

Chugai Enters into Comprehensive Partnership Agreement with Preferred Networks

TOKYO, July 26, 2018 -- <u>Chugai Pharmaceutical Co., Ltd.</u> (TOKYO: 4519, Chugai) and <u>Preferred Networks, Inc.</u> (PFN) announced today that they have entered into a comprehensive partnership agreement aiming to create new values in innovative drugs and services.

Under the corporate slogan, "INNOVATION BEYOND IMAGINATION," Chugai strives to contribute to global healthcare through innovation. As the rapid progress of Internet of Things (IoT) and Artificial Intelligence (AI) has greatly changed the society, unprecedented innovation possibilities have expanded also in life sciences with integration of these technologies and existing ones. Following this trend, we decided to build a comprehensive partnership with PFN, a global leading company of AI technology known for "Chainer™," a deep learning framework, seeking to create new values by applying cutting-edge data analysis technologies, as well as expertise, technologies and data accumulated by Chugai.

In this partnership, we will select projects to which the cutting-edge data analysis technologies offered by PFN are applicable from our business activities which places "Technology-driven drug discovery" as a core element, and pursue for results in several collaborative projects. In addition to projects which aim to solve existing challenges, the partnership is designed to accommodate more exploratory initiatives as well. With this framework, the potential of innovations will be broadly discussed so as to bring about new values including innovative drugs and solutions for various medical need. Furthermore, Chugai will make an investment of about 7 hundred million yen as a subscription of third-party allocation of shares of PFN along with the comprehensive partnership agreement.

PFN promotes advanced initiatives in cooperation with leading companies and organizations of each industry, focusing on industrial utilization of the deep learning technology. This comprehensive partnership allows PFN to further broad activities in the biotechnology and healthcare area which is positioned as its priority area.

"We are very pleased to have concluded the comprehensive partnership agreement with PFN, a world-leading company in the development of deep learning frameworks and software," said Nobuya Ishii, Chugai's Department Manager of Science & Technology Intelligence Dept., Project & Lifecycle Management Unit. "PFN's advanced technologies allow us to take new approaches which are different from our conventional methods in R&D and value chain activities. I hope that we can yield fruitful results leading to innovative drugs and services as much as possible in all stages including drug discovery, development, and manufacturing."

"I am very glad to have signed the comprehensive partnership agreement with Chugai, a leading

company in creating innovative drugs. With expertise and performance Chugai have cultivated in pharmaceutical business and PFN's technologies together, we strive to create new drugs and services which are not seen yet," said Daisuke Okanohara, PFN's Representative Director & Executive Vice President.

About Chugai

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 may satisfy the unmet medical needs, mainly focusing on the oncology area.

In Japan, Chugai's research facilities in Gotemba and Kamakura are collaborating to develop new pharmaceuticals and laboratories in Ukima are conducting research for technology development for industrial production. Overseas, <u>Chugai Pharmabody Research</u> based in Singapore is engaged in research focusing on the generation of novel antibody drugs by utilizing Chugai's proprietary innovative antibody engineering technologies. <u>Chugai Pharma USA</u> and <u>Chugai Pharma Europe</u> are engaged in clinical development activities in the United States and Europe.

The consolidated revenue in 2017 of Chugai totaled 534.2 billion yen and the operating income was 103.2 billion yen (IFRS Core basis).

Additional information is available on the internet at https://www.chugai-pharm.co.jp/english/.

About Preferred Networks Inc.

Founded in March 2014 with the aim of business utilization of deep learning technology focused on IoT, PFN advocates Edge Heavy Computing as a way to handle the enormous amount of data generated by devices in a distributed and collaborative manner at the edge of the network, driving innovation in various fields, with a focus on three business areas: transportation, manufacturing, and bio/healthcare.

PFN develops and provides Chainer[™], an open source deep learning framework. PFN promotes advanced initiatives by collaborating with world leading organizations, such as Toyota Motor Corporation, Fanuc Corporation, National Cancer Center. (https://www.preferred-networks.jp/en)

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Contact:

For Media

Chugai Pharmaceutical Co., Ltd.

Media Relations Group, Corporate Communications Dept.,

Tomoko Shimizu

Tel: +81-3-3273-0881

E-mail: pr@chugai-pharm.co.jp

For Investors

Chugai Pharmaceutical Co., Ltd.

Investor Relations Group, Corporate Communications Dept.,

Toshiya Sasai

Tel: +81-3-3273-0554

E-mail: <u>ir@chugai-pharm.co.jp</u>