

## **Vedanta Biosciences Announces License Agreement with RIKEN and other Japanese Institutions for New Immune Boosting Microbiome Technology**

*Company also announces second patent issuance in Japan for pharmaceutical compositions and methods of use in autoimmune, inflammatory and infectious diseases*

**BOSTON, Massachusetts, March 30, 2016** — [Vedanta Biosciences](#), pioneering the development of a new class of therapies designed to modulate the human microbiome, today announced a license agreement with [RIKEN](#), the [University of Tokyo](#) and [Azabu University](#) for technology developed by RIKEN Team Leader and Vedanta Co-founder and Scientific Advisory Board Member, Kenya Honda, M.D., Ph.D. The new technology has potential clinical applications in infectious disease, vaccine design and immuno-oncology. Vedanta also received a second patent issuance in Japan for key intellectual property.

Under the terms of the agreement, Vedanta will collaborate with Dr. Honda's lab to investigate potential pharmaceutical candidates involving bacterial strains that activate immune cells in the human gut called Th17 cells. Th17 cells are a specialized group of immune cells that may help protect the body against infectious pathogens and are also a potential target in the treatment of cancer.

"This technology introduces a new way in which we can harness the immune system in the treatment of disease," Honda said. "Microbes that stimulate Th17 cells may lead to new avenues in vaccine design and in novel therapies for cancer and microbial infections."

Details on the technology – immune-boosting microbes isolated from the human gut – were published in October 2015 in the prestigious scientific journal *Cell*.<sup>1</sup> In the published study, Honda and colleagues identified and isolated bacterial strains from humans that can induce Th17 cells and demonstrated that these strains induce Th17 responses by adhering to cells in the intestine.

Vedanta is a leader in the microbiome field in developing a platform for the discovery, development, and manufacturing of drugs based on live commensal microbes. Using its proprietary technology platform, Vedanta has isolated a vast library of human-associated bacterial strains and characterized how the immune system recognizes and responds to bacteria. The company has generated a pipeline of microbial drug candidates that can suppress – or tone down – the immune system, a potentially beneficial approach for managing inflammatory or autoimmune diseases where the immune system is overactive and causes damage to the body. The license agreement broadens Vedanta's pipeline by adding candidates that conversely stimulate the immune system to fight infections and cancer.

"This new technology, coupled with our proprietary platform, broadens Vedanta's ability to develop immunotherapies based on bacterial strains derived from the gut microbiota," said Dr. Bernat Olle, Chief Executive Officer of Vedanta. "We previously demonstrated we can develop therapies to potentially calm overactive immune responses. This technology enables us to do the opposite – to harness bacteria to potentially activate immune cells when needed."

Vedanta also further strengthened its patent portfolio with a second patent issuance in Japan, which provides coverage for multiple candidates in Vedanta's pipeline through 2031. The patent includes claims to pharmaceutical compositions of bacterial strains and methods of treatment for autoimmune diseases, inflammatory diseases and infectious diseases using such compositions.



## **About Vedanta**

Vedanta Biosciences is pioneering development of a novel class of therapies designed to modulate pathways of interaction between the human microbiome and the host immune system. Founded by PureTech Health (PureTech Health plc, PRTC.L) and a group of world-renowned experts in immunology and microbiology, Vedanta Biosciences is a leader in the microbiome field with capabilities that potentially enable discovery, development, and manufacturing of drugs based on live commensal microbes. Using its proprietary technology platform, Vedanta Biosciences has isolated a vast collection of human-associated bacterial strains and characterised how the immune system recognises and responds to these microbes and has generated a pipeline of drug candidates in development for infectious disease, immune tolerance, inflammation, and immuno-oncology.

Vedanta's scientific co-founders have pioneered the fields of innate immunity, Th17 and regulatory T cell biology, and include Dr. Ruslan Medzhitov (Professor of Immunobiology at Yale), Dr. Alexander Rudensky (tri-institutional Professor at the Memorial Sloan-Kettering Institute, the Rockefeller University and Cornell University), Dr. Dan Littman (Professor of Molecular Immunology at NYU), Dr. Brett Finlay (Professor at the University of British Columbia) and Dr. Kenya Honda (Professor, School of Medicine, Keio University). Vedanta's Board of Directors includes Board Chairman Christopher Viehbacher, Managing Partner at Gurnet Point Capital and former CEO and Member of the Board of Directors of Sanofi; Dr. Bennett Shapiro, former Executive Vice President of Merck; Dr. John LaMattina, former President of research and development at Pfizer and David Steinberg, Co-Founder of Vedanta and Executive Vice President at PureTech.

In January 2015, Vedanta announced a licensing agreement with Janssen Biotech, Inc., one of the Janssen Pharmaceutical Companies, including an upfront payment and development and commercialization milestone payments of up to \$339 million. Under the agreement, Janssen is developing one of the product candidates in Vedanta's pipeline built on the Company's technology platform.

## **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.

<sup>1</sup> Atarashi et al., Th17 Cell Induction by Adhesion of Microbes to Intestinal Epithelial Cells, Cell (2015), <http://dx.doi.org/10.1016/j.cell.2015.08.058>

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