Twist Bioscience Announces Synthetic DNA Biosecurity Publication in Frontiers

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-- Peer-Reviewed Publication Details Next Steps for Access to Safe, Secure DNA Synthesis --

SAN FRANCISCO--(BUSINESS WIRE)--Apr. 25, 2019-- Twist Bioscience Corporation (NASDAQ: TWST), a company enabling customers to succeed through its offering of high-quality synthetic DNA using its silicon platform, today announced a new biosecurity publication titled 'Next Steps for Access to Safe, Secure DNA Synthesis', highlighting specific steps, in part derived from successes in the cybersecurity community, that ensure DNA synthesis screening (screening both the sequence and the customer) stays well ahead of emerging challenges and continues to enable responsible research advances. The publication was featured in *Frontiers in Bioengineering and Biotechnology,* an open-access, peer-reviewed publication.

"Manufacturing synthetic DNA at increased scale and complexity holds tremendous promise to advance the progress in the grand challenges facing our world," said Emily M. Leproust, Ph.D., CEO and co-founder of Twist Bioscience. "At the same time, we believe that this opportunity comes with a responsibility to build and operate a comprehensive biosecurity program to support responsible research and reduce risk, as well as engage with the global biosecurity community to plan for future challenges."

Adding to the ongoing biosecurity screening of sequences and customers Twist implements for all incoming orders, the publication encourages the synthetic biology community as a whole to conduct the following activities:

- Red teaming: hiring an expert group to identify vulnerabilities in internal biosecurity screening systems, similar to a third-party audit;
- Screening oligo-length sequences: as the availability of large quantities of short DNA increases, the publication posits these, too, should be subject to screening (currently, guidance calls for all sequences over 200 base pairs to be screened);
- Shared responsibility for assessing risk through research funding by governments and institutions;
- Democratizing access to sequence screening across large and small organizations through open source software algorithms and data sources to improve accuracy and affordability to carry out screening; and
- Continuing to raise awareness of biosecurity best practices including 'know your customer' from the 2010 Health and Human Services Screening Framework Guidance for Providers of Synthetic Double-Stranded DNA.

The full text of the publication can be viewed here.

"We believe that, together, this multifaceted approach to advance technology, policy, education and social environments will ensure screening and security practices scale - in terms of the rapidly growing number of global synthesis requests as well as evolving with increasing knowledge of biological systems and functional components – and will help guard against potential misuse," commented James Diggans, Ph.D., director of bioinformatics and biosecurity for Twist Bioscience.

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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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, the potential promise of Twist Bioscience's manufacturing synthetic DNA at increased scale and complexity. 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 and Twist Bioscience's Form 10-Q for the quarter ended December 31, 2018 filed with the Securities and Exchange Commission on February 11, 2019. Any forward-looking statements contained in this press release speak only as of the date hereof, and Twist Bioscience specifically disclaims any obligation to update any forward-looking statement, whether as a result of new information, future events or otherwise.

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