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BiomX Licenses Novel Targets for Liver Disease Phage Therapy Program From JSR Corporation in Japan

Bacterial targets licensed were discovered by Professor Takanori Kanai of Keio University School of Medicine

Targets potentially affect progression of Primary Sclerosing Cholangitis, an orphan, terminal liver disease

NESS ZIONA, Israel, June 11, 2019 /PRNewswire/ -- [BiomX Ltd.](#), a microbiome company developing both natural and engineered phage therapies, today announced it has licensed a new set of bacterial targets from JSR Corporation, for the development and commercialization of phage therapies for Primary Sclerosing Cholangitis (PSC), an orphan liver disease. While studying intestinal barrier dysfunction implicated in the pathogenesis of PSC, Dr. Takanori Kanai, Professor of Department of Internal Medicine Division of Gastroenterology and Hepatology at Keio University School of Medicine and his research team discovered in the microbiome of patients with PSC specific strains of *Klebsiella pneumoniae* (*Kp*) that disrupt the epithelial barrier. The presence of those strains triggers additional bacterial translocation and liver inflammatory responses. The results of this study were recently published in [Nature Microbiology](#).



"Our study identified disease-modulating pathobionts from patients with PSC. One of the key functions of these pathobionts is to disrupt the intestinal epithelial barrier and cause a 'leaky gut'," said Professor Kanai. "Strain specific bacterial targeting techniques, such as BiomX's phage therapy, have the potential to eradicate these harmful bacteria and possibly treat PSC at its root cause."

Using its advanced discovery and development capabilities in phage therapy, BiomX discovered phage that eradicate the pathogenic strains and is developing a customized phage cocktail as a therapeutic for PSC.

"This is our second collaboration with JSR Corporation, accessing groundbreaking microbiome research conducted at Keio University School of Medicine," said Jonathan Solomon, CEO of BiomX. "Our previous collaboration with JSR and Keio University School

of Medicine yielded the lead target for our inflammatory bowel disease program. Phage therapy is an optimal treatment option in this case, allowing long term treatment specifically targeting the pathogenic driver in this chronic disease, without harming the beneficial gut microbiome. We look forward to rapidly advancing this program for the treatment of PSC, a disease for which there are no approved therapies."

About Primary Sclerosing Cholangitis (PSC)

PSC is a rare progressive disease of the liver, characterized by inflammation and damage to hepatic bile ducts, leading to fibrosis and ultimately liver failure, cirrhosis and an increased risk of cancer. Disease symptoms commonly include fatigue, pruritus, jaundice, and/or skin lesions. There is currently no effective medical therapy for PSC and the majority of patients will eventually require liver transplantation. Median survival without liver transplantation after diagnosis is 10 to 12 years. There are estimated to be approximately 230,000 PSC patients worldwide with approximately 45,000 cases in the US (3,000 new cases identified each year) and a similar number in Western Europe.

About JSR Corporation

From synthetic rubbers for tires to materials for the semiconductor, display and the life sciences industries, materials created by JSR play an important role in almost every aspect of daily life. JSR has continuously expanded its business by leveraging its proprietary polymer technologies. JSR-Keio University Medical and Chemical Innovation Center (JKiC), a joint research facility, opened in October 2017 to create innovation through investigating the wholly novel concept of fusing medicine and chemistry to establish practical technologies that contribute to global society with people live long and healthy lives.

About BiomX

BiomX is a microbiome drug discovery company developing both natural and engineered phage therapies that target and destroy harmful bacteria in chronic diseases such as inflammatory bowel disease (IBD) and cancer. We discover and validate proprietary bacterial targets and customize our phage compositions against these targets.

www.biomx.com

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