

November 19, 2018

FRONTEO Healthcare Announces a New Technology Utilizing Its “Concept Encoder” AI System --Targeted at New Candidate Medications Discovery

By leveraging natural language processing technology based on vector operation, the technology allows researchers to produce a wide range of outputs that relate to their hypotheses, and to shorten time to find drug candidate chemical compounds

TOKYO, November 19, 2018 -- FRONTEO Healthcare, Inc., a subsidiary of FRONTEO, Inc. (“FRONTEO”) (NASDAQ: FTEO) (TSE: 2158), that provides information analysis solutions utilizing artificial intelligence (AI) for healthcare and nursing care, announced today that the “New Candidate Medications Discovery” technology using its proprietary AI engine “Concept Encoder” (patent No. 6346367). The AI engine is designed specifically for the healthcare industry, and features objectivity, transparency and reproducibility.

The main feature of this technology is to enable researchers developing new drugs and medicines at pharmaceutical companies to discover the relevance between their hypotheses and the “descriptions of documentary records” found in open databases, and to find needed information by adding and/or subducting words and/or documents. It allows researchers to get to new, specific target drug candidates by finding out the diseases that could be relevant to their new hypotheses and the relativity with the drugs that change similar genes. The “elimination of heavy processing facilities” is also the key element of this technology, as “Concept Encoder” requires no super computers or large-scale servers to conduct analysis.

AI is actively used in and outside of Japan to simulate the actions of drug candidate chemical compounds leveraging open database information. Some domestic companies have already adopted this method to enhance the efficiency of their research and development operations. However, the information analysis solution we offer based on our AI engine “Concept Encoder” is very innovative and is different from the above-mentioned simulations.

Specifically, “Concept Encoder” is designed to learn the text information of study reports (documentary records) together with open database information. Once the hypotheses from researchers are prepared in natural language, they are put into “Concept Encoder”. Then, the intensity of relevance with the target gene networks, etc. related to the hypotheses is displayed in a visualized format as scores (numerical values). This technology may also suggest new diseases that can be closely related to certain chemical compounds. In addition to this, it can produce a wide range of outputs as it is not limited to conventional database searching.

Moreover, vectorization allows “Concept Encoder” to freely remove unnecessary factors, such as certain diseases and target gene networks related to existing medicine, as well as conduct analysis based on the differentials only. This is another major strength of “Concept Encoder”, enabling accelerated discoveries of chemical compounds as new candidate medication.

Drug research and development sections at major pharmaceutical companies routinely check research papers and open databases to update information for discovering new candidate drugs as early as possible and ahead of competitors. On the other hand, this custom presents a serious problem since this process consumes considerable time and labor of the researchers involved.

Around the world there are many open databases of genes, proteins and compounds that provide the foundation for the development of medicines. The key to enhancing the operational efficiency of researchers lies in whether “real” methods (in vivo/ in vitro analysis) — experiments using animals and cultured cells etc.—can be replaced by “virtual” means (in silico analysis) that include computer simulations utilizing databases or extracting target information from open information with pin-point accuracy.

Incorporating natural language processing to vectorize the contents of the documentary records to explorer information found in databases and documentary records is technology independently developed by FRONTEO Healthcare. This highly versatile technology is expected to be applicable not only to the area of candidate drug discovery, but also to analyze a wide range of networks.

FRONTEO Healthcare will continue its endeavors in contributing to the development of the healthcare industry as a whole by creating and providing information analysis solutions based on “Concept Encoder” AI system.

About Concept Encoder URL: <https://www.fronteo-healthcare.com/conceptencoder>
Concept Encoder is the AI system developed by FRONTEO Healthcare specifically for the healthcare industry. The system was developed with the aim of effective, evidence-based analysis and utilization of healthcare-related big data, including large bodies of free-entry text data. The program incorporates significance tests and other crucial statistical methods for evidence-based medicine (EBM), the gold standard of practice among healthcare professionals, and applies this to natural language analysis. The Concept Encoder can also co-analyze non-textual data, and a research effort is underway to co-analyze the numerical data accumulated within the healthcare domain, such as genetic expression, vital data, and other test result values prevalent in the healthcare domain. Patent Number: 6346367

Overview of FRONTEO Healthcare, Inc.

Name: FRONTEO Healthcare, Inc.

Date of foundation: April 16, 2015

Capital amount: JPY 327,000 thousand (On the date of February 1, 2017)

Representative: Kuniko Nishikawa, Chief Executive Officer

Area of business:Diagnosis support, healthcare operational support, pharmaceutical industry support, and other healthcare-related information analysis businesses

URL: <https://www.fronteo-healthcare.com/en/>

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.

For more information about FRONTEO, contact global_pr@fronteo.com or visit <http://www.fronteo.com/global/>.

Safe Harbor Statement

This announcement contains forward-looking statements. These forward-looking statements are made under the "safe harbor" provisions of the U.S. Private Securities Litigation Reform Act of 1995. These statements can be identified by terminology such as "will," "expects," "anticipates," "future," "intends," "plans," "believes," "estimates" and similar statements. Among other things, the amount of data that FRONTEO expects to manage this year and the potential uses for FRONTEO's new service in intellectual property-related litigation, contain forward-looking statements. FRONTEO may also make written or oral forward-looking statements in its reports filed with, or furnished to, the U.S. Securities and Exchange Commission, in its annual reports to shareholders, in press releases and other written materials and in oral statements made by its officers, directors or employees to third parties. Statements that are not historical facts, including statements about FRONTEO's beliefs and expectations, are forward-looking statements. Forward-looking statements involve inherent risks and uncertainties. A number of factors could cause actual results to differ materially from those contained in any forward-looking statement, including but not limited to the following: FRONTEO's goals and strategies; FRONTEO's expansion plans; the expected growth of the data center services market; expectations regarding demand for, and market acceptance of, FRONTEO's services; FRONTEO's expectations regarding keeping and strengthening its relationships with customers; FRONTEO's plans to invest in research and development to enhance its solution and service offerings; and general economic and business conditions in the regions where FRONTEO provides solutions and services. Further information regarding these and other risks is included in FRONTEO's reports filed with, or furnished to the Securities and Exchange Commission. FRONTEO does not undertake any obligation to update any forward-looking statement, except as required under applicable law. All information provided in this press release and in the attachments is as of the date of this press release, and FRONTEO undertakes no duty to update such information, except as required under applicable law.

CONTACT: FRONTEO Global PR
global_pr@fronteo.com