



Takeda and HemoShear Therapeutics Extend Exclusive Drug Discovery Partnership in Liver Diseases

Charlottesville, Va. – March 20, 2019 – HemoShear Therapeutics, LLC, a privately held biotechnology company, today announced an extension of its partnership with Takeda Pharmaceutical Company Limited to discover and develop additional novel therapeutics for liver diseases, including nonalcoholic steatohepatitis (NASH).

“We are excited that Takeda recognizes our unique ability to identify novel therapeutic approaches for liver fibrosis and NASH,” said Jim Powers, HemoShear’s CEO. “We have an incredibly strong and productive relationship with Takeda and are happy to see our science drive their decision to expand our partnership.”

Under the terms of the original agreement, HemoShear received upfront payments and R&D funding, and Takeda received exclusive access to HemoShear’s proprietary disease modeling platform to discover and develop best-in-class therapeutics for specific liver diseases. HemoShear was eligible to receive milestone payments of potentially \$470 million and royalties. Further additional financial terms related to the extension of the partnership were not disclosed.

[HemoShear’s partnership with Takeda](#) has already generated several early drug discovery therapeutic targets. These targets were shown in the HemoShear *REVEAL-Tx*TM platform to inhibit biological processes associated with inflammation and fibrosis that can lead to nonalcoholic steatohepatitis (NASH), cirrhosis, and liver cancer. Furthermore, analysis using *REVEAL-Tx*TM suggests that inhibition of these targets demonstrates disease responses that are superior to established mechanisms of fibrosis currently being targeted by other companies in clinical trials.

“Our partnership with HemoShear has already borne fruit and we are enthusiastic about expanding the relationship,” said Gareth Hicks, Ph.D., head of GI Drug Discovery at Takeda. “We are planning to advance novel drug targets identified and validated by HemoShear into our discovery pipeline and look forward to bringing new therapies to the clinic.”

Certain liver diseases may progress to end-stage disease requiring liver transplantation and represent a serious unmet medical need. NASH, one of the leading causes of transplantation, is a serious, chronic liver disease that is estimated to impact over 16 million people in the United States alone. NASH is characterized by inflammation and excessive fat accumulation in the liver that may progress to fibrosis, cirrhosis, liver cancer, and eventually liver failure. There is currently no FDA approved therapeutic available for NASH and liver fibrosis patients.

About HemoShear Therapeutics

HemoShear Therapeutics discovers novel biological targets and advances drug programs to treat metabolic disorders with significant unmet patient need. HemoShear's drug discovery platform, *REVEAL-Tx™*, enables the Company's scientists to create best-in-class, biologically relevant human disease models to uncover and explain the underlying mechanisms of disease, translate those discoveries into drug candidates, and predict which drug candidates will treat patients successfully. HemoShear's proprietary drug discovery programs are focused on rare genetic metabolic disorders. In addition, the Company has exclusive partnerships to discover novel therapeutic approaches in nonalcoholic steatohepatitis (NASH) with Takeda and in gout with Horizon Pharma. For more information visit www.HemoShear.com

About HemoShear's *REVEAL-Tx™* Platform

Existing human experimental disease models do not reliably represent human biology. HemoShear has developed a transformational platform, *REVEAL-Tx™*, which applies principles of physiological blood flow to tissue from patients to recapitulate disease. *REVEAL-Tx™* provides unprecedented insights into complex pathophysiological pathways by replicating human disease with great accuracy and allows drug candidates to be studied at human concentrations. HemoShear's human disease models, in combination with its advanced proprietary computational biology tools, identify novel treatment approaches and reduce risk of failure by enabling HemoShear's scientists to deeply interrogate disease pathways, test hypotheses, and select meaningful targets in physiologically accurate disease conditions.

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