BioSpectrum the business of Bio & Health Sciences

AstraZeneca starts AI collaboration to accelerate drug discovery

01 May 2019 | News

Collaboration with BenevolentAI will use machine learning and artificial intelligence to discover potential new drugs for chronic kidney disease and idiopathic pulmonary fibrosis

AstraZeneca and BenevolentAI have begun a long-term collaboration to use artificial intelligence (AI) and machine learning for the discovery and development of new treatments for chronic kidney disease (CKD) and idiopathic pulmonary fibrosis (IPF).

Scientists from the two organisations will work side-by-side to combine AstraZeneca's genomics, chemistry and clinical data with BenevolentAI's target identification platform and biomedical knowledge graph – a network of contextualised scientific data (genes, proteins, diseases and compounds) and the relationship between them.

Machine learning systematically analyses data to find connections between facts, and AI-based reasoning is used to extrapolate previously unknown connections. Together, the companies will interpret the results to understand the underlying mechanisms of these complex diseases and more quickly identify new potential drug targets.

Mene Pangalos, Executive Vice President and President BioPharmaceuticals R&D, said: "The vast amount of data available to research scientists is growing exponentially each year. By combining AstraZeneca's disease area expertise and large, diverse datasets with BenevolentAI's leading AI and machine learning capabilities, we can unlock the potential of this wealth of data to improve our understanding of complex disease biology and identify new targets that could treat debilitating diseases."

Joanna Shields, Chief Executive Officer, BenevolentAI, said: "Millions of people today suffer from diseases that have no effective treatment. The future of drug discovery and development lies in bridging the gap between AI, data, and biology. We are thrilled to be joining forces with AstraZeneca to develop new insights and identify promising new treatments for chronic kidney disease and idiopathic pulmonary fibrosis."

CKD and IPF are complex diseases in which the underlying disease biology is poorly understood. This disease complexity requires the interrogation of vast, rich datasets.

BenevolentAI is a global AI leader focused on drug discovery. The company has developed the Benevolent Platform, an AI discovery platform which can be used by scientists to try to discover novel pathways and mechanisms important in the pathophysiology of disease.