Collaboration of Four Biotech Companies Showcases High Throughput DNA Assembly Platform for Diverse Applications

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SEATTLE & SAN FRANCISCO--(BUSINESS WIRE)--May 23, 2019-- Arzeda, the Protein Design Company™,Twist Bioscience Corporation (Nasdaq: TWST), TeselaGen Biotechnology Inc. and Labcyte Inc. have partnered to showcase a state-of-the-art DNA assembly platform, inviting fellow researchers to learn from their experience. The companies plan to host an event at Arzeda's headquarters in Seattle on Thursday, May 30th where they will demonstrate several tangible examples of how the integrated platform accelerated development of various products including a food and beverage sweetener as well as a key component in the next generation of plexiglass.

The event, which is open to the public, will feature talks from leaders of each company as well as several demonstrations by Arzeda team members, aimed at educating attendees on how the platform transformed Arzeda's DNA construction. The platform can be adapted to other research environments and in turn can be a powerful tool for others in the industry to increase throughput and manufacturing speed while reducing production costs.

Arzeda will showcase several pilot examples of the platform including the following: Arzeda's DNA assembly platform was used to construct 822 plasmids encoding novel enzymes that were computationally designed to produce a new-to-market acrylate that could be used in the next generation of plexiglass and other industrial materials. The costs associated with constructing the plasmids were reduced by nearly 10-fold and the turnaround time decreased by 25 percent. Subsequent platform improvements have continued to reduce costs and turnaround times for other ongoing projects.

“Our Genetic Design-Build team at Arzeda established a high-throughput DNA assembly platform which integrates Arzeda’s genetic design software Scribe™, Twist’s high-quality DNA gene fragments, Labcyte’s Echo® acoustic liquid handler and TeselaGen’s automated DNA assembly design software and LIMS – in just six months,” said Alexandre Zanghellini, Ph.D., CEO of Arzeda. “We have identified exceptional partners in Twist, TeselaGen and Labcyte that allow us to demonstrate that Arzeda’s protein design platform, beginning with our core technology of computational protein design and integrating downstream with high-throughput DNA construction and protein analytics, is much greater than the sum of its individual parts.”

The integrated platform supports the high-throughput testing of Arzeda’s computationally designed proteins and enzymes. After the proteins are designed, Arzeda proprietary genetic design software Scribe™ automatically encodes them into DNA. The resulting DNA sequences are then imported into TeselaGen’s Synthetic Evolution™ DESIGN software to automate the DNA assembly design process and determine the exact DNA fragments to be synthesized. TeselaGen’s software will soon be integrated with Twist’s API ordering system for seamless DNA ordering at scale. After the DNA is made by Twist and received, TeselaGen’s BUILD application automatically generates worklist instructions for the Echo Liquid Handler to perform the DNA assembly at miniaturized reaction volumes, reducing the use of expensive reagents.

“We are building a system that allows you to go from mind to molecule very easily -- we help our clients move an idea for a bio-based product out of their heads and into their hands quickly and efficiently,” said Mike Fero, Ph.D., founder and CEO of TeselaGen. “There are a number of attributes in our system -- automated protocol generation, interfaces to robots, automated data acquisition rather than by-hand data input, and continuously updated machine learning models -- that improve the process and optimize the end product.”

"This collaboration of four leading companies in synthetic biology is a perfect example of how Twist works in service of our customers, providing large amounts of DNA rapidly to remove the bottleneck of DNA synthesis to accelerate research and production," said Emily M. Leproust, Ph.D., CEO and cofounder of Twist Bioscience. "We appreciate playing an integral role in a collaborative platform - both of physical component parts for high-throughput DNA assembly and complementary organizations - working together to advance the field of synthetic biology, from industrial chemicals to healthcare to biomaterials."

“Collaborating with industry partners to bring innovative capabilities to our customers is an important focus for us,” said Randy Dyer, director of product marketing for Labcyte. “By enabling high-speed, low-cost plasmid construction with the Echo Liquid Handler, synthetic biology researchers can accelerate laboratory workflows and produce high-quality DNA assemblies at the same time."

About Labcyte

Labcyte, now a part of Beckman Coulter Life Sciences, is revolutionizing liquid handling. Echo® Liquid Handlers use sound to precisely transfer liquids without contact, eliminating the use of pipettes. Labcyte instruments are used worldwide throughout the pharmaceutical and biotechnology industries, as well as by hospitals, service laboratories, contract research organizations, and academic institutions. Our customers work across a wide spectrum of scientific research, including drug discovery, genomics, proteomics, diagnostics and personalized medicine. Labcyte has 63 U.S. patents and others internationally. For more information, visit www.labcyte.com or www.beckman.com.

About TeselaGen

TeselaGen is building a deep learning-powered solution for rapid, precise and accurate DNA making and modification. TeselaGen's cloud-based enterprise platform bridges the gap between good ideas and the realization of valuable products like vaccines, biologic medicines, and sustainably sourced chemicals. Positioned at the intersection of design and biology, TeselaGen is applying forward engineering approaches to design, build and test in the biological realm. TeselaGen is privately held and is based in the software hub of San Francisco, CA. Follow TeselaGen on Twitter, and learn

more at teselagen.com.

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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About Arzeda

Since 2008 Arzeda, The Protein Design Company™, has harnessed the power of computational protein design to build novel enzymes and discover new pathways that enable cost effective, sustainable production of value-added specialty chemicals and ingredients. In partnership with Fortune 500 companies and industrial leaders, the company has developed a portfolio of proteins that increase the efficiency, robustness and diversity of biological processes. Our proprietary pathway design software unlocks new opportunities for specialty chemicals, advanced materials and health and nutrition products that would otherwise be impossible to exploit. More information is available at www.arzeda.com. Arzeda is on Twitter. Sign up to follow our Twitter feed @ArzedaCo at https://twitter.com/ArzedaCo.

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, 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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