PureTech Health Affiliate Vedanta Biosciences Announces First Patient Enrolled in VE416 Phase 1b/2 Food Allergy Clinical Study

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Milestone study for microbiome field: First clinical study of a rationally-defined bacterial consortium (VE416) for treating food allergy

Approach will be studied first in peanut allergy and could potentially be used to address other food allergies

PureTech Health plc (LSE: PRTC) ("PureTech Health"), an advanced biopharmaceutical company developing novel medicines for dysfunctions of the Brain-Immune-Gut (BIG) axis, is pleased to note that its affiliate Vedanta Biosciences today announced the first patient has been enrolled in the Phase 1b/2 clinical study of VE416. VE416 is the company's live biotherapeutic product candidate for food allergies. It is produced from pure, clonal bacterial cell banks, which yield a drug product of uniform and pathogen-free composition in powdered form, bypassing the need to rely on faecal donor material.

The study, which is being conducted at MassGeneral Hospital for Children, will enrol 40 patients who are 12 years of age and older with a history of peanut allergy to explore VE416 both as a monotherapy, and in combination with an oral peanut immunotherapy, over the course of several months. The primary endpoints of the randomised, double-blind, placebo-controlled trial are safety of VE416 and the amount of peanut protein tolerated.

Joseph Bolen, PhD chief scientific officer at PureTech Health, said: "Scientific evidence is mounting that microbiota in the gut play an important role in food allergies. This study will be an important milestone as we seek to desensitise patients to allergens by modulating their microbiomes with a rationally defined live biotherapeutic product. We're excited both for Vedanta Biosciences and for the many people with food allergies who need new treatment options."

The full text announcement from Vedanta Biosciences is as follows:

Vedanta Biosciences Announces First Patient Enrolled in VE416 Phase 1b/2 Food Allergy Clinical Study

First clinical study of a rationally-defined bacterial consortium (VE416) for treating food allergy, will initially be studied in patients with history of peanut allergy

Antigen-agnostic approach could potentially be used to address multiple food allergies

CAMBRIDGE, Mass., July 1, 2019 —Vedanta Biosciences, a clinical-stage company developing a new category of therapies for immune-mediated diseases based on rationally-defined consortia of human microbiota-derived bacteria, today announced the first patient has been enrolled in the Phase 1b/2 clinical study of VE416 in adults and adolescents with a history of peanut allergy. VE416 is Vedanta Biosciences' live biotherapeutic product candidate being developed for treatment of food allergies, including persistent peanut allergy.

The study, which is being conducted at MassGeneral Hospital for Children, will explore VE416 as a monotherapy, and in combination with an oral peanut immunotherapy, over the course of several months. The randomised, double-blind, placebo-controlled trial is slated to enrol up to 40 patients that are 12 years of age and older. The primary endpoints are safety of VE416 and amount of peanut protein tolerated during a double-blind, placebo-controlled food challenge following the treatment.

"Food allergies are both common and devastating, and we have evidence that the microbiome plays an important role," said Wayne Shreffler, MD, PhD, chief of pediatric allergy and immunology and director of the Food Allergy Center at Massachusetts General Hospital. "People with food allergies are keenly interested in more options than avoidance. I'm hopeful that modulating the gut ecosystem with therapeutics derived from the microbiome may prove to be a safe and effective tool by itself or a way to improve allergen desensitisation."

The clinical trial of VE416 draws on previous work conducted by Vedanta Biosciences and its scientific co-founder, Dr Kenya Honda at Keio University, to identify gut bacteria that can induce immunoregulatory responses and protect against allergic intestinal disease. This research and independent findings show that these immunoregulatory bacteria can potentially have protective effects against a range of food allergens, suggesting they work via antigen-agnostic mechanisms.

"There has been a marked increase in the prevalence of food allergies in industrialized societies over the last few decades, and while there is no single explanation for why that is the case, multiple lines of evidence point to the effects of modern lifestyle practices on the gut microbiota," said Bernat Olle, PhD, co-founder and chief executive officer of Vedanta Biosciences. "We are excited to start the first study to examine the potential benefits of a rationally-defined bacterial consortium for treatment of peanut allergic patients."

About VE416

VE416 is an orally administered investigational live biotherapeutic product (LBP) consisting of a defined bacterial consortium. It is produced from pure, clonal bacterial cell banks, which yield a drug product of uniform composition in powdered form and free of any pathogenic strains, bypassing the need to rely on faecal donor material with inconsistent composition. In preclinical research, VE416 induced protective immunoregulatory responses and reduced anaphylaxis and allergic symptoms in sensitised mice. The VE416 Ph1b/2 study will enrol 40 peanut allergic patients ages 12 and older, including individuals with single and multiple food allergies. The study will assess the safety and colonisation of VE416 and the amount of peanut protein tolerated following treatment. The study will also assess the efficacy of VE416 in inducing higher rates of clinical tolerance and reducing adverse effects in patients undergoing peanut oral immunotherapy.

About Vedanta Biosciences

Vedanta Biosciences is a clinical-stage company developing a new category of therapies for immune-mediated diseases based on rationally-defined consortia of human microbiome-derived bacteria. Vedanta Biosciences is a leader in the microbiome field with capabilities and deep expertise to discover, develop, and manufacture live bacteria drugs. These include what is believed to be the largest collection of human-gut associated bacteria, a suite of proprietary assays to select pharmacologically potent strains, vast proprietary datasets from human interventional studies, and facilities for cGMP-compliant manufacturing of rationally-defined bacterial consortia in powder form. Vedanta Biosciences' pioneering work, in collaboration with its scientific co-founders, has led to the identification of human commensal bacteria that induce a range of immune responses – including induction of regulatory T cells, CD8+ T cells, and Th17 cells, among others. These advances have been published in leading peer-reviewed journals, including *Science* (multiple), *Nature* (2013, 2019), *Cell,* and *Nature Immunology*. Vedanta Biosciences has harnessed these biological insights and its capabilities to generate a pipeline of programmes in infectious disease, autoimmune disease, allergy, and immuno-oncology.

Vedanta Biosciences was founded by PureTech Health (LSE: PRTC). Its scientific co-founders are world-renowned experts in immunology and microbiology who have pioneered the fields of innate immunity, Th17 and regulatory T cell biology, and include Ruslan Medzhitov, PhD, (Yale and Howard Hughes Medical Institute (HHMI)), Brett Finlay, PhD, (University of British Columbia and HHMI), Kenya Honda, PhD, (Keio University and RIKEN), Dan Littman, PhD, (New York University and HHMI), Alexander Rudensky, PhD, (Sloan Kettering and HHMI), and Jeremiah Faith, PhD, (Mount Sinai School of Medicine).

About PureTech Health

PureTech Health (LSE: PRTC) is an advanced biopharmaceutical company developing BIG medicines for dysfunctions of the Brain-Immune-Gut axis. The Company has gained deep insights into the connection between these systems and the resulting role in diseases that have proved resistant to established therapeutic approaches. By harnessing this emerging field of human biology, PureTech is developing new categories of medicines with the potential to have great impact on people with serious disorders.

PureTech is advancing a rich pipeline of innovative therapies with an unbiased, non-binary, and capital efficient R&D model across its affiliates and its internal R&D pipeline. PureTech's affiliates include seven clinical-stage platforms, including one product that has been cleared by the US Food and Drug Administration (FDA) and a second product candidate that has been filed with the FDA for review, and several other novel preclinical programmes. The PureTech pipeline includes ground-breaking platforms and therapeutic candidates that were developed in collaboration with some of the world's leading experts.

PureTech's internal pipeline is centred on lymphatic targeting and tissue-selective immunomodulation for the potential treatment of immune and central nervous system disorders, lymphatic conditions, and cancers. The Company is advancing multiple platforms to enable oral administration of therapies directly into the lymphatic system, regulate lymphatic flow and function, and target immunosuppressive mechanisms in oncology. For more information, visit www.puretechhealth.com or connect with us on Twitter @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.