

## **Gilead Sciences and Precision BioSciences Announce Collaboration to Develop Therapies Against Hepatitis B Virus Using ARCUS Genome Editing**

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FOSTER CITY, Calif. & DURHAM, N.C.--(BUSINESS WIRE)--Sep. 12, 2018-- Gilead Sciences (Nasdaq: GILD) and Precision BioSciences announced today that the companies have entered into a strategic collaboration to develop therapies targeting the *in vivo* elimination of hepatitis B virus (HBV) with Precision's proprietary genome editing platform, ARCUS.

This press release features multimedia. View the full release here: <https://www.businesswire.com/news/home/20180912005598/en/>

An estimated 257 million people are living with HBV infection around the world. Current HBV treatments suppress HBV viral replication but do not completely clear the virus. The presence of covalently closed circular DNA (cccDNA) enables HBV replication if treatment is stopped. Preliminary studies at Gilead using ARCUS nucleases to target HBV cccDNA *in vitro* have demonstrated significant activity against cccDNA and integrated HBV DNA in human hepatocytes.

"Gilead is committed to developing innovative therapies to achieve functional cure for patients with chronic hepatitis B virus infection," said John McHutchison, MD, Chief Scientific Officer and Head of Research and Development at Gilead. "We are excited about the potential of genome editing and Precision's ARCUS technology, which has demonstrated promising *in vitro* activity. We look forward to exploring this technology as an important component of our HBV cure research efforts."

Under the terms of the collaboration agreement, Precision will be primarily responsible for the development, formulation, and preclinical evaluation of the investigational nucleases, and Gilead will be responsible for the clinical development and commercialization of potential therapies. Gilead will fully fund the research and development. Precision is eligible to receive milestone payments of up to an aggregate of \$445 million and tiered royalties that go up to the mid-teens for commercial products developed through the collaboration.

Precision Chief Scientific Officer Derek Jantz commented, "Gilead's cure-based approach to hepatitis B is comprehensive and exciting. Precision is pleased that initial studies with our ARCUS platform have established an important role for genome editing in their HBV program. This is an excellent application for our technology, which has made notable progress toward therapeutic *in vivo* editing in relevant models over the last year."

### **About Precision BioSciences**

Precision BioSciences is dedicated to improving life. Our mission is to cure genetic disease, overcome cancer, and feed the planet. We are striving to achieve this goal with ARCUS, our therapeutic-grade, naturally-derived genome editing system that combines both specificity and efficacy to help overcome life's greatest genetic challenges. For additional information, please visit [www.precisionbiosciences.com](http://www.precisionbiosciences.com)

### **About Gilead Sciences**

Gilead Sciences, Inc. is a research-based biopharmaceutical company that discovers, develops and commercializes innovative medicines in areas of unmet medical need. The company strives to transform and simplify care for people with life-threatening illnesses around the world. Gilead has operations in more than 35 countries worldwide, with headquarters in Foster City, California.

### **Gilead Forward-Looking Statement**

This press release includes forward-looking statements within the meaning of the Private Securities Litigation Reform Act

of 1995 that are subject to risks, uncertainties and other factors, including the risk that the parties may not realize the potential benefits of this collaboration. All statements other than statements of historical fact are statements that could be deemed forward-looking statements. These risks, uncertainties and other factors could cause actual results to differ materially from those referred to in the forward-looking statements. The reader is cautioned not to rely on these forward-looking statements. These and other risks are described in detail in Gilead's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018, as filed with the U.S. Securities and Exchange Commission. All forward-looking statements are based on information currently available to Gilead, and Gilead assumes no obligation to update any such forward-looking statements.

*For more information on Gilead Sciences, please visit the company's website at [www.gilead.com](http://www.gilead.com), follow Gilead on Twitter (@GileadSciences) or call Gilead Public Affairs at 1-800-GILEAD-5 or 1-650-574-3000.*

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Source: Gilead Sciences, Inc.

Gilead Investors

Sung Lee, 650-524-7792

or

Gilead Media

Amy Flood, 650-522-5643

or

Precision Media

Heather King, 919-314-5512 x1332