Chugai Pharmaceutical Co., Ltd.
FRONTEO, Inc.

Chugai and FRONTEO Enter into a License Agreement
for AI-based Drug Discovery Support System

TOKYO, May 29, 2020 -- Chugai Pharmaceutical Co., Ltd. (TOKYO: 4519) and FRONTEO, Inc. have entered into a license agreement for a drug discovery support system based on artificial intelligence (AI).

Under the license agreement, Amanogawa (trademark-pending), a literature search system with AI which employs Concept Encoder (conceptencoder®), a unique AI system for natural language processing developed by FRONTEO, and Cascade Eye, a newly developed system which is capable of visualizing information on disease mechanism in the form of a pathway map, will be utilized in Chugai's drug discovery process.

"Researchers only have to enter a query or hypothesis that they want to validate to our AI-based drug discovery support system. Then, papers and relevant data will be instantly displayed. Cascade Eye is a newly developed innovative system that can objectively analyze information, including that on various molecules and genes relevant to diseases, and is capable of visualizing such information in the form of a pathway map," said Hiroyoshi Toyoshiba, FRONTEO's CTO, Life Science AI. Commenting on the collaboration, he added with expectation, "The combination of technologies owned by Chugai and FRONTEO will help create innovation in therapeutic areas in need of personalized healthcare and with high unmet medical needs[1]."

"Formulating CHUGAI DIGITAL VISION 2030, we are accelerating unique digital transformation in line with our management strategy. Utilization of AI in drug discovery research which is considered as the source of our corporate value, is one of the most important goals. Maximized utilization of FRONTEO's proprietary AI technologies for better understanding of diseases, as well as for discovery of etiologies left unspecified so far and identification of biomarkers, will shorten time required for development of innovative new drugs, increase probability of success, and improve overall process efficiency," said Satoko Shisai, Chugai's Vice President, Head of Digital & IT Supervisory Division.

Although impacts of the collaboration alone on results of FRONTEO for the business term ending in March 2021 are expected to be slight, it will be announced promptly if there is any situation requiring disclosure. The impacts on Chugai's consolidated financials for the fiscal year ending December 2020 are expected to be minimal.

*1: Strong demand for new therapeutic drugs and therapies for the treatment of diseases for which no effective therapy is currently available.

About Concept Encoder　URL: https://lifescience.fronteo.com/en/concept-encoder/

Concept Encoder (conceptencoder®) is a natural language processing AI (artificial intelligence) system developed by FRONTEO specifically for use in the life sciences field. It was developed in 2018 with the aim of effective, evidence-based analysis and utilization of medical data containing large amounts of free-entry text data. Concept Encoder is also capable of co-analysis with data other than text, and research efforts are underway to co-analyze numerical data such as gene expression information, vital data, and various other test values accumulated in the life sciences domain. Patent Registration Number: Patent No. 6346367

About CHUGAI DIGITAL VISION 2030

URL: https://www.chugai-pharm.co.jp/profile/digital/index.html (Japanese only)

In CHUGAI DIGITAL VISION 2030, Chugai has set its goal for 2030 to transform its business by using digital technologies to make Chugai a top innovator in the provision of society-changing healthcare solutions. Based on the three basic strategies consisting of 1) Strengthen digital platform, 2) Optimize all value chains, and 3) Digital transformation for drug discovery and development, the company aims to transform its business and provide society-changing healthcare solutions.

About Chugai　URL: https://www.chugai-pharm.co.jp/english/

Chugai Pharmaceutical is one of Japan's leading research-based pharmaceutical companies with strengths in biotechnology products. Chugai, based in Tokyo, specializes in prescription pharmaceuticals and is listed on the 1st section of the Tokyo Stock Exchange. As an important member of the Roche Group, Chugai is actively involved in R&D activities in Japan and abroad. Specifically, Chugai is working to develop innovative products which will satisfy unmet medical needs.

About FRONTEO　URL: https://www.fronteo.com/en/

FRONTEO, Inc. is a data analysis company that supports information analysis with its proprietary natural language processing AI (artificial intelligence) engines "KIBIT ®" and "conceptencoder®." Established in August 2003 as a company to support e-discovery (electronic evidence discovery), which supports evidence preservation, investigation, and analysis of electronic data necessary for legal matters such as international lawsuits, as well as digital forensic investigations, FRONTEO has applied its proprietary technologies such as its data analysis platforms to assist in roughly 10,000 international litigation measures to date. The AI-related technologies cultivated in the legal business have also been expanded to areas such as life sciences and business intelligence, and have achieved results in drug discovery research support, diagnostic support, and work style reforms. Listed on TSE Mothers on June 26, 2007. Capital of 2,568,651,000 yen (as of March 31, 2020).

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