

PRESS RELEASE

HMT and Toyobo have established production of Ethanolamine-phosphate phospho-lyase for clinical assay relating Major Depression Disorder (MDD).

Boston, MA - On October 19, 2017, Human Metabolome Technologies, Inc. (hereinafter referred to as HMT, Head office: Tsuruoka City, Yamagata Prefecture, President: Ryuji Kanno,) and Toyobo Co., Ltd. (Head Office: Osaka Prefecture Osaka City, Representative Director: President: Seiji Narahara, Toyobo) have announced that they have collaboratively established mass production technology for the enzyme Ethanolamine-phosphate phospho-lyase used for measurement of a depression-related biomarker. In the future, Toyobo will provide this enzyme to HMT and HMT will manufacture and sell a research reagent kit.

1. Background

The number of patients with depression is 322 million people worldwide^{*1} and the domestic economic loss amount is considered to be about 3 trillion yen^{*2} per year in Japan. Diagnosis of depression is currently focused mainly on interviews by specialists, but the background and symptoms of onset are diversified and therefore highly accuracy alternative diagnosis is required. HMT has revealed that the concentration of plasma Ethanolamine Phosphate (PEA) is reduced relating to the depressive state and its usefulness as a biomarker to assess Major Depressive Disorder (MDD) is being studied.

*1 ... Study by WHO in 2015

*2 ... 2011 school corporation Keio University "Fiscal 2010 Ministry of Health, Labor and Welfare Disability Welfare General Promotion Project subsidy" Mental illness Estimation of Social Cost of "Business Performance Report"

2. Currently

The measurement of PEA concentration in the plasma for clinical diagnosis requires specific analytical methods with selectivity, sensitivity and throughput. Therefore, HMT is developing reagent kits based on an enzymatic assay for PEA together with its analytical method. By using this kit, it will be possible for many medical institutions and laboratories to quickly and easily measure PEA concentrations. Toyobo, which has a proven practice in the manufacture of diagnostic enzymes, has been collaborating with HMT for the development of this kit using their established mass production technologies. Toyobo will begin to provide this enzyme to HMT starting November 2017.

3. Future plans

Toyobo will provide Ethanolamine-phosphate phospho-lyase as a component of the PEA reagent kit and support the development of a next-generation in vitro diagnosis system for depression. HMT will proceed with the establishment of the manufacturing and sales of a PEA reagent kit, improving the assessment of MDD and provide these kits to a wide range of clinical research institutes in 2018.

About Human Metabolome Technologies

Human Metabolome Technologies, Inc., (HMT) was founded in 2003 by Professor Masaru Tomita, Ph.D., Director of the Institute for Advanced Biosciences (IAB), Keio University, Japan, and by IAB's Professor Tomoyoshi Soga, Ph.D. A Japan-based biotechnology company, HMT provides capillary electrophoresis mass spectrometry based metabolomics services, aiming to provide complete solutions for metabolomics research in biomarker discovery, drug design, diagnostic technology and food production.

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