Exscientia applies Genome scale AI-Drug Discovery to critical global health challenges - Company receives $4.2M grant from Bill & Melinda Gates Foundation to identify new targets and leads for malaria, tuberculosis, and non-hormonal contraception

December 10, 2020

This was initially released by Exscientia and published on their website

Exscientia, the world-leading artificial intelligence (AI) driven pharma-tech company, today announced funding from the Bill & Melinda Gates Foundation to apply its AI-driven Centaur platforms to the discovery of next-generation therapeutic targets and leads.

Through this partnership, Exscientia will use its Centaur Biologist™ platform to apply domain-specific implementations of knowledge graphs and deep learning algorithms to a diverse wealth of biological data. Responding to objectives set by Exscientia's scientists, the platform will prioritise opportunities ranging from existing under-appreciated targets to complex new dual-target opportunities where Exscientia's Centaur Chemist™ can then be applied to evolve novel bispecific small molecules.

By applying both Centaur systems at genome scale, this funding will promote innovative treatments for infectious diseases (malaria and tuberculosis) as well as new medicines for family planning (which are collectively the most effective way to reduce maternal and infant mortality) [1].

Andrew Hopkins, CEO of Exscientia said, "Exscientia is committed to applying AI to deliver transformational drugs for the benefit of all patients. Through our investments in Centaur Biologist™ we can now qualify targets objectively, at genome scale. Similarly, our Centaur Chemist™ platform can tackle a range of challenges, in particular the design of bispecific small molecules that can deliver an improved response through dual-targeting, by assessing thousands of possible target combinations. We are delighted to receive financial support from the foundation to develop much-needed first-in-class therapies to these disease areas to address key global health needs"

[1] Accelerating Discovery for Non-Hormonal Contraceptives. Bill & Melinda Gates Foundation
https://gcgh.grandchallenges.org/challenge/accelerating-discovery-non-hormonal-contraceptives

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Notes to the editors:

Infectious diseases: Enhancing drug efficacy and combating resistance

Malaria and tuberculosis remain leading causes of death worldwide. Prevalence is linked to a combination of poverty, continued unmet clinical need, treatment side-effects, emerging drug resistance, and high failure rates in research and development for next-generation medicines.

Infant, Child and Maternal Mortality:

Family planning plays an important role in reducing maternal, infant and child mortality. There have been significant improvements in the reproductive health of women in low resource settings, yet it is estimated that over 214 million women in developing countries still have an unmet need for modern contraception1. Exscientia's Centaur Biologist will apply advanced AI techniques including knowledge graphs and deep learning to extract insights from the public corpus and prioritise small-molecule tractable non-hormonal contraceptive (NHC) opportunities.

About Exscientia

Exscientia is a global leading Pharmatech company, using Artificial Intelligence (AI) to drive drug discovery and is the first AI company to have designed a novel molecule to enter the clinic. Founded in 2012, Exscientia fuses the power of AI with the experience of seasoned drug hunters. Exscientia's innovative Centaur Chemist® platform enables breakthrough productivity gains as well as new approaches to improve drug design. Novel compounds are automatically designed and prioritized for synthesis by its AI systems, which rapidly evolve compounds towards the desired candidate criteria for clinical development.

Exscientia's Centaur Biologist® platform drives the flexible analysis and prioritisation of discovery targets across all pharmaceutically relevant disease space. Exscientia is collaborating with several leading pharmaceutical and life sciences companies as well as building its own portfolio of innovative medicines. Exscientia has its headquarters in Oxford, England with further offices in Dundee, Scotland, the USA and Japan. For more information visit us on www.exscientia.ai or follow us on Twitter @exscientiaAI.

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