit of its mission to prevent and control diseases in France and throughout the world, the Institut Pasteur operates in four main areas: research, public health, education and training, and development of research applications. More than 2,700 people work on its Paris campus. The Institut Pasteur is a globally recognized leader in infectious diseases, microbiology, and immunology. Other avenues of investigation include cancer, genetic and neurodegenerative diseases, genomics and developmental biology. This research aims to expand our knowledge of the living world in a bid to lay the foundations for new prevention strategies and novel therapeutics. Since its inception, 10 Institut Pasteur scientists have been awarded the Nobel Prize for Medicine, including two in 2008 for the 1983 discovery of the human immunodeficiency virus (HIV) that causes AIDS.

www.pasteur.fr/en

Legal Notice Regarding Forward-Looking Statements

This press release contains forward-looking statements. All statements other than statements of historical facts contained herein are forward-looking statements reflecting the current beliefs and expectations of management made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, including, but not limited to, delivery on Twist's mission to improve healthcare and sustainability through synthetic DNA. Such forward-looking statements involve known and unknown risks, uncertainties, and other important factors that may cause Twist Bioscience's actual results, performance, or achievements to be materially different from any future results, performance, or achievements expressed or implied by the forward-looking statements. Such risks and uncertainties include, among others, the risks and uncertainties of the ability to attract new customers and retain and grow sales from existing customers; risks and uncertainties of rapidly changing technologies and extensive competition in synthetic biology could make the products Twist Bioscience is developing obsolete or non-competitive; uncertainties of the retention of a significant customer; risks of third party claims alleging infringement of patents and proprietary rights or seeking to invalidate Twist Bioscience's patents or proprietary rights; and the risk that Twist Bioscience's proprietary rights may be insufficient to protect its technologies. For a further description of the risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to Twist Bioscience's business in general, see Twist Bioscience's risk factors set forth in Twist Bioscience's Annual Report on Form 10-K filed with the Securities and Exchange Commission on December 20, 2018 relating to its initial public offering of common stock. Any forward-looking statements contained in this press release speak only as of the date hereof, and Twist Bioscience specifically disclaims any

¹ Nii-Trebi NI. Emerging and Neglected Infectious Diseases: Insights, Advances, and Challenges. Biomed Res Int. 2017;2017:5245021.

² Africa Union's Peace and Security Council discuss public health threats to the Continent Urge integration of effective public health strategies in the

African Union Peace and Security Architecture | African Union [Internet]. [cited 2019 Mar 14]. Available from: https://au.int/en/pressreleases/20180118 <a href="https:

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