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French firm Depixus collaborates with Japan's Daiichi Sankyo to accelerate RNA-targeted drug discovery

December 12, 2023 | News

Daiichi Sankyo will use MAGNA to explore the interactions of lead molecules with a number of undisclosed RNA targets



Interactomics pioneer Depixus, based in Paris, has entered a collaboration with Daiichi Sankyo to use their novel MAGNA technology to accelerate the Japanese healthcare leader's RNA-targeted drug discovery programme.

Based on magnetic force spectroscopy, MAGNA is a unique technology that enables high-throughput analysis of dynamic biomolecular interactions in real time with single-molecule resolution. In the case of RNA, these insights reveal how small molecules and proteins bind to three-dimensional RNA structures and provide valuable information about binding kinetics and mode of action.

The team at Daiichi Sankyo will use MAGNA to explore the interactions of lead molecules with a number of undisclosed RNA targets. This data will inform hit-to-lead selection and lead optimization, accelerating and de-risking the company's RNA-targeted therapeutics pipeline as they move towards the clinic.

Unlike other analytical techniques that provide static snapshots, averaged bulk data or indirect measurements of molecular interactions, MAGNA generates direct readouts of dynamic binding and conformational changes from thousands of individual molecules. It can be used to study a wide range of molecular interactions – for example, between DNA, RNA, proteins and small molecule therapeutics – with applications in areas such as RNA-targeted drug discovery, protein-protein interactions, PROTACs and molecular glues.

Depixus is currently discussing collaborations with other global pharmaceutical and biotech partners to explore challenging novel targets and accelerate the next generation of life-changing therapeutics. The company is also aiming for the commercial launch of its MAGNA One instrument in 2024, bringing the power of interactomics to academic and industrial laboratories.