Company News

March 29, 2001

Consignment Contract Concluded with Hitachi on Functional Analysis of Proteins

Ono Pharmaceutical Co., Ltd. has entered into full-scale drug discovery program based on proteome analysis, which enables large-scale analysis of its candidate genes for drugs.

With the sequencing of the human genome completed and disclosed, the post-genomic age has arrived as the proteomics technologies begin to play an important role in elucidating characteristics and functions of proteins expressed by genes. Many companies around the world are expected to enter fierce competition in this new proteomics era.

Ono started genomic drug discovery research almost a decade ago. Through their collaboration with Genetics Institute (Boston, Massachusetts), Ono has successfully obtained about 420 drug target genes (only proteins secreted from cells).

In cooperation with Genetics Institute, universities and other research institutions, Ono has been conducting functional analysis of the proteins expressed by these genes. The analyses of about fifteen of the genes have been completed so far and it has been found that five of the genes have a relationship with AIDS, cancer, autoimmune diseases such as rheumatism, and some urinary diseases. Two kinds of lead compounds obtained through such efforts have been under *in vivo* biological animal studies. Ono is planning to conduct clinical studies on these two compounds in a few years.

Recognizing that it is important to swiftly analyze the functions of the remaining 400 or so genes, Ono signed a contract with Hitachi (Life Science Group) on March 28, 2001 concerning functional analysis of proteins using state-of-the-art technologies to identify and analyze protein-protein interactions.

Under the contract, Ono will commission functional analysis of genes to Hitachi, who will be allowed to use gene information owned by Ono. When new information on protein-protein interactions with high patentability is obtained as a result of the analyses, Ono will seek to gain intellectual property rights for such information to strategically develop products ahead of its competitors, paying Hitachi a contingency fee for the research.

The technology of Hitachi to be used for functional analyses of genes is an industrial-scale yeast two-hybrid method, which was introduced from Myriad Genetics in the US to Hitachi, to carry out comprehensive assays. Thanks to the technology, Ono will be able to obtain accurate and timely information on how each of Ono's genes relates to a certain disease.

Ono has been promoting contract research in cooperation with venture companies in Japan and abroad concerning gene expression analysis of pathological models using animals and human tissues. It is hoped that the contract with Hitachi will further accelerate Ono's genomics drug discovery/proteomic drug discovery program.