



PureTech's Entrega To Receive \$5 Million Investment from Lilly To Advance Proprietary Oral Delivery Technology for Peptides

December 19, 2017

PureTech Health plc (LSE: PRTC), an advanced, clinical-stage biopharmaceutical company, is pleased to note that Entrega, an affiliate of PureTech Health, today announced a research collaboration with Eli Lilly and Company (NYSE: LLY) ("Lilly").

Under the terms of the initial agreement, Entrega will receive \$5 million in equity and research funding from Lilly to investigate the application of Entrega's peptide delivery technology to certain Lilly products and therapeutic candidates. This initial agreement does not grant Lilly a development or commercialisation license to the Entrega technology.

David Steinberg, Chief Innovation Officer of PureTech Health, said: "We are pleased to collaborate with Lilly to advance a novel approach for oral peptide delivery through our affiliate Entrega. In addition to our wholly-owned pipeline of programmes, our affiliates – like Entrega – enable PureTech Health to build value by collaborating with leading pharma partners."

The full text of the announcement from Entrega is as follows:

Entrega To Receive \$5 Million Investment from Lilly To Advance Proprietary Oral Delivery Technology for Peptides

Novel approach to long-standing delivery challenge will be pursued for existing and investigational Lilly therapeutic candidates

BOSTON, Massachusetts, December 19, 2017 – Entrega, an affiliate of [PureTech Health](#) (LSE: PRTC) focused on the oral delivery of complex molecules, such as peptides, that cannot currently be taken orally, is pleased to announce a research collaboration with Eli Lilly and Company (NYSE: LLY) ("Lilly") to advance Entrega's proprietary peptide delivery technology. Under the terms of the initial agreement, Entrega will receive \$5 million in equity and research funding from Lilly to investigate the application of Entrega's peptide delivery technology to certain Lilly products and therapeutic candidates. This initial agreement does not grant Lilly a development or commercialisation license to the Entrega technology.

"We are excited to work with the innovative team at Entrega," said Divakar Ramakrishnan, Vice President, Drug Delivery and Device R&D at Lilly. "Their approach is novel and complements our broader efforts in oral macromolecule delivery."

The vast majority of biologic drugs (including peptides, proteins and other macromolecules) are currently administered by injection, which can present challenges for healthcare delivery and compliance with treatment regimes. Oral administration thus represents an ideal delivery approach for this increasingly large class of therapies reshaping many areas of medicine. Entrega's technology platform is a unique approach to oral delivery which uses a proprietary, customisable hydrogel dosage form to control local fluid microenvironments in the GI tract to both enhance absorption and reduce the variability of drug exposure.

"Entrega has used a rigorous scientific approach to generate new insights into one of the most challenging problems in drug delivery. Our proof-of-concept data demonstrates successful delivery of peptides in large animals," said Dr Robert Langer, Chairman of Entrega's Scientific Advisory Board, non-executive Board member of PureTech Health and Institute Professor at the Massachusetts Institute of Technology (MIT). "We are excited to work together with Lilly, who is an experienced collaborator in this important area of peptide delivery."

About Entrega

Entrega is an affiliate of [PureTech Health](#) (LSE: PRTC) focused on the oral delivery of medications that cannot currently be taken orally. Its technology has the potential to deliver a wide variety of biological molecules, drug substances, and nanoparticles, and may also enable novel applications in a variety of fields such as disease management and mobile health tracking. Entrega's technology uses a proprietary, customisable hydrogel oral dosage form to control the gastrointestinal (GI) tract fluid microenvironment surrounding the hydrogel, enhancing the stability, absorption, and consistency of large and/or unstable drug molecules.

Entrega's Directors and Scientific Advisory Board is comprised of a group of leading experts, including:

[Robert Langer, ScD](#), is one of 13 Institute Professors at MIT (an Institute Professor is the highest honour awarded to a faculty member). His h-index of 246 is the highest of any engineer in history. He has over 1,300 issued and pending patents which have been licensed or sublicensed to over 350 companies. He served as Chairman of the FDA's SCIENCE BOARD (highest advisory board) from 1999-2002. Langer is one of a very few individuals elected to the National Academy of Medicine, the National Academy of Engineering, the National Academy of Sciences and the National Academy of Inventors. He is one of four living individuals to receive both the US National Medal of Science and the US National Medal of Technology and Innovation. In 2015, Dr Langer received the Queen Elizabeth Prize for Engineering. He has also received the Draper Prize (considered the engineering Nobel Prize), Albany Medical Center Prize, Wolf Prize for Chemistry, Millennium Technology Prize, Priestley Medal (highest award of the American Chemical Society), Gairdner Prize, Kyoto Prize, Breakthrough Prize and the Lemelson-MIT prize, for being "one of history's most prolific inventors in medicine." In 2017, Nature Biotechnology named Langer as the Number 1 Translational Researcher in the world. He holds 32 honorary doctorates including honorary degrees from Harvard and Yale.

[Colin Gardner, PhD](#), was formerly the CSO of a start-up formulation company (TransForm Pharmaceuticals), which was acquired by Johnson & Johnson and consequently led to major changes in the way in which J&J integrated discovery and early development. Colin stayed on as the President and Site Leader of TransForm until he retired in June 2009. Before that, Colin was VP and Global Head of formulation design and development for all Merck products until 2001. He was involved in the development of 16 NCEs whose combined maximum annual sales averaged \$20Bn and three vaccines. Colin was born and educated in Scotland, receiving a BSc and PhD in chemistry from the University of Glasgow. After post-doctoral studies at Harvard Medical School (Biophysics) and MIT (Chemical Engineering), he returned to Europe and spent 6 years in drug

discovery at the Merrell International Research Center in Strasbourg. Since leaving J&J, he has worked with over 30 small and medium-sized pharmaceutical and device companies in the Boston area, leading to two IPOs and two acquisitions.

Samir Mitragotri, PhD, is the Hiller Professor of Bioengineering and Wyss Professor of Biologically Inspired Engineering at Harvard University. Prior to this, he was the Mellichamp Chair Professor in the Department of Chemical Engineering at the University of California, Santa Barbara. His research is focused on transdermal, oral, and targeted drug delivery systems. He is an elected member of the National Academy of Engineering, National Academy of Medicine and National Academy of Inventors. He is also an elected fellow of AAAS, CRS, BMES, AIMBE, and AAPS. He is an author of over 210 publications, an inventor on over 150 patent/patent applications, and a 2015, 2016 Thomson Reuters Highly Cited Researcher. He received his BS in Chemical Engineering from the Institute of Chemical Technology, India and a PhD in Chemical Engineering from the Massachusetts Institute of Technology.

Howard B. Rosen, MBA, was formerly President of ALZA Corporation, where he was responsible for all aspects of managing the drug delivery company as an independent 1000-person operating company within the Johnson & Johnson Family of Companies. Over his 10 years at ALZA, Mr. Rosen also had responsibilities for mergers and acquisitions, R&D planning, and technology ventures. Previously Mr. Rosen was Vice President, Commercial Strategy at Gilead Sciences, Inc. Mr. Rosen is a lecturer in the Department of Chemical Engineering at Stanford and teaches entrepreneurship at the Stanford Graduate School of Business. He is also a member of the National Academy of Engineering and holds chemical engineering degrees from MIT and Stanford.

Rob Armstrong, PhD, is the Chief Executive Officer, board member, and co-founder of Boston Pharmaceuticals. Dr Armstrong was formerly Vice President of Global External Research and Development and Chorus for Eli Lilly and Company. In this role, Dr Armstrong spearheaded a number of innovative initiatives at Lilly including the development of an integrated global network of R&D partnerships and the creation of external funding and molecule sourcing mechanisms to develop innovative drugs in the Chorus translational medicine engine. Dr Armstrong also served as Vice President of Discovery Chemistry Research and Technologies at Lilly and prior to joining Lilly, he led Small Molecule Drug Discovery and Development at Amgen. Dr Armstrong received bachelor's degrees in chemistry and biochemistry from the University of California at San Diego and a PhD in chemistry from Colorado State University.

Ownership Information

Following the closing of the collaboration agreement, PureTech Health (together with its affiliates) owns approximately 70.4% of Entrega calculated on a fully-diluted basis¹ and approximately 73.9% of Entrega calculated on a diluted basis².

(1) This calculation includes issued and outstanding shares, outstanding options to purchase shares, and unallocated shares authorised to be issued pursuant to equity incentive plans.

(2) This calculation includes issued and outstanding shares as well as outstanding options to purchase shares, but excludes unallocated shares authorised to be issued pursuant to equity incentive plans.

About PureTech Health

PureTech Health (PureTech Health plc, PRTC.L) is an advanced, clinical-stage biopharmaceutical company developing novel medicines targeting serious diseases that result from dysfunctions in the nervous, immune, and gastrointestinal systems (brain-immune-gut or the "BIG" axis), which together represent the adaptive human systems. PureTech Health is at the forefront of understanding and addressing the biological processes and crosstalk associated with the BIG axis. By harnessing this emerging field of human biology, the Company is pioneering new categories of medicine with the potential to have great impact on people with serious diseases. PureTech Health is advancing a rich pipeline of innovative therapies that includes two pivotal stage programmes, multiple human proof-of-concept studies and a number of early clinical and pre-clinical programmes. PureTech's rich research and development pipeline has been advanced in collaboration with some of the world's leading scientific experts, who along with PureTech's team of biopharma pioneers, entrepreneurs and seasoned Board, identify, invent, and clinically de-risk new medicines. With this experienced team pursuing cutting edge science, PureTech Health is building the biopharma company of the future focused on improving and extending the lives of people with serious disease. For more information, visit www.puretechhealth.com or connect with us on Twitter [@puretechh](https://twitter.com/puretechh).

Forward Looking Statement

This press release contains statements that are or may be forward-looking statements, including statements that relate to PureTech's future prospects, developments and strategies. The forward-looking statements are based on current expectations and are subject to known and unknown risks and uncertainties that could cause actual results, performance and achievements to differ materially from current expectations, including, but not limited to, those risks and uncertainties described in the risk factors included in the regulatory filings for PureTech Health. These forward-looking statements are based on assumptions regarding the present and future business strategies of the company and the environment in which it will operate in the future. Each forward-looking statement speaks only as at the date of this press release. Except as required by law and regulatory requirements, neither PureTech Health nor any other party intends to update or revise these forward-looking statements, whether as a result of new information, future events or otherwise.

This announcement contains inside information for the purposes of Article 7 of Regulation (EU) 596/2014.