



## PureTech's Karuna Completes \$42 Million Financing Round to Advance Lead Product Candidate for the Treatment of Disorders Marked by Psychosis and Cognitive Impairment

August 2, 2018

PureTech Health plc (LSE: PRTC) ("PureTech Health"), a clinical-stage biopharmaceutical company developing novel medicines for dysfunctions of the Brain-Immune-Gut (BIG), today announced that its affiliate, Karuna, successfully completed a \$42 million Series A financing round, including the issuance of \$22 million in shares upon conversion of debt into equity. This financing round included ARCH Venture Partners, the Wellcome Trust, Steven Paul MD, PureTech Health, and other undisclosed investors.

Proceeds from the financing will be used to advance its lead product candidate, KarXT (Karuna-xanomeline-trospium chloride), including the initiation of a Phase 2 trial in patients with schizophrenia in the third quarter of 2018 and the expansion into other therapeutic areas, including a non-opiate pain indication.

Joep Muijers, PhD, Chief Financial Officer at PureTech Health, said: "The financial commitment from these high-profile investors shows clear confidence in Karuna's approach to developing what could be the first new mechanism in over 50 years for the treatment of psychosis and cognitive impairment across central nervous system (CNS) disorders. As KarXT advances into a Phase 2 trial, we believe strongly in Karuna's unique mechanism of action and potential."

The full text announcement from Karuna is as follows:

### **Karuna Completes \$42 Million Series A Financing Round to Advance Selective Muscarinic Receptor Agonist Programme into Phase 2 Study**

*Participants include ARCH Venture Partners, Wellcome Trust, PureTech Health, Steven Paul MD, and other undisclosed investors*

**BOSTON, August 2, 2018** —[Karuna Pharmaceuticals](#), focused on targeting muscarinic receptors for the treatment of disorders marked by psychosis and cognitive impairment, today announced the completion of a \$42 million Series A financing round, including the issuance of \$22 million in shares upon conversion of debt into equity. Participants included ARCH Venture Partners, the Wellcome Trust, Steven Paul MD, PureTech Health, and other undisclosed investors. Karuna plans to use the proceeds from the financing to advance its lead product candidate, KarXT (Karuna-xanomeline-trospium chloride), including the initiation of a Phase 2 trial in patients with schizophrenia in the third quarter of 2018 and the expansion into other therapeutic areas, including a non-opiate pain indication.

"Karuna has all of the characteristics we look for in a game-changing CNS company. Its lead drug candidate has a unique mechanism of action for treating both psychosis and cognition, as well as an exciting non-opiate application for pain. These are therapeutic indications where there is a profound need for new treatments. We are excited about the clinical data that have already been generated, and we look forward to helping to drive the next chapter of growth," said Robert Nelsen, Co-Founder and Managing Director of ARCH Venture Partners.

KarXT is designed to improve tolerability and unlock the potential of muscarinic cholinergic receptor agonists that selectively target M1/M4 muscarinic cholinergic receptors in the brain while blocking their activation in tissues outside the brain. Karuna is currently completing a second Phase 1 trial using a proprietary co-formulation of xanomeline, a muscarinic agonist Karuna exclusively licensed from Eli Lilly which showed compelling efficacy in patients with schizophrenia and Alzheimer's disease but had peripheral cholinergic side effects, combined with trospium chloride, a muscarinic antagonist that acts only in the periphery (outside of the brain and central nervous system). The initial Phase 1 trial demonstrated a significant and clinically meaningful reduction in pre-specified cholinergic side effects with KarXT compared to xanomeline alone. The Phase 2 trial in patients with schizophrenia is designed to replicate and expand on previous efficacy and safety data with xanomeline in schizophrenia and Alzheimer's disease.

"We greatly appreciate the support of our investors and their confidence in the potential of KarXT to be the first new and highly differentiated medicine in over 50 years for the treatment of psychosis and cognitive impairment in psychiatric and neurological disorders," said Andrew Miller, PhD, Co-Founder and Chief Executive Officer of Karuna. "We believe KarXT could be a promising new treatment that safely and effectively addresses the debilitating positive, negative, and cognitive symptoms of patients living with schizophrenia and other central nervous system disorders."

#### **About Karuna Pharmaceuticals**

Karuna is a clinical-stage drug development company targeting muscarinic cholinergic receptors for the treatment of psychosis and cognitive impairment across central nervous system (CNS) disorders, including schizophrenia and Alzheimer's disease, as well as neuropathic pain. Karuna's lead product candidate, [KarXT](#), consists of xanomeline, a novel muscarinic acetylcholine receptor agonist that has demonstrated efficacy in placebo-controlled human trials in schizophrenia and Alzheimer's disease without the troubling sedative, metabolic, and neurological side effects of currently prescribed antipsychotic drugs, and trospium chloride, an FDA-approved and well-established muscarinic receptor antagonist that has been shown not to enter the central nervous system (CNS). Karuna has demonstrated improved tolerability of KarXT vs xanomeline in a placebo-controlled human study and is currently conducting a Phase 1 trial using a proprietary co-formulation of xanomeline and trospium chloride. A Phase 2 trial of safety and efficacy in people with schizophrenia is expected to begin in the third quarter of 2018. Karuna, which was founded by [PureTech Health](#) (LSE: PRTC), 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](http://www.karunapharma.com).

#### **About PureTech Health**

PureTech Health (LSE: PRTC) is an advanced, clinical-stage biopharmaceutical company developing novel medicines for dysfunctions of the Brain-

Immune-Gut (BIG). The Company has developed deep insight into the connection between these systems and the resulting role in many chronic diseases, which represent the majority of healthcare spend and have proven resistant to established therapeutic approaches. By harnessing this emerging field of human biology, PureTech Health has developed new categories of medicines with the potential to have great impact on people with serious diseases.

PureTech Health is advancing a rich pipeline of innovative therapies across two divisions. Its Affiliates division includes two product candidates that are preparing for potential regulatory approval in the United States and Europe and a number of clinical and pre-clinical programmes. These affiliates have developed ground-breaking platforms and therapeutic candidates in collaboration with some of the world's leading scientific experts.

PureTech's Internal division (Ariya) is advancing a pipeline fuelled by recent discoveries in lymphatics and immune cell trafficking to modulate disease in a tissue-specific manner. These programmes build on a new understanding of the transport and biodistribution of various immune system components in order to develop targeted therapies for diseases with major unmet needs including cancer and autoimmune and neuroimmune disorders. One of these programmes, which is focused on the oral administration of nucleic acids and other biologics using milk exosomes, is being advanced in collaboration with Roche for the potential application across their antisense oligonucleotides platform.

For more information, visit [www.puretechhealth.com](http://www.puretechhealth.com) or connect with us on Twitter [@puretechh](https://twitter.com/puretechh).

#### **Ownership Information and Other Required Disclosures**

PureTech Health owns approximately 58.4% of Karuna calculated on a diluted basis<sup>1</sup> and approximately 56.8% of Karuna calculated on a fully-diluted basis<sup>2</sup> following the closing of the Series A Financing.

<sup>1</sup>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.

<sup>2</sup>This calculation includes issued and outstanding shares, outstanding options to purchase shares, and unallocated shares authorised to be issued pursuant to equity incentive plans.

#### **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.

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