

Servier and Iktos announce their successful collaboration in the field of artificial intelligence

Paris (France), January 29, 2019 - Servier, an independent pharmaceutical company, and Iktos, a company specialized in artificial intelligence (AI) technologies applied to chemistry, announced today the success of their first collaboration, which was designed to evaluate Iktos technology's potential to accelerate the discovery of promising new compounds in a real-life drug discovery project. The results of this collaboration were presented at the XXV EFMC International Symposium on Medicinal Chemistry held in Ljubljana from September 2 to 6, 2018. Servier and Iktos announce their intention to pursue their collaboration in the coming months, in line with Servier's strategy to invest strongly in AI technologies for new drug discovery.

The technology developed by Iktos, which is based on deep generative models, feeds on the data already generated in a research project to perform the design and optimization of new molecules meeting all project specifications *in silico*. This technology addresses one of the major issues encountered in early-stage pharmaceutical R&D: multi-parameter optimization, i.e., identification of molecules that simultaneously meet all *in vitro* criteria (pharmacological activity, selectivity, ADME, no toxicity) required for a preclinical drug candidate.

In the Servier-Iktos collaboration, Iktos technology was used to analyze a dataset of more than 800 molecules tested on 11 criteria, none of which met all the success criteria set for the project. The Iktos algorithm suggested 150 molecules virtually optimized for all objectives, 11 of which Servier synthesized and tested, with good results: more than 9/11 criteria were met in average, and one molecule met all 11 objectives.

Françoise Gellibert, head of Discovery Chemistry at Servier, declared: "*The results obtained with the molecules suggested by the Iktos algorithm for a very difficult project are promising. The algorithm can, within a short time frame, suggest new molecules that meet specifications, and we now wish to evaluate the time saving that this technology can bring to the life cycle of a research project with a smaller dataset.*"

"*We are particularly happy with these results, which provide real-life validation of Iktos technology and constitute the first demonstration of the potential of artificial intelligence in finding solutions to chemical optimization problems,*" said Yann Gaston-Mathé, CEO of Iktos. "*We are eager to initiate new projects with Servier, a leader in French pharma R&D, that will enable us to address new issues and to confirm the relevance of our technology to drug discovery.*"

Further to this initial success, Servier and Iktos announce their intention to pursue the collaboration. Iktos technology will be used to accelerate identification of drug candidates. For this purpose, Iktos will make its software Makya available for beta testing by a group of medicinal and computational chemists at Servier.



"With several partnerships in the field, Servier is actively investing in new artificial intelligence technologies for the discovery of new drugs. This collaboration with Iktos is an additional step in that direction and is in line with Servier's desire to acquire cutting-edge technologies to accelerate research for the benefit of patients," concludes Christophe Thurieau, Director of the Servier Research Institute.

About Servier

Servier is an international pharmaceutical company governed by a non-profit foundation, with its headquarters in France (Suresnes). With a strong international presence in 149 countries and a turnover of 4.152 billion euros in 2017, Servier employs 21,700 people worldwide. Entirely independent, the Group reinvests 25% of its turnover (princeps drugs) in research and development and uses all its profits for development. Corporate growth is driven by Servier's constant search for innovation in five areas of excellence: cardiovascular, immune-inflammatory and neuropsychiatric diseases, cancer and diabetes, as well as by its activities in high-quality generic drugs. Servier also offers eHealth solutions beyond drug development.

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About Iktos

Founded in October 2016, Iktos is a French start-up company specialized in the development of artificial intelligence solutions applied to chemical research, notably medicinal chemistry and new drug discovery. Iktos is developing a proprietary and innovative technology using deep learning generative models, which uses existing data to design molecules that are optimized *in silico* to meet all the objectives of a drug discovery project. The use of Iktos technology enables major productivity gains in early-stage pharmaceutical R&D. Iktos offers its technology to its clients both as services and as a software, Makya™.

More information on: www.iktos.ai

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