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XtalPi partners with Dong-A ST focusing on immunology and inflammation therapies

August 20, 2025 | News

Dong-A ST aims to expand its R&D scope beyond small molecule therapeutics



China-based startup XtalPi has signed a Memorandum of Understanding (MoU) with Korea's leading pharmaceutical company Dong-A ST, to jointly develop therapeutics for immunological and inflammatory diseases.

This collaboration will be based on XtalPi's intelligent and automated drug discovery platform, which integrates artificial intelligence (AI), quantum physics, and large-scale automated robotic experiments.

The two companies plan to co-identify targets and discover first-in-class or best-in-class drug candidates using XtalPi's proprietary AI-driven drug discovery platform. The XtalPi platform combines the speed and generative power of AI with the accuracy of its robotic lab-in-the-loop to accelerate drug discovery and vastly expand the explorable chemical space.

This integrated workflow spans deep-learning-based molecule design, quantum physics and molecular dynamics simulations for predicting drug-target interactions, automated chemical synthesis, and experimental validation of candidate compounds' key pharmaceutical properties.

Leveraging its expertise in immunology and inflammation as well as its experience in small molecule drug development, Dong-A ST will actively participate throughout the entire R&D process—including candidate validation, efficacy and safety testing, and the formulation of preclinical and clinical development strategies. The company also plans to explore strategies for pipeline expansion and assess commercialisation potential.

Through this partnership, Dong-A ST aims to strengthen its pipeline in the immunology and inflammation space and expand its R&D scope beyond small molecule therapeutics into areas such as targeted protein degradation (TPD), biologics, antibody-drug conjugates (ADC), and gene therapies.

Meanwhile, both Dong-A ST and XtalPi operate open innovation offices in Boston, USA. This geographic proximity will facilitate closer and more efficient collaboration throughout the drug discovery process.