Synlogic Discontinues Development of SYNB1020 to Treat Hyperammonemia

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– SYNB1020 well tolerated in Phase 1b/2a study, but did not lower blood ammonia in patients with cirrhosis –

– Company will focus resources on advancement of SYNB1618, SYNB1891 and new early development programs –

CAMBRIDGE, Mass.--(BUSINESS WIRE)--Aug. 20, 2019-- Synlogic, Inc., (Nasdaq: SYBX), a clinical stage company applying synthetic biology to beneficial microbes to develop novel, living medicines, today announced that it is discontinuing development of SYNB1020, an early stage clinical product candidate for the treatment of hyperammonemia. The decision to discontinue the program was based on top-line data from an interim analysis of a randomized, double-blind, placebo-controlled Phase 1b/2a study of the Synthetic Biotic medicine in 23 patients with cirrhosis and elevated blood ammonia. The study was designed to evaluate the safety and tolerability of SYNB1020 treatment, as well as changes in blood ammonia levels and several exploratory endpoints associated with early stage hepatic encephalopathy (HE). SYNB1020 was well tolerated in patients with cirrhosis. Plasma and urinary nitrate increased in subjects treated with SYNB1020, indicating that the strain was active, but there was no evidence of blood ammonia lowering or changes in other exploratory endpoints relative to placebo.

"We are disappointed that results from our Phase 1b/2a study of SYNB1020 did not demonstrate an activity profile in ammonia lowering that warranted continued development of the program. We would like to thank the patients and investigators who participated in the clinical trial and contributed to this research," said Aoife Brennan, M.B., B.Ch., Synlogic's president and chief executive officer. "Moving forward, we will focus our resources on advancement of SYNB1618 for the treatment of phenylketonuria, SYNB1891 for the treatment of solid tumors and several new programs in early development."

Detailed results of the Phase 1b/2a study are expected to be presented at a future scientific or medical conference.

About Synlogic's Phase 1b/2a Trial of SYNB1020 in Patients with Cirrhosis

The study had two parts. First, an initial sentinel open-label cohort of six subjects with cirrhosis and a Model for End-Stage Liver Disease (MELD) score < 12 received orally administered SYNB1020 (5×10^{11} CFU TID) for six days. Subjects were admitted to an inpatient facility for a run-in diet, baseline assessments, safety monitoring, and collection of blood, urine, and fecal samples for the evaluation of safety, tolerability, pharmacokinetics and pharmacodynamics of treatment. The safety data were reviewed by a safety data monitoring committee and the second part of the trial was opened for enrollment.

The second part of the trial comprised a randomized, double-blinded, placebo-controlled study in patients with cirrhosis and hyperammonemia. Eligible subjects were admitted to an inpatient facility for a run-in diet period of five days and 24-hour ammonia profile (AUC), and those subjects with elevated plasma ammonia levels were randomized and received either placebo or orally administered SYNB1020 (5×10^{11} CFU TID) for six days. A total of 17 subjects entered Part 2 of the trial of which, eight subjects received placebo. The primary endpoint of the study was safety and tolerability. In addition, the study evaluated the effect of SYNB1020 administration on plasma ammonia levels as well as other exploratory endpoints, including levels of inflammatory markers IL-6, TNF-alpha, and endotoxin, and psychometric hepatic encephalopathy score (PHES).

About Synlogic
Synlogic is pioneering the development of a novel class of living medicines, Synthetic Biotic medicines, based on its proprietary drug development platform. Synlogic leverages the tools and principles of synthetic biology to genetically engineer probiotic microbes to perform or deliver critical functions missing or damaged due to disease. The company's lead program, SYNB1618, targets phenylketonuria (PKU). When delivered orally, Synthetic Biotic medicines can act from the gut to compensate for the dysfunctional metabolic pathway and have a systemic effect, with the potential to significantly improve symptoms of disease for affected patients. In addition, the company is developing SYNB1891 as an immunostimulatory approach for the treatment of advanced solid tumors. Further, the company is leveraging the broad potential of its platform to create Synthetic Biotic medicines for the treatment of other more common diseases, including inflammatory and immune disorders. 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, including statements regarding Synlogic's plans and expectations for the development of SYNB1020 and its other product candidates. 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 platform to develop therapeutics to address a wide range of diseases including: cancer, inborn errors of metabolism and inflammatory and immune disorders; the future clinical development of Synthetic Biotic medicines; the approach Synlogic is taking to discover and develop novel therapeutics using synthetic biology; and the expected timing of Synlogic's clinical trials and availability of clinical trial data. 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.

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