



Synlogic Completes Merger with Mirna Therapeutics

August 28, 2017

- *Synlogic Commences Trading on NASDAQ Capital Market under Ticker Symbol "SYBX"*
- *Combined Company has Approximately \$100 Million in Cash and Cash Equivalents Following Transaction Close*
- *Company Strengthens Board of Directors with addition of Michael Powell, Ph.D., and Richard Shea*

CAMBRIDGE, Mass. & AUSTIN, Texas--(BUSINESS WIRE)--Aug. 28, 2017-- Synlogic, Inc. and Mirna Therapeutics, Inc. today announced that the proposed merger of the two companies has closed following the approval of Mirna's stockholders received on August 24, 2017. The merged company will operate as Synlogic, Inc. and will focus on advancing Synlogic's platform for development of Synthetic Biotic™ medicines, which are designed using synthetic biology to genetically reprogram probiotic bacteria to treat metabolic and inflammatory diseases and cancer. Synlogic will commence trading on the NASDAQ Capital Market today, August 28, 2017, under the ticker symbol "SYBX".

"The close of this merger, in combination with our recent financing, provides Synlogic with significant resources to move forward as a public company and realize our goal of developing a new class of living medicines that have the unique potential to compensate for dysfunctional pathways in serious diseases," said Jose Carlos Gutiérrez-Ramos, Ph.D., Synlogic's president and chief executive officer. "Earlier this year we initiated the first human clinical trial of our lead Synthetic Biotic investigational medicine for hyperammonemia, and in the first half of 2018 we expect to initiate clinical trials of a second Synthetic Biotic medicine candidate for the treatment of phenylketonuria (PKU). Our solid financial position enables us to continue to execute on advancing our novel development programs through the clinic to demonstrate the therapeutic potential of our Synthetic Biotic platform."

The combined company's cash and cash equivalents, as of immediately following the closing of the merger, is approximately \$100 million. This includes proceeds from a Series C financing that closed immediately prior to the signing of the merger agreement in which Synlogic raised approximately \$42 million from leading biotechnology investors, including Aju IB Investment, Ally Bridge Group, Arctic Aurora LifeScience, CLI Ventures, Perceptive Advisors, Rock Springs Capital, and other undisclosed new investors. Existing investors, Atlas Venture, Deerfield, New Enterprise Associates (NEA), and OrbiMed also participated in the financing. As a result of the closing of the merger, Synlogic stockholders and option holders own, or have rights to acquire, approximately 82 percent of the combined company, and former Mirna stockholders own approximately 18 percent of the combined company.

Appointment of New Members to Synlogic's Board of Directors

The company also announced today that Michael Powell, Ph.D., and Richard Shea will join the Synlogic Board of Directors.

"We are delighted to welcome Mike and Rick to Synlogic's Board," said Dr. Gutiérrez-Ramos. "Both bring a wealth of both operational and public company board experience in the pharmaceutical and biotechnology industries that will be invaluable as we advance our novel platform of Synthetic Biotic medicines through clinical studies."

Dr. Powell, who has been a General Partner of Sofinnova Ventures since 1997, served as the Chairman of the Mirna board of directors. Before joining Sofinnova, he was Group Leader of Drug Delivery at Genentech where his focus was developing new formulations for protein and peptide therapeutics. In 1987, he was part of the founding team of Cytel, serving as Director of Product Development, and before that was a scientist and project team leader at Syntex Research (Roche).

Dr. Powell received his Ph.D. in physical chemistry from the University of Toronto and completed post-doctoral work in bioorganic chemistry at the University of California, where he was subsequently a faculty member. He currently serves on the Board of Trustees of Washington University in St. Louis and as an adjunct professor of pharmaceutical chemistry at the University of Kansas. Dr. Powell will serve as Chairman of Synlogic's nominating and corporate governance committee and as a member of the audit committee.

Mr. Shea currently serves as Chief Financial Officer and Treasurer of Syndax Pharmaceuticals, Inc., and previously served as a member of its board of directors from January 2014 to February 2017. Prior to joining Syndax, he served in several key roles in publicly traded companies. This includes Senior Vice President and Chief Financial Officer of Momenta Pharmaceuticals Inc., and Chief Operating Officer and Chief Financial Officer of Variagenics Inc., a pharmacogenomics company. He was Vice President of Finance of Genetics Institute, Inc., which was acquired by Wyeth Pharmaceuticals, Inc. Mr. Shea received an A.B. from Princeton University and an M.B.A. from the Public Management Program at Boston University. Mr. Shea will serve as Chairman of Synlogic's audit committee.

About Synlogic's Lead Programs

In June 2017, Synlogic initiated a Phase 1 clinical trial in healthy volunteers to evaluate the safety and tolerability of SYN1020, which is being developed for the potential treatment of Urea Cycle Disorders (UCD) and hepatic encephalopathy (HE), both diseases where patients experience elevated ammonia levels that can have life-threatening consequences. Following potential success in the Phase 1 trial, the company plans to initiate additional clinical trials in patients by mid-2018.

Synlogic's second development candidate, SYN1618, is being developed for the treatment of Phenylketonuria (PKU), which is caused by defective

metabolism of the amino acid phenylalanine. The company's goal is to initiate a Phase 1 clinical trial of SYN1618 in the first half of 2018.

About Synthetic Biotic™ Medicines:

Synlogic's innovative new class of Synthetic Biotic medicines leverages the tools and principles of synthetic biology to genetically reengineer probiotic microbes to perform or deliver critical functions missing or damaged due to disease. The company's two lead programs target diseases known as inborn errors of metabolism. Patients with these rare metabolic diseases are born with a faulty gene, which inhibits the body's ability to break down commonly occurring by-products of digestion that then accumulate to toxic levels with serious health consequences. Delivered orally, Synthetic Biotic medicines are designed to act from the gut to compensate for the dysfunctional metabolic pathway and have a systemic effect, clearing toxic metabolites associated with specific metabolic diseases. Synthetic Biotic medicines have the potential to significantly improve the quality of life for affected patients.

About Synlogic™

Synlogic is pioneering the development of a novel class of living treatments, Synthetic 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 Disorder (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 Mirna, Synlogic or the management of either company, before or after the aforementioned merger, may identify forward-looking statements. Examples of forward-looking statements, include, but are not limited to, statements relating to expectations regarding the capitalization, resources and ownership structure of Synlogic; the approach Synlogic is taking to discover and develop novel therapeutics using synthetic biology; the adequacy of Synlogic's capital to support its future operations and its ability to successfully initiate and complete clinical trials; the nature, strategy and focus of Synlogic; the difficulty in predicting the time and cost of development of Synlogic's product candidates and Synlogic's executive and board structure. Actual results could differ materially from those contained in any forward-looking statement as a result of various factors, including, without limitation: unexpected costs, charges or expenses resulting from the transaction; potential adverse reactions or changes to business relationships resulting from the announcement or completion of the transaction; and legislative, regulatory, political and economic developments. The foregoing review of important factors that could cause actual events to differ from expectations should not be construed as exhaustive and should be read in conjunction with statements that are included herein and elsewhere, including the risk factors included in Synlogic's Registration Statement on Form S-4 (File No. 333-218885) and Synlogic's periodic reports filed with the SEC. Except as required by applicable law, Mirna and Synlogic undertake no obligation to revise or update any forward-looking statement, or to make any other forward-looking statements, whether as a result of new information, future events or otherwise.

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