UCB News

UCB partners with Ailux Biologics, a Division of XtalPi, on Biologics AI Platform

- Computational advancements enable earlier and more widespread use of antibodyantigen structural insights across drug discovery process
- These advancements have the potential to transform antibody discovery methods, broadening therapeutic applications and accelerating the development of innovative molecules

BRUSSELS (BELGIUM) and CAMBRIDGE, MA (US), January 9th, 2025: UCB, a global biopharmaceutical company, and XtalPi, a global leader in AI drug discovery, today announced a license agreement on XtalFold[™], a biologics AI platform developed by Ailux Biologics, a division of XtalPi.

Under the agreement, Ailux Biologics grants UCB a non-exclusive license to leverage XtalFold[™] for the discovery and engineering of biologics. XtalFold[™] is a proprietary AI-based software suite that provides rapid and accurate structural insights to accelerate biologics innovation across multiple phases.

"UCB has long been a pioneer in leveraging computation to develop highly differentiated biologics that benefit patients." stated Jian Ma, PhD, CEO of XtalPi, "We are proud to contribute to their efforts in creating therapies that transform lives." Yi (Alex) Li, VP of XtalPi and Head of Ailux Biologics, said: "The recent Nobel Prize highlighted the groundbreaking impact of protein structure prediction. XtalFold™ exemplifies this innovation, offering a commercially validated solution with rapid industry adoption. We're excited to join forces with UCB to further explore its potential."

XtalFold™ utilizes sequence information alone to model the interaction between biomolecules, which forms the foundation of biotherapeutics like monoclonal antibodies. In rigorous benchmark studies, XtalFold™ achieved state-of-the-art performance in terms of overall success rate and the quality of hard-to-model regions like the antibody-antigen interface. XtalFold™ has been licensed to multiple global pharmaceutical companies and has delivered highly impactful results in a variety of projects, including antigen design, epitope identification, affinity maturation, pH-sensitivity engineering, and bispecifics design.

"UCB have a strong legacy of antibody discovery and engineering. We have established unique and powerful single-B cell screening and in vitro display discovery technologies to support hit identification and are pioneers in structure-based and computer-aided optimisation of molecules. The XtalFold™ license takes this further, integrating antibody-antigen structural insights into the entire antibody discovery and optimisation workflow," said Daniel Lightwood, Head of Antibody Discovery and Optimisation. Alexander Hillisch, Head of Global CADD, UCB added, "Our decision to license this tool comes after extensive testing and evaluation against other computational approaches and we believe it has the potential to enhance UCB's ability to rapidly and efficiently discover high quality therapeutic antibody candidates and ultimately deliver new medicines to patients."



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About UCB

UCB, Brussels, Belgium (www.ucb.com) is a global biopharmaceutical company focused on the discovery and development of innovative medicines and solutions to transform the lives of people living with severe diseases of the immune system or of the central nervous system. With approximately 9,000 people in approximately 40 countries, the company generated revenue of €5.3 billion in 2023. UCB is listed on Euronext Brussels (symbol: UCB). Follow us on Twitter: @UCB news.

About XtalPi

XtalPi is a quantum physics-based, AI-powered, and robotics-driven, innovative R&D platform company. Established in 2015 by three physicists at Massachusetts Institute of Technology (MIT), the company is dedicated to driving intelligent and digital transformation in the life sciences and materials sciences sectors. XtalPi combines quantum physics, AI, cloud computing, and large-scale robotics to provide R&D solutions, services, and products for biomedicine, chemical, renewable energy and advanced materials industries globally.

About Ailux Biologics

Ailux Biologics is a division of XtalPi dedicated to the innovation in large molecule drug discovery. With a team of around 100 experts, Ailux has established a state-of-the-art biologics discovery lab, a proprietary database purpose-built for AI (AtlaXTM) and a trio of AI platforms, including a structure modeling suite (XtalFoldTM), a generative large language model for proteins (XenProTTM) and a predictive AI suite for biologics (XentientTM). Ailux partners with pharma and biotech companies to accelerate their biologics programs with AI-powered, lab-validated solutions.

For further information

UCB

Global R&D Communications - Scott Fleming; Scott.fleming@ucb.com / T +44 7702777378

Corporate Communications, Media Relations - Laurent Schots laurent.schots@ucb.com / T +3225599264

Investor Relations - Antje Witte antje.witte@ucb.com / T +3225599414

