BIOVERATIV AND BICYCLE THERAPEUTICS ENTER INTO STRATEGIC RESEARCH COLLABORATION TO DEVELOP THERAPIES FOR HEMOPHILIA AND SICKLE CELL DISEASE

Bicycle to receive an upfront payment of $10 million, with potential for future milestones

WALTHAM, Mass. and CAMBRIDGE, U.K., September 6, 2017 – Bioverativ Inc. (NASDAQ: BIVV), a global biotechnology company focused on the discovery, development and commercialization of innovative therapies for hemophilia and other rare blood disorders, and Bicycle Therapeutics Ltd., a biotechnology company pioneering a new class of therapeutics based on its proprietary bicyclic peptide (*Bicycle*®) product platform, today announced a research collaboration focused on the discovery, development and commercialization of innovative therapies for hemophilia and sickle cell disease.

The collaboration will seek to identify and develop *Bicycles* to treat rare blood disorders. *Bicycles* are a new therapeutic modality that combine attributes of antibodies, small molecules and peptides within one molecule, enabling high selectivity and affinity while simultaneously being able to penetrate and bind to the target(s) of interest within the body.

Bicycle Therapeutics will be responsible for leading initial discovery activities through lead optimization to candidate selection for two programs. Bioverativ will lead preclinical and clinical development, as well as subsequent marketing and commercialization. Bioverativ will reimburse Bicycle for internal and external program-related costs.

Upon execution of the agreement, Bicycle will receive a $10 million upfront payment and near-term research and development funding of $4.2 million. Bicycle is eligible to receive up to $410 million related to development, regulatory and commercialization milestones for products planned under the two programs, as well as tiered single to low double-digit royalties related to product sales. Additional terms of the transaction are not being disclosed.

"We are constantly exploring new ways to do innovative science to find new molecules that can advance the care of people living with rare blood disorders," said Tim Harris, Ph.D., D.Sc., Executive Vice President of Research and Development at Bioverativ. "This collaboration offers a unique opportunity to identify an entirely new therapeutic modality that may lead to meaningful new treatments and outcomes for people living with hemophilia and sickle cell disease. We are delighted to be working with Bicycle to pursue our shared goal of creating progress for patients with great unmet treatment needs."

"We believe our *Bicycle* platform has extremely broad therapeutic potential and we are excited to work with Bioverativ, a standout leader in the hematology field, to explore *Bicycles* in this important area of clinical need," said Kevin Lee, Chief Executive Officer of Bicycle Therapeutics. "Combining Bioverativ's deep expertise in hematology with our powerful platform offers great promise for the development of novel, targeted therapies for patients. This alliance provides the latest validation of our *Bicycle* platform and furthers our strategy to evaluate its potential in a wide range of new disease areas."

About Bioverativ

Bioverativ is a global biotechnology company dedicated to transforming the lives of people with hemophilia and other rare blood disorders through world-class research, development and commercialization of innovative therapies. Launched in 2017 following separation from Biogen Inc., Bioverativ builds upon a strong heritage of scientific innovation and is committed to actively working with the blood disorders community. The company's mission is to create progress for patients where they need it most and its hemophilia therapies when launched represented the first major advancements in hemophilia treatment in more than two decades. For more information, visit bioverativ.com or follow @bioverativ on Twitter.

About Bicycle Therapeutics

Bicycle Therapeutics is developing a new class of medicines to treat oncology and other important diseases based on its proprietary bicyclic peptide (*Bicycle*®) product platform. *Bicycles* exhibit the affinity and exquisite target specificity usually associated with antibodies. Their small size enables rapid and deep tissue penetration, allowing tissues and tumors to be targeted from within. Their peptidic nature provides a "tuneable" pharmacokinetic half-life and a renal route of clearance, thus avoiding the liver and gastrointestinal tract toxicity often seen with other drug modalities. Bicycle Therapeutics is rapidly advancing towards the clinic with its lead programs using *Bicycle Drug Conjugates*® to selectively deliver toxins to tumors. Bicycle Therapeutics enters into collaborations in order to advance its programs and realize the full potential of the technology. Bicycle Therapeutics' unique intellectual property is based on the work initiated at the MRC Laboratory of Molecular Biology in Cambridge, U.K., by the scientific founders of the company, Sir Gregory Winter and Professor Christian Heinis. Bicycle Therapeutics is headquartered in Cambridge, U.K., with a U.S. subsidiary in Cambridge, Massachusetts. For more information, visit www.bicycletherapeutics.com.

Bioverativ Safe Harbor

This press release contains forward-looking statements, including statements about the potential benefits and developments that may be achieved through the collaboration with Bicycle. These statements may be identified by words such as “believe,” “expect,” “may,” “plan,” “potential,” “will” and similar expressions, and are based on Bioverativ’s current beliefs and expectations. These statements involve risks and uncertainties that could cause actual results to differ materially from those reflected in such statements. Risks and uncertainties that may cause actual results to differ materially include, among others: uncertainty regarding the ability to achieve the expected benefits from the collaboration, including as a result of risks and uncertainties associated with drug development and commercialization; reliance on third parties over which Bioverativ may not always have full control; risks associated with collaborations; and other risks and uncertainties that are described in the Risk Factors section of Bioverativ’s most recent annual or quarterly report filed with the Securities and Exchange Commission. Any forward-looking statements speak only as of the date of this press release and Bioverativ assumes no obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise.

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