

Press Release

Astellas and Pantherna Enter into a New Technology Evaluation Agreement for Research with Expanded Target Organ to Generate mRNA-Based Regenerative Medicine Programs Using Direct Reprogramming

TOKYO and Hennigsdorf, Germany, October 4, 2022 - Astellas Pharma Inc. (TSE:4503, President and CEO: Kenji Yasukawa, Ph.D., “Astellas”) and Pantherna Therapeutics GmbH (CEO: Klaus Giese, Ph.D., “Pantherna”) today announced that the companies have entered into a new technology evaluation agreement for research to generate mRNA-based regenerative medicine programs using direct reprogramming (transdifferentiation)*.

This agreement expands the scope of the technology evaluation agreement for research, which [Astellas and Pantherna entered into in 2021](#), to include new target organ.

Pantherna owns a proprietary platform of state-of-the-art, unique mRNA molecules (PTXmRNAs) for enhancing the efficiency of mRNA actions in the body. Under the new agreement, Pantherna’s mRNA platform and Astellas’ world-class drug discovery capabilities will be combined to promote research on the generation of regenerative medicine programs for new target organ using a direct reprogramming approach. Astellas will be responsible for providing drug discovery ideas, preparing candidate compounds for technology evaluation, and performing research aimed at developing this therapeutic modality, while Pantherna will be responsible for providing technical information and development support.

“We are excited about this expansion of our collaboration with Astellas,” said Pantherna’s Chief Executive Officer, Klaus Giese, Ph.D. “We feel honored that Astellas, as a leading pharmaceutical company, has underscored their interest in leveraging the unique aspects of our proprietary therapeutic mRNA technology.”

“Through this agreement, which expands the scope of our collaboration with Pantherna, we will create innovative regenerative medicine programs for new target organ, and we expect that we will be able to thereby expand the treatment options for

diseases with high unmet medical needs.” said Taiji Sawamoto, Ph.D., Executive Vice President, Applied Research & Operations, at Astellas. “The collaboration with Pantherna is an initiative which synergistically integrates Astellas' expertise with mRNA as a therapeutic modality and its capabilities cultivated in the research field of direct reprogramming, and will promote the development of next-generation treatments using a new modality/technology based on the Focus Area approach strategy.”

* Direct reprogramming: Direct conversion of the fate of cells without passing through the pluripotent state. <https://www.astellas.com/en/science/direct-reprogramming-research-unit>

About Astellas

Astellas Pharma Inc. is a pharmaceutical company conducting business in more than 70 countries around the world. We are promoting the Focus Area Approach that is designed to identify opportunities for the continuous creation of new drugs to address diseases with high unmet medical needs by focusing on Biology and Modality. Furthermore, we are also looking beyond our foundational Rx focus to create Rx+[®] healthcare solutions that combine our expertise and knowledge with cutting-edge technology in different fields of external partners. Through these efforts, Astellas stands on the forefront of healthcare change to turn innovative science into value for patients. For more information, please visit our website at <https://www.astellas.com/en>.

About Pantherna

Pantherna Therapeutics is a privately held biopharmaceutical company developing first-in-class therapeutics for vascular diseases. Pantherna's innovative technology platform is based on advanced lipid nanoparticles for the target-specific, selective delivery and expression of therapeutic mRNA drugs in organs and tissues such as the endothelium. Pantherna Therapeutics was recently awarded with a 2022 Pharma Trend Honor for its lead candidate PAN004 in the category “Most Innovative Product: Leap Innovations-Nucleic Acid-Based Drug Development” (https://businesswire.com/news/home/20220916005215/en/Pharma-Trend-Honors-the-Best-Pharmaceutical-Companies-and-the-Most-Innovative-Products_2022). Pantherna is based in Hennigsdorf, Brandenburg (Innovationsforum) close to Berlin, Germany. For more information, please visit our website at <https://pantherna-therapeutics.com/>.

Cautionary Notes (Astellas)

In this press release, statements made with respect to current plans, estimates, strategies and beliefs and other statements that are not historical facts are forward-looking statements about the future performance of Astellas. These statements are based on management's current assumptions and beliefs in light of the information currently available to it and involve known and unknown risks and uncertainties. A number of factors could cause actual results to differ materially from those discussed in the forward-looking statements. Such factors include, but are not limited to: (i) changes in general economic conditions and in laws and regulations, relating to pharmaceutical markets, (ii) currency exchange rate fluctuations, (iii) delays in new product launches, (iv) the inability of Astellas to market existing and new products effectively, (v) the inability of Astellas to continue to effectively research and develop products accepted by customers in highly competitive markets, and (vi) infringements of Astellas' intellectual property rights by third parties.

Information about pharmaceutical products (including products currently in development) which is included in this press release is not intended to constitute an advertisement or medical advice.

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