BioSpectrum the business of Bio & Health Sciences ASIA EDITION

Astellas strengthens immuno-oncology portfolio by acquiring Xyphos

December 27, 2019 | News

Acquisition adds talent and proprietary therapeutic platform to accelerate next-generation cancer immunotherapy



Japan based Astellas Pharma Inc. and US headquartered Xyphos Biosciences, Inc. have announced that Astellas has acquired Xyphos. With the acquisition Astellas will gain Xyphos' novel and proprietary ACCEL (Advanced Cellular Control through Engineered Ligands) technology platform, as well as industry-leading immuno-oncology talent, to develop new and potentially better ways to mobilize, target and control immune cells to find, modulate and destroy targeted cells throughout the body.

"At Astellas, immuno-oncology is a Primary Focus of our research and development strategy, and we are working on the development of next-generation cancer immuno-therapy using new modalities/technologies," said Kenji Yasukawa, President and CEO, Astellas. "The innovative technology in development at Xyphos fits perfectly in advancing our immuno-oncology strategy to create and deliver value for patients. Combining this technology with our capabilities in cell therapy that we have been working on so far, we can create next-generation high-function cells and maximize the value of our technology. We look forward to working with Xyphos' superb team to advance and expand their clinical development programs to bring their novel therapeutics to patients."

"At Xyphos, we are driven to advance our innovative cell therapy technology platform as an exciting new approach to potentially manage and cure cancer," said James Knighton, Chief Executive Officer, Xyphos. "Astellas' commitment to immuno-oncology makes them an ideal partner to advance our proprietary NKG2D-based NK-cell and T-cell platform to the next stage of clinical exploration. Further, we look forward to becoming part of Astellas to accelerate this immuno-oncology research and development in the vibrant South San Francisco community."

Xyphos has developed a flexible and versatile synthetic biology platform to direct cells of the immune system to target single or multiple tumor antigens while controlling the immune cell proliferation and endurance. Xyphos's proprietary molecules can be delivered to natural immune cells or to engineered Chimeric Antigen Receptor (CAR) cells to generate immunotherapies for oncology. Xyphos' patented CAR technology is based on an engineered modification to a natural human receptor named NKG2D. NKG2D exists on natural killer (NK) cells and some T-cells. The designed modification of NKG2D renders it inert, that is, unable to bind to any of its natural ligands, which occur on stressed cells. Through further protein engineering, several natural ligands of NKG2D have been modified to bind exclusively to the otherwise inert NKG2D receptor. Various functional molecules (for example, antibodies that recognize specific tumor antigens) are attached to the modified ligand. The ligand-directed functional molecules then bind exclusively to immune cells expressing the inert CAR on their surface – the proprietary *convertible*CAR®-cells. The CAR-cells can be directed by the ligand-bound antibody to seek, become activated

and attacks a targeted cancer cell. Xyphos' first *convertible* CAR-T cell product candidate is in preclinical development and scheduled to be tested in a first-in-human clinical study in 2021.

Considering the acquisition, $ 120 million was paid upon closing of the acquisition, and Xyphos became a wholly owned subsidiary of Astellas. In addition to this payment and potential future development milestone payments, it will provide a total transaction value of $ 665 million.

The impact of this transaction on Astellas' financial results in the fiscal year ending March 31, 2020 will be limited.