

January 30, 2020

Sumitomo Dainippon Pharma Co., Ltd.
Exscientia Ltd

Sumitomo Dainippon Pharma and Exscientia Joint Development New Drug Candidate Created Using Artificial Intelligence (AI) Begins Clinical Study

Sumitomo Dainippon Pharma Co., Ltd. (Head office: Osaka, Japan, Representative Director, President and CEO: Hiroshi Nomura) and Exscientia Ltd. (Headquarters: Oxford, UK; CEO: Andrew Hopkins) announce that a phase I clinical study of DSP-1181, that was created using Artificial Intelligence (AI), has been initiated in Japan for the treatment of obsessive-compulsive disorder as an initial indication.

DSP-1181 was created through the joint research by Sumitomo Dainippon Pharma and Exscientia, with Sumitomo Dainippon Pharma providing its experience and knowledge in monoamine GPCR drug discovery and Exscientia applying its Centaur Chemist™ Artificial Intelligence (AI) platform for drug discovery. This project was delivered by the strong synergy of the joint research, requiring less than 12 months to complete the exploratory research phase, just a fraction of the typical average of 4.5 years using conventional research techniques.^{ref)}

DSP-1181 is being progressed as a long-acting and potent serotonin 5-HT_{1A} receptor agonist, and its phase I clinical study to treat obsessive-compulsive disorder as an indication candidate. Through this, Sumitomo Dainippon Pharma has expanded its development pipeline to treat key unmet medical needs in the Psychiatry and Neurology area, one of the company's three focus research areas.

Toru Kimura, Board of Directors, Senior Executive Officer and Senior Executive Research Director of Sumitomo Dainippon Pharma, said: "We are very excited with the results of the joint research that resulted in the development of candidate compounds in a very short time. Exscientia's sophisticated AI drug discovery technologies combined with our company's deep experience in monoamine GPCR drug discovery, allowed us to work synergistically, delivering a highly successful outcome. We will continue to work hard to make this clinical study a success so that it may deliver new benefits to patients as soon as possible."

Andrew Hopkins, CEO of Exscientia, said: "We believe that this entry of DSP-1181, created using AI, into clinical studies is a key milestone in drug discovery. This project's rapid success was through strong alignment of the integrated knowledge and experiences in chemistry and pharmacology on monoamine GPCR drug discovery at Sumitomo Dainippon Pharma with our AI technologies. We are proud that our AI drug discovery platform Centaur Chemist™ has contributed to generate DSP-1181 and look forward to its progression as a treatment for obsessive-compulsive disorder."

Terms:

Monoamine GPCR drug discovery

Drug discovery targeting G protein-coupled receptor (GPCR), endogenous ligands of which are monoamine neurotransmitters such as serotonin, dopamine and norepinephrine

Obsessive-compulsive disorder

OCD is a psychiatric disorder characterized by the presence of obsessions (repetitive and persistence thoughts, images, or urges) and/or compulsions (repetitive behaviors or mental acts). OCD is associated with reduced quality of life as well as high levels of social and occupational impairment as a result of time-consuming (e.g., take more than 1 hour per day) by obsessions or compulsions. The mechanism of OCD has not been clarified, however dysfunction in the orbitofrontal cortex, anterior cingulate cortex, and striatum have been most strongly implicated. The

number of patients in Japan and the United States is estimated to be over 1 million and around 3 million, respectively.

Reference

Paul SM et al "How to improve R&D productivity: the pharmaceutical industry's grand challenge"
Nature Review Drug Discovery 2010

About Sumitomo Dainippon Pharma Co., Ltd

Sumitomo Dainippon Pharma defines its corporate mission as "to broadly contribute to society through value creation based on innovative research and development activities for the betterment of healthcare and fuller lives of people worldwide". By pouring all our efforts into the research and development of new drugs, we aim to realize our corporate mission and provide innovative and effective pharmaceutical solutions to people not only in Japan but also around the world. Sumitomo Dainippon Pharma's goal is to create innovative pharmaceutical products in the focus research areas of Psychiatry & Neurology, Oncology and Regenerative Medicine/Cell Therapy.

About Exscientia Ltd

Exscientia is a global Artificial Intelligence (AI)-driven drug discovery company. Centaur Chemist™ platform, fusing the power of the original AI with the experience of seasoned drug hunters, enables breakthrough productivity gains as well as new approaches to improve drug efficacy. Novel compounds are automatically designed and prioritised for synthesis by its AI systems, which rapidly evolve compounds towards the desired candidate criteria for clinical development. For more information visit us on www.exscientia.ai or follow us on Twitter @exscientialtd.

Contacts:

Sumitomo Dainippon Pharma Co., Ltd.

Corporate Communications

TEL: +81-6-6203-1407 (Osaka), +81-3-5159-3300 (Tokyo)

Exscientia Ltd.

Edelman PR

Marianne Fekene . +44(0) 7810298448

Camille Oster +44(0) 7812660934

exscientia@edelman.com

Mark Swindells - Chief Commercial Officer

Exscientia Ltd.

contact@exscientia.co.uk