

## **Aichi Medical University, Nippon Zoki Pharmaceutical Co., Ltd., and FRONTEO Healthcare, Inc. Begin Joint Research on Creating an AI System to Guide Pain Management**

*Treatment of pain will be guided by the KIBIT artificial intelligence engine. Judgment criteria of a multidisciplinary chronic pain management team will be utilized to develop algorithms for the diagnosis and management of chronic pain.*

May 8, 2017 -- Aichi Medical University, Nippon Zoki Pharmaceutical Co., Ltd., and FRONTEO Healthcare, Inc. (“FRONTEO Healthcare”), a subsidiary of FRONTEO, Inc. (NASDAQ:FTEO) (TSE:2158) that provides medical data analysis solutions using the artificial intelligence (“AI”) engine “KIBIT”, announced today that the three parties have begun their joint research to develop an AI system that supports the diagnosis and management of chronic pain.

Chronic pain arises from a spectrum of both known and unknown etiologies. In addition to the tremendous morbidity which results, it is also a major driver of the increase in healthcare costs. Optimal diagnosis and treatment of chronic pain requires a multidisciplinary approach encompassing medical, neurological, psychosocial, and occupational expertise. As Japan is an aging society with high stress levels, the number of patients with chronic pain is expected to increase dramatically over the next few decades.

Aichi Medical University established Japan’s first multidisciplinary management and research facility for chronic pain, the Multidisciplinary Pain Center (the “Pain Center”). The Pain Center includes anesthesiologists, orthopedic surgeons, psychiatrists, nurses, physiotherapists, and clinical psychologists, all highly focused on the management of pain. In addition, approximately 7,000 patients are cared for annually at the Pain Center.

The KIBIT joint research will develop algorithms focused on the diagnosis and treatment of chronic pain. Aichi Medical University will provide anonymous medical records of patients with pain and their corresponding multidisciplinary management. FRONTEO Healthcare will be responsible for the analysis and optimization of algorithms incorporating this knowledge base into KIBIT. Nippon Zoki will provide financial support and business development expertise. After a one-year initiation phase, the involved parties will proceed with the development of a commercialized diagnostic platform to support pain management in Japanese clinics and hospitals. Ultimately, this project will enable better and more cost effective care of pain management across Japan.

### **About Aichi Medical University**

Aichi Medical University opened in 1972 as a single-subject university having only a medical department, with the primary founding principle of “training physicians that can respond to the needs of a new age, and providing medical service to the local community.” In the year 2000, with the opening of the Department of Nursing in order to “train nursing staff with a broad perspective and high level of education, to respond rapidly and proactively to a variety of

social needs,” it became a medical university with two departments. The ethos and objective of the university is “to train personnel to work in medicine and healthcare in a new era, within a fully-equipped education and research environment, and to contribute to social welfare, particularly regional healthcare, and cooperate to international progress and improvements in healthcare, reflecting the characteristics of a private university.” Aichi Medical University will continue to develop these activities even further in the future, with the fundamental policy of being “a winning medical university that is highly regarded in society,” and work on new reforms to reach greater heights in all areas, whether in education, research or treatment, to win out in the modern competitive age.

URL: <http://www.aichi-med-u.ac.jp/english/>

#### **About Nippon Zoki Pharmaceutical Co., Ltd.**

Founded over 75 years ago, with the motto of “Creativity and Safety,” Nippon Zoki Pharmaceutical Co., Ltd. is a research-and-development-based pharmaceutical manufacturer involved in the development, manufacture and sale of prescription pharmaceuticals and drugstore pharmaceuticals rooted in the needs of patients and physicians, mainly in the fields of pain treatment, skin disease, and allergic disease. Its drug Neurotropin is recommended by the Japan Society of Pain Clinicians as the first-line treatment for post-herpetic neuralgia, and boasts top-class figures among analgesics for domestic prescriptions and sales. In addition to the Japanese market, in 1994 Nippon Zoki expanded its business to China, and is developing its business manufacturing and selling its own products in the ASEAN market, centered on the business in Vietnam it started in 2008. In the future, it aims to move into the health-tech business, including management of patient healthcare, support for treatment by healthcare professionals, and the development of software healthcare devices to reduce workloads, to contribute further to clinical practice.

URL: <http://www.nippon-zoki.co.jp/e>.

Name: Nippon Zoki Pharmaceutical Co., Ltd.  
Established: October 9, 1940  
Capital: 100 million yen  
Representative: CEO/President Ryusaku Konishi  
Area of business: Manufacture and sale of prescription pharmaceuticals  
Manufacture and sale of general pharmaceuticals  
Production plant (precision machinery) business

#### **About FRONTEO, Inc.**

FRONTEO, Inc. (“FRONTEO”) (Nasdaq:FTEO) (TSE:2158) supports the analysis of big data based on behavior informatics by utilizing its technology, “KIBIT”. FRONTEO’s KIBIT technology is driven by FRONTEO artificial intelligence based on knowledge acquired through its litigation support services. KIBIT incorporates experts’ tacit knowledge, including their experiences and intuitions, and utilizes that knowledge for big data analysis. FRONTEO continues to expand its business operations by applying KIBIT to new fields such as healthcare and marketing. FRONTEO was founded in 2003 as a provider of e-discovery and international litigation support services. These services include the preservation, investigation and analysis of evidence materials contained in electronic data, and computer forensic investigation. FRONTEO provides e-discovery and litigation support by making full use of its

data analysis platform, "Lit i View", and its Predictive Coding technology adapted to Asian languages. The company name was changed from UBIC, Inc. to FRONTEO, Inc. as of July 1, 2016.

URL: <http://www.fronteo.com/global/>.

For more information about this research project, contact [global\\_pr@fronteo.com](mailto:global_pr@fronteo.com) or [information@nippon-zoki.co.jp](mailto:information@nippon-zoki.co.jp)