Twist Bioscience Announces Microsoft Purchase of its Synthetic DNA for Digital Data Storage Research

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— Company to Provide Ten Million Long Oligonucleotides for Encoding Digital Data —

SAN FRANCISCO, Calif. – April 27, 2016 – Twist Bioscience, a company accelerating science and innovation through rapid, high-quality DNA synthesis, today announced Microsoft Corp. has agreed to purchase ten million long oligonucleotides from Twist Bioscience to encode digital data.

"Today, the vast majority of digital data is stored on media that has a finite shelf life and periodically needs to be re-encoded. DNA is a promising storage media, as it has a known shelf life of several thousand years, offers a permanent storage format and can be read for continuously decreasing costs," commented Emily M. Leproust, Ph.D., CEO of Twist Bioscience. "Our silicon-based DNA synthesis platform offers unmatched scale and product quality that vastly accelerates the ability to write DNA at a cost enabling data storage. We are thrilled to work with Microsoft, and University of Washington researchers, to address the growing challenge of digital data storage."

"As our digital data continues to expand exponentially, we need new methods for long-term, secure data storage," said Doug Carmean, a Microsoft partner architect within the company's Technology and Research organization. "The initial test phase with Twist demonstrated that we could encode and recover 100 percent of the digital data from synthetic DNA. We're still years away from a commercially- viable product, but our early tests with Twist demonstrate that in the future we'll be able to substantially increase the density and durability of data storage."

Using DNA for Digital Data Storage

The quantity of digital data is doubling approximately every two years yet the ability to store this data is not keeping pace. There is a drastic need for a new storage medium that effectively and accurately stores data. The recent convergence of affordable DNA sequencing and the scalability of Twist Bioscience's silicon-based DNA synthesis technique presents a new opportunity enabling the oldest lifeform, DNA, to become a viable data storage option. Using DNA as an archival technology avoids two key limitations of traditional digital storage media: limited lifespan and low data density. DNA data storage could last up to 2,000 years without deterioration according to a recent presentation at the American Chemical Society. In addition, a single gram of DNA can store almost a one trillion gigabytes (almost a zettabyte) of digital data.

About Twist Bioscience

At Twist Bioscience, our expertise is accelerating science and innovation by leveraging the power of scale. We have developed a proprietary semiconductor-based synthetic DNA manufacturing process featuring a 10,000-well silicon platform capable of producing synthetic biology tools, including genes, oligonucleotide pools and variant libraries. By synthesizing DNA on silicon instead of on traditional 96-well plastic plates, our platform overcomes the current inefficiencies of synthetic DNA production, and enables cost-effective, rapid, high-quality and high throughput synthetic gene production, which in turn, expedites the design, build, test cycle to enable personalized medicines, pharmaceuticals, sustainable chemical production, improved agriculture production, diagnostics, biodetection and data storage. For more information, please visit www.twistbioscience.com. Twist Bioscience is on Twitter. Sign up to follow our Twitter feed @TwistBioscience at https://twitter.com/TwistBioscience.

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