Synlogic and Ginkgo Bioworks Announce Collaboration as First Step Toward Building an Unprecedented Discovery Engine for Novel Living Medicines in Neurological and Liver Disorders

December 8, 2017

Partnership IntegratesLiving Medicine Drug Discovery and Development Expertise withLeading Industrial-Scale Organism Engineering Applied to Therapeutics for the First Time

Companies Aim to Expand Portfolio of Novel, Probiotic-Based, Living Medicines with Additional Partners

BOSTON & CAMBRIDGE, Mass.--(BUSINESS WIRE)--Dec. 8, 2017-- Ginkgo Bioworks, the organism company, and Synlogic, Inc. (Nasdaq: SYBX), the clinical-stage drug discovery and development company developing novel Synthetic Biotic™ medicines, today announced a collaboration to discover new living medicines to treat neurological and liver disorders. Synthetic Biotic medicines are living medicines in which engineered probiotics are designed to perform critical metabolic conversions in the gut that can replace physiological activity missing or damaged in patients.

This press release features multimedia. View the full release here: http://www.businesswire.com/news/home/20171208005111/en/

Together, Synlogic and Ginkgo aim to transform the discovery and design of living medicines. Ginkgo's automated foundry and expertise in high-throughput organism screening and design, combined with Synlogic's insights and expertise in discovery, translational and clinical development of Synthetic Biotic medicines will enhance Synlogic's powerful drug discovery engine, enabling iteration through thousands of drug leads with great speed and precision. Synlogic's core expertise in building Synthetic Biotic medicines for clinically-relevant potency, quantitative pharmacology, dose response, and reproducible manufacturing will further accelerate the development of novel gut-based therapeutics.

"Combining synthetic biology and the microbiome to make living medicines is a novel, promising approach to developing treatments for a wide variety of conditions," said Jason Kelly, CEO of Ginkgo Bioworks. "We have applied our automated foundry to design organisms for a wide range of industries and are excited to leverage our platform for therapeutics development for the very first time. Synlogic is the perfect partner for us as we set out to pursue the challenge of designing living medicines."

This collaboration is the first step toward an anticipated broad effort to generate a portfolio of transformational living medicine drug leads. The focus of this collaboration will be combining optimization capabilities, establishing the working model behind the joint discovery engine, and generating drug leads. The parties expect to further collaborate to explore how their technologies can be used to treat a broad range of neurological and liver conditions. The companies will jointly seek strategic partners for portfolio expansion, clinical development, and commercialization in these disease areas.

"Our mission is to unlock the broad potential of Synthetic Biotic medicines and bring them to patients," said JC Gutiérrez-Ramos, Ph.D., Synlogic's president and CEO. "There is massive need among the approximately 100 million Americans suffering from neurological conditions and 30 million from liver disease. There is strong scientific evidence that neurologic conditions can be modulated by taking advantage of the natural cross talk between gut and the brain, a conversation that involves hundreds of well-characterized metabolites. In our first-in-human study to treat hyperammonemia, we demonstrated a pharmacological effect and dose responses on systemic metabolites with a Synthetic Biotic medicine that acts from the gut. As we observed this effect in non-human primates in our phenylketonuria program, we now have two examples in toxic encephalopathies of Synthetic Biotic medicines modifying metabolites through their programmed mechanisms while acting in different regions of the gut in human and non-human primates. We look forward to creating a powerful new drug discovery and development engine with Ginkgo to deliver Synthetic Biotic medicines to modulate metabolites that influence the brain and liver."

There is potential for both parties to further develop technology generated during the collaboration. Financial terms of the collaboration are not disclosed.

About Ginkgo Bioworks

Headquartered in Boston, Ginkgo Bioworks uses the most advanced technology on the planet – biology – to grow products instead of manufacturing them. The company's technology platform is bringing biotechnology into consumer goods markets, enabling fragrance, cosmetic, nutrition, food, agriculture and pharmaceuticals to make better products. For more information, visit www.ginkgobioworks.com.

About Synlogic

Synlogic is pioneering the development of a novel class of living, Synthetic Biotic medicines, based on its proprietary drug development platform. Synlogic's initial pipeline includes Synthetic Biotic medicines for the treatment of rare genetic diseases, such as urea cycle disorders (UCD) and phenylketonuria (PKU). In addition, the company is leveraging the broad potential of its platform to create Synthetic Biotic medicines for the treatment of more common diseases, including liver disease, inflammatory and immune disorders, and cancer. Synlogic is collaborating with AbbVie to develop Synthetic Biotic-based treatments for inflammatory bowel disease (IBD). For more information, please visit www.synlogictx.com.

Forward-Looking Statements

This press release contains “forward-looking statements” that involve substantial risks and uncertainties for purposes of the safe harbor provided by the Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical facts, included in this press release regarding strategy, future operations, future financial position, future revenue, projected expenses, prospects, plans and objectives of management are forward-looking statements. In addition, when or if used in this press release, the words “may,” “could,” “should,” “anticipate,” “believe,” “estimate,” “expect,” “intend,” “plan,” “predict” and similar expressions and their variants, as they relate to Synlogic may identify forward-looking statements. Examples of forward-looking statements, include, but are not limited to, statements regarding the potential of Synlogic’s and Ginkgo’s platforms to develop therapeutics to address a wide range of diseases, including neurological and liver disorders; the future clinical development of Synthetic Biotic medicines; the approach that Synlogic and Gingko are taking to discover and develop novel therapeutics using synthetic biology; the potential of Synlogic’s technology to treat hyperammonemia. Actual results could differ materially from those contained in any forward-looking statement as a result of various factors, including: the uncertainties inherent in the preclinical development process; the ability of Synlogic to protect its intellectual property rights; and legislative, regulatory, political and economic developments, as well as those risks identified under the heading “Risk Factors” in Synlogic’s filings with the SEC. The forward-looking statements contained in this press release reflect Synlogic’s current views with respect to future events. Synlogic anticipates that subsequent events and developments will cause its views to change. However, while Synlogic may elect to update these forward-looking statements in the future, Synlogic specifically disclaims any obligation to do so. These forward-looking statements should not be relied upon as representing Synlogic’s view as of any date subsequent to the date hereof.

View source version on businesswire.com: http://www.businesswire.com/news/home/20171208005111/en/

Source: Synlogic, Inc.

MEDIA CONTACTS:
Synlogic
Courtney Heath, 617-872-2462
courtney@scientpr.com
or
Bateman Group for Ginkgo Bioworks
Jordyn Lee
ginkgobioworks@bateman-group.com
or
INVESTOR CONTACT:
Synlogic
Elizabeth Wolffe, Ph.D., 617-207-5509
liz@synlogictx.com