**#HIMSS23Europe: Machine Learning in Drug Discovery**

In another session at HIMSSEurope23, Noor Shaker, Senior Vice President, X-CHEM, talked about the different ways to analyse and identify different candidates at the early stage of drug discovery and to deliver those treatments to patients.

She discussed how healthcare is seeing great innovation in the AI space and how AI is transforming biology and regions today. The drug discovery process is usually a long one - around 15 years and costs about $2.5 billion to deliver one drug to market. How can we identify novel chemicals and drugs for a specific population of patients?

According to Noor, AI is democratising access to technology in this area. Several companies have recently been working in this space with significant success and are discovering and designing new drug candidates using AI. These companies own this technology, and they develop and use it internally.

It is essential to find a way to deliver that technology to everyone - to every doctor and every chemist working on the discovery to allow them to identify and find novel drugs and deliver them to patients worldwide.

Noor talked about a platform they've built called Artemis AI. It is a very powerful AI that allows researchers to digest information about chemicals and clinical entities and others to identify the potency and toxic behaviour of those compounds. It is vital to see different characteristics of the compound that help chemists to determine which ones are likely to work and clinical trials.
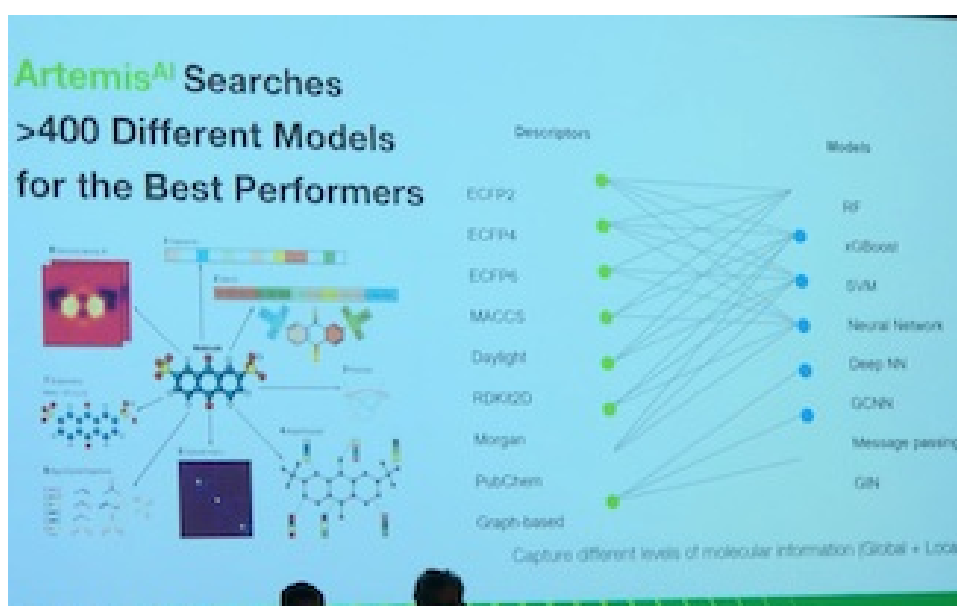
This technology was built over the past three years in a way that is scalable so that AI engineers can design entities from scratch. It provides analytics tools and allows us to profile chemicals and identify those likely to work in late clinical stages.

Noor pointed out that X-Chem is all about identifying novel starting points for drugs for different diseases. With its headquarters in Boston and

offices in Hungary, London, and Montreal, they are working with the top ten pharmaceutical companies and forming a global footprint. They are working on developing the ability to identify those drugs using AI. This way, we aim to deliver novel drugs faster, cheaper, and more effectively to target different diseases.

Source: HIMSS23Europe

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