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PureTech Health plc

PureTech Health's Karuna to Present Tolerability Proof-of-Concept Data for KarXT, A Novel Antipsychotic Agent Targeting the Muscarinic Receptors, at Two Upcoming Medical Meetings

PureTech Health plc ("PureTech", LSE: PRTC), an advanced, clinical-stage biopharmaceutical company, is pleased to note that Karuna will present additional data from the KarXT tolerability proof-of-concept study at two upcoming major medical meetings - The Society of Biological Psychiatry's (SOBP) 72nd Annual Scientific Program and Convention and The American Society of Clinical Psychopharmacology (ASCP) Annual Meeting. The presentations build on topline data announced in December 2016 and provide a clear proof-of-concept that the KarXT approach improves the tolerability of xanomeline.

Atul Pande, Chief Medical Officer at PureTech Health, said: "We're pleased to share additional data that support our proprietary KarXT approach for the treatment of psychosis and cognitive dysfunction across CNS disorders, including schizophrenia and Alzheimer's Disease. We look forward to further evaluation of KarXT in a Phase 2 study – set to initiate later this year – which we believe has great potential to deliver the first truly novel antipsychotic agent in more than sixty years to treat patients with schizophrenia or Alzheimer's Disease."

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

Karuna Pharmaceuticals to Present KarXT Tolerability Proof-of-Concept Data for KarXT, A Novel Antipsychotic Agent Targeting the Muscarinic Receptors, at Two Upcoming Medical Meetings

Newly appointed Chief Medical Officer, Stephen Brannan, M.D. to present the data at the American Society of Clinical Psychopharmacology Annual Meeting

Boston, Massachusetts, May 19, 2017 — Karuna Pharmaceuticals, focused on targeting muscarinic receptors for the treatment of central nervous system (CNS) disorders including schizophrenia and Alzheimer's Disease and a subsidiary of PureTech Health (LSE: PRTC), today announced that it will present additional data from the KarXT tolerability proof-of-concept study at two upcoming major medical meetings - The Society of Biological Psychiatry's (SOBP) 72nd Annual Scientific Program and Convention and The American Society of Clinical Psychopharmacology (ASCP) Annual Meeting. The additional data will be presented by newly appointed Karuna Chief Medical Officer (CMO) and former Vice President and head of Neuroscience at Takeda, Stephen Brannan, M.D. and Karuna Chief Clinical Advisor and former Chief Medical Officer at Eli Lilly, Alan Breier, M.D.

The Society of Biological Psychiatry's 72nd Annual Scientific Program and Convention in San Diego, California

- Saturday, 20 May, 17:00 PDT, poster presentation (#LBS 1315; Sapphire CP)

The American Society of Clinical Psychopharmacology Annual Meeting in Miami, Florida

- Tuesday, 30 May, 14:00 EDT, oral presentation (Salon 3, Americana Ballroom)
- Thursday, 1 June, 12:30 EDT, poster presentation (#T58; Salon 4, Americana Ballroom)

The presentations build on topline data from the KarXT tolerability proof-of-concept study, which were announced in December 2016 and provide a clear proof-of-concept that the KarXT approach improves the tolerability of xanomeline. In this study, KarXT was shown to reduce the incidence of prespecified cholinergic adverse events by a statistically significant and clinically meaningful extent (46%, $p=0.016$) compared to xanomeline alone and each individual cholinergic adverse event was reported at a lower rate in the KarXT treatment arm. The cholinergic adverse event rate was also similar to placebo during the lead-in period. No severe or serious adverse events were reported.

KarXT combines xanomeline, a novel clinical-stage muscarinic acetylcholine receptor agonist, with tropium chloride, a muscarinic antagonist, and is being developed to selectively target muscarinic receptors in the CNS. Exclusively licensed to Karuna, xanomeline has demonstrated robust efficacy in reducing psychosis in both schizophrenia and Alzheimer's disease in previous studies; however, it has been associated with side effects that have limited its development.

"We're excited to reveal additional data that support the enhanced tolerability of our proprietary KarXT approach," said Andrew Miller, Ph.D., Chief Executive Officer of Karuna. "We're also thrilled to welcome Steve as CMO to lead our clinical development and medical affairs efforts as we prepare to advance KarXT to a Phase 2 clinical trial this year. Steve's impressive experience in drug development, his expertise in neuropsychiatric research, and his dedication to finding new treatments will be great assets to Karuna as we continue to work towards developing the first truly novel antipsychotic agent for patients with schizophrenia or Alzheimer's in more than sixty years."

Dr. Brannan will lead the presentations at the ASCP Annual Meeting. In his new position as CMO, Dr. Brannan will oversee clinical development and medical affairs across Karuna's innovative therapies for the treatment of psychosis and cognitive dysfunction across CNS disorders including schizophrenia and Alzheimer's Disease. Dr. Brannan has extensive industry experience, having served as the Vice President and Head of Neuroscience at Takeda in addition to senior positions within Novartis, Eli Lilly, Forum Pharmaceuticals, and Cyberonics. He has been active in the development of important central nervous system treatments including Cymbalta, Exelon Patch, Trintellix, and VNS for Treatment Resistant Depression. Prior to working in the pharmaceutical industry, Dr. Brannan was part of the faculty at the University of Texas Health Science Center at San Antonio (UTHSCSA) where he specialized in Mood and Anxiety disorders. Dr. Brannan has over 40 publications and routinely gives invited talks and presentations at industry conferences. Dr. Brannan trained in psychiatry at UTHSCSA and holds a M.D. degree from the University of Texas Southwestern Medical School.

"I'm excited to join Karuna and to have the opportunity to have a key role in developing this exciting, novel approach to treating patients with psychosis and cognitive impairment," said Dr. Brannan. "These

disorders impact millions of people who have significant unmet needs for new and better treatments to adequately and safely manage their symptoms.”

About Karuna

Karuna is a clinical-stage drug development company targeting muscarinic receptors for the treatment of central nervous system (CNS) disorders. Karuna's lead program, **KarXT**, is a product candidate consisting of **xanomeline**, a novel muscarinic acetylcholine receptor agonist that has demonstrated efficacy in placebo-controlled human trials in schizophrenia and Alzheimer’s disease, and **trospium chloride**, an FDA-approved and well-established muscarinic receptor antagonist that has been shown not to enter the CNS. Karuna intends to evaluate KarXT in a Phase 2 trial set to begin in 2017.

Karuna’s Board of Directors includes Ben Shapiro, M.D., PureTech Health Non-Executive Director & former Executive Vice President of Research for Merck; Edmund Harrigan, M.D., former Senior Vice President for Worldwide Safety and Regulatory, Head of Worldwide Business Development at Pfizer; and Atul Pande, M.D., PureTech Health Chief Medical Officer & Former Senior Vice President, Head of Neuroscience and Senior Advisor, Pharmaceutical R&D at GlaxoSmithKline. Karuna’s Chief Clinical Advisor is Alan Breier, M.D., the former Chief Medical Officer at Eli Lilly. Karuna, co-founded by PureTech Health, has a worldwide exclusive license for xanomeline and has a patent portfolio more broadly covering selective muscarinic targeting enabled by the KarXT approach. For more information, visit www.karunapharma.com.

About PureTech Health

PureTech Health (PureTech Health plc, PRTC.L) is an advanced, clinical-stage biopharmaceutical company developing novel medicines that modulate the adaptive human systems. PureTech’s therapies target the dysfunctions in the immune, nervous, and gastro-intestinal systems by addressing the underlying pathophysiology of disease from a systems perspective rather than through a single receptor or pathway. The Company is advancing a rich pipeline that includes multiple human proof-of-concept studies and pivotal or registration studies expected to read out over the next 12-18 months. PureTech Health’s growing research and development pipeline has been developed in collaboration with some of the world’s leading scientific experts, who along with PureTech's experienced team and a stellar Board identify, analyse and advance very selectively the opportunities the Company believes hold the most promise for patients. This experienced and engaged team places PureTech Health at the forefront of ground-breaking science and technological innovation and leads the Company between and beyond existing disciplines. 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 the company’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 plc. 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 the company nor any other party intends to update or revise these forward-looking statements, whether as a result of new information, future events or otherwise.

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