



February 24, 2015 ImaginAb, Inc. JFE Engineering Corporation

Study of Business Cooperation in Manufacture and Sales of Radiodiagnostic agents

The American company ImaginAb, Inc. (CFO: Jeffrey D. Quan; COO: Jennifer S. Keppler; Head Office: California, US; hereinafter, "ImaginAb") and JFE Engineering Corporation (President and CEO: Hisanori Kanou; Head Office: Chiyoda-ku, Tokyo) announced that the two companies have concluded a memorandum of understanding (MOU) on study of business cooperation in the manufacture and sale of radiobiopharmaceuticals for use in PET diagnosis ^{*1} in Japan.

ImaginAb is promoting research and development of PET diagnostic agents for discovery of cancers and immune disorders by using low molecular antibodies that select and bond with minute lesions. In particular, ⁸⁹Zr-Df-IAB2M, ^{*2} (hereinafter, "the diagnostic agent"), which is now in the clinical development process in the United States ^{*3}, has attracted considerable interest as a revolutionary PET diagnostic agent that enables contrast radiography imaging of the metastasis of prostate cancer to lymph nodes and bone, which was difficult with conventional diagnostic techniques. To expand its biopharmaceuticals business in Japan, beginning with the diagnostic agent, ImaginAb established a Japanese local subsidiary, ImaginAb Japan KK, in May 2014.

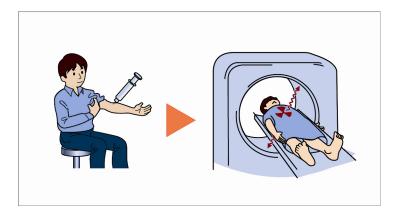
JFE Engineering Corporation is focusing on the medical field as a new engineering business area, and has already delivered cyclotrons and synthesizers ^{*4} for use in PET diagnosis to a total of 35 hospitals and other medical institutions throughout Japan. Development of the diagnostic agent is underway by combining the radioactive isotope 89Zr (zirconium-89) and a low molecular antibody, which is a first in Japan. The recently-announced cooperative arrangement will make the maximum use of the manufacturing technologies and know-how of JFE Engineering.

In preparation for the practical application stage of PET diagnosis using the diagnostic agent in Japan, the two companies will study the establishment of an integrated technology covering all the processes from the manufacture of the diagnostic agent to supply to medical institutions.

The companies also intend to contribute to the dissemination of leading-edge medicine in the future.

*1 PET diagnosis: Positron emission tomography diagnosis

A system in which a pharmaceutical agent containing a radioactive substance is injected into the patient's body, and diagnostic imaging is performed by measuring the gamma rays emitted by the agent.



*2 Prostate cancer PET diagnostic agent "89Zr-Df-IAB2M"

⁸⁹Zr-Df-IAB2M is a PET diagnostic agent combining ⁸⁹Zr (radioisotope of zirconium), which has a half-life of approximately 3 days, in a low molecular antibody, and enables imaging of prostate cancers by bonding selectively with PSMA (<u>Prostate Specific Membrane Antigen</u>), which is a specific membrane antigen of prostate cancer.

PET diagnosis is possible within a short time after administering the agent because the body clearance of the diagnostic agent, which is manufactured by an antibody low-molecularization technology developed by ImaginAb, is faster than that of conventional antibody diagnostic agents. Safety is also improved, as chemical structures which are not necessary for imaging are removed.

*3 Clinical development in United States

⁸⁹Zr-Df-IAB2M is now in the Phase II clinical study development stage for drug approval by the Food and Drug Administration (FDA) in the United States. Development will also be carried out in Japan in the future with the aim of obtaining drug approval.

*4 Cyclotron, synthesizer

Equipment which is necessary for manufacturing PET diagnostic agents.

The cyclotron is used to manufacture the radioactive substance that emits gamma rays, and the synthesizer is a device which synthesizes the PET diagnostic agent by using this radioactive substance and a pharmaceutical agent that collects at the diagnosis site as materials.

In the PET diagnostic agents in practical use at present, glucose is used as the pharmaceutical agent that collects at the diagnosis site. PET diagnostic agents using antibodies have not yet been applied practically.

For inquiries regarding this press release, please contact the following:

ImaginAb Japan, Inc., Dr. Shintaro Nishimura, Representative Director

Public Relations Section, General Affairs Department, JFE Engineering Corporation