



Press Release

CiRA, Kyoto University and Astellas Second Phase Joint Research Agreement Signed for Medical Applications of iPS Cells

Kyoto and Tokyo, April 12, 2023 - The Center for iPS Cell Research and Application, Kyoto University (Director: Dr. Jun Takahashi; "CiRA") and Astellas Pharma Inc. (TSE: 4503, President and CEO: Naoki Okamura, "Astellas") entered into the second phase of a joint research agreement to further promote the utilization of differentiated cells and tissues derived from human induced pluripotent stem cells (iPS cells)^{*1} and to create innovative medical solutions.

During the first phase (July 2017 to March 2023), the two parties conducted comprehensive joint research on drug discovery applications of iPS cells. In the second phase, the two parties will build on their past efforts and incorporate digital technology into a technological platform for differentiated cells and tissues derived from iPS cells to further accelerate drug discovery and develop the technology to cover an even broader range of medical applications.

1. Establishment of a technological platform for stable and high-quality production of iPS cell-derived differentiated cells and tissues by utilizing Mahol-A-Ba

Maintaining iPS cells in an appropriate state and programming them to differentiate into target cells require the technical expertise and astute judgment of experienced researchers. In addition, to evaluate the pharmacological effects of a compound, expert researchers must confirm whether iPS cells have differentiated correctly into target cells to completion. Therefore, the two parties will establish a technological platform for the stable and high-quality production of differentiated cells and tissues derived from iPS cells.

For the purpose of this joint research, CiRA installed Astellas' cellular drug discovery platform "Mahol-A-Ba"^{*2}. The two parties will work together to construct digital protocols for Mahol-A-Ba to develop a high-quality and highly reproducible differentiation induction method and create a library of differentiated cells.



Mahol-A-Ba installed at CiRA (Please click [here to watch the video](#))

2. Construction of a new evaluation system using iPS cell-derived differentiated cells and tissues

Cell types of various tissues and organs differentiated from iPS cells have been utilized to investigate the causes of diseases and to evaluate the pharmacological properties of drug candidates. By constructing advanced pathological models and models that can evaluate individual patient differences, the two parties aim to improve clinical predictability further and create medical solutions to treat diseases for which conventional methods have failed to provide viable options.

3. Creation of cell therapy programs using iPS cell-derived differentiated cells

The two parties will apply 1. and 2. above to create new cell therapy programs and resolve issues faced by current cell therapy in general (e.g., the establishment of efficient differentiation methods to target cells).

“The joint research agreement with Astellas, which includes state-of-the-art core technology for drug discovery, will be of critical importance to generating new possibilities of drug discovery using iPS cell technology. I would like to express my sincere gratitude to Astellas,” said CiRA Director Jun Takahashi. “Through this joint research, we hope to contribute to drug discovery and development of treatments for various diseases as soon as possible.”

“We are pleased to enter into this joint research agreement,” said Yoshitsugu Shitaka, Ph.D., Chief Scientific Officer at Astellas. “We hope that the collaboration

between CiRA, who has expertise in iPS cells and cell therapy, and Astellas, who has proven capabilities in drug discovery, will deliver even greater VALUE to patients.”

CiRA and Astellas will further promote the use of iPS cell-derived differentiated cells and tissues to create innovative medical solutions to offer new treatment options for patients, thereby contributing to the treatment of diseases with high unmet medical needs.

*1: For more information on iPS cells, please visit CiRA’s website: https://www.cira.kyoto-u.ac.jp/e/faq/faq_ips.html

*2: For more information on Astellas’ cellular drug discovery platform “Mahol-A-Ba,” please visit Astellas’ website: (https://www.astellas.com/en/stories/strategy/dx_strategy_series_vol.2)

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>.

Cautionary Notes

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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