

GSK signs a deal with Exscientia to search for drug candidates for up to ten disease-related targets

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With GlaxoSmithKline unveiling a new \$43 million deal in the field on Sunday, the world's leading drug companies are turning to artificial intelligence to improve the business of finding new medicines.

Other pharmaceutical giants including Merck & Co, Johnson & Johnson and Sanofi are also exploring the potential of artificial intelligence (AI) to help streamline the drug discovery process.

According to a news reported by The Reuters, the aim is to harness modern supercomputers and machine learning systems to predict how molecules will behave and how likely they are to make a useful drug, thereby saving time and money on unnecessary tests.

AI systems already play a central role in other high-tech areas such as the development of driverless cars and facial recognition software.

Hopkins, who used to work at Pfizer, said Exscientia's AI system could deliver drug candidates in roughly one-quarter of the time and at one-quarter of the cost of traditional approaches.

The Scotland-based company, which also signed a deal with Sanofi in May, is one of a growing number of start-ups on both sides of the Atlantic that are applying AI to drug research. Others include U.S. firms Berg, Numerate, twoXAR and Atomwise, as well as Britain's BenevolentAI.

It is not the first time drugmakers have turned to high-tech solutions to boost R&D productivity.

The introduction of "high throughput screening", using robots to rapidly test millions of compounds, generated mountains of leads in the early 2000s but notably failed to solve inefficiencies in the research process.

When it comes to AI, big pharma is treading cautiously, in the knowledge that the technology has yet to demonstrate it can successfully bring a new molecule from computer screen to lab to clinic and finally to market.

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The new deal with Exscientia will allow GSK to search for drug candidates for up to 10 disease-related targets. GSK will provide research funding and make payments of 33 million pounds (\$43 million), if pre-clinical milestones are met.