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**MBL**

**MEDICAL & BIOLOGICAL LABORATORIES Co., Ltd. concludes a patent licensing agreement with the University of Toyama concerning a rapid antibody production technique**

Nagoya, Japan – February 28, 2017 - MEDICAL & BIOLOGICAL LABORATORIES Co., Ltd. (MBL) and the University of Toyama announced today that they have entered a patent licensing agreement for the Magnetic-beads Reaction through Arrayed Hanging-Droplets method (MAGrahd method), a rapid antibody production technique invented by the University of Toyama. The MAGrahd method reliably allows for the synthesis of an antibody gene from a single antibody-producing cell. Through the agreement, MBL has acquired the rights to develop and create high-performance antibodies using the MAGrahd method worldwide.

The MAGrahd method enables more rapid and efficient production of target antibodies than the conventional cell fusion method and help shorten the time required for development projects. The MAGrahd method will serve as a basis for MBL's monoclonal antibody development technologies and will be applied primarily to the company's diagnostic reagents business alongside other techniques such as artificial lymph node technology, phage display method, and the SPYMEG technology, all aiming to enhance product development capability and efficiency.

The MAGrahd method was invented by Professors Masaharu Isobe and Nobuyuki Kurosawa of the Department of Life Sciences and Bioengineering, Faculty of Engineering, at the University of Toyama, as a fundamental technology for isolating antigen-specific antibody genes.

Unlike the cell fusion method, which requires months to screen for a target antibody, this new antibody-isolation system based on the MAGrahd method facilitates isolation of a necessary antibody by using gene recombination technology and requires only five days. Also, the system isolates an antibody gene with the most purpose-fitting function because it is capable of reliably isolating a target antibody gene from an antibody-producing cell through the MAGrahd method and expressing the isolated antibody gene in a cultured cell, thereby generating an antibody and making it react again with its antigen.

**[Reference]**

Kurosawa N, Yoshioka M, Fujimoto R, Yamagishi F, Isobe M. Rapid production of antigen-specific monoclonal antibodies from a variety of animals. BMC Biol. 2012 Sep 28;10:80. doi: 10.1186/1741-7007-10-80. PubMed PMID: 23017270

## **About MBL**

MEDICAL & BIOLOGICAL LABORATORIES, Co., Ltd. was founded in 1969 as the first antibody manufacturer in Japan. MBL then expanded its business beyond immunology into other areas of research, such as gene diagnoses and topics related to intercellular signaling. MBL now conducts research, development, production, and sale of clinical diagnostic and basic laboratory reagents.

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