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Press Release

Announcement of Winning the 5th Japan Open Innovation Prize "Minister of Environment Award"

February 22, 2023 - Astellas Pharma Inc. (Headquarters: Tokyo; President and CEO: Kenji Yasukawa), The Mitsubishi Chemical Group, and CKD Corporation (Headquarters: Komaki, Aichi; President: Katsuhito Okuoka) won the Minister of Environment Award of the 5th Japan Open Innovation Prize (sponsored by the Cabinet Office) for "Practical Use of Environmentally Friendly Biomass-based Plastic for Blister Packages."

1. About Japan Open Innovation Prize and Minister of Environment Award^{1,2}

Aiming to promote open innovation in Japan, the prize recognizes highly advanced and creative initiatives that are expected as future role models. Open innovation initiatives that are exemplary, have a large social impact, and are sustainable receive awards. The Minister of the Environment Award is given to individuals or groups recognized for their outstanding efforts from the perspective of global environmental conservation, pollution prevention, protection and maintenance of the natural environment, and other environmental conservation efforts.

2. Project Overview

The Mitsubishi Chemical Group developed a blister package material using more than 50% plant-derived raw material while maintaining the conventional performance; Astellas and CKD investigated optimal manufacturing conditions to meet requirements for tablet protection performance and usability. These efforts led to the world's first practical application of the biomass-derived plastic blister packaging for a pharmaceutical product.^{3,4}

By using this plant-derived biomass-based plastic instead of traditional petroleum-derived plastic in blister packages, CO₂ emission can be reduced by about 40-60% compared to the conventional amount.

3. Key factors recognized

The primary factor was the collaboration of the three companies from different industries to develop and put the technology into practical use. Other factors included an open innovation initiative for excellent commercialization of bioplastics and expectation for the pharmaceutical industry to raise awareness for lowering environmental impacts and expand such efforts.



Photos of the Award Ceremony

<Reference>

- 1: Japan Open Innovation Prize website, <https://www8.cao.go.jp/cstp/openinnovation/prize/>
- 2: Ministry of the Environment website, https://www.env.go.jp/press/press_01179.html *Japanese only
- 3: Astellas press release dated October 11, 2021, "World's First Use of Environmentally Friendly Biomass-based Plastic for Blister Packages, the Primary Packaging for Drugs," <https://www.astellas.com/en/news/17266>
- 4: The Mitsubishi Chemical Corporation press release dated November 1, 2021, "Adoption of Moisture-Proof Sheets for Capsule and Tablet Packaging Made from Plants," https://www.m-chemical.co.jp/news/2021/1212624_7471.html *Japanese only

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 Mitsubishi Chemical Group Corporation

Mitsubishi Chemical Group Corporation is a specialty materials provider with an unwavering commitment to lead with innovative solutions to achieve KAITEKI, the well-being of people and the planet. We bring deep expertise and material science leadership in core market segments such as mobility, health & life sciences, and electronics, enabling industry transformation, technology breakthroughs, and longer, more fruitful lives for us all. Together, around 70,000 employees worldwide provide advanced chemistry-based solutions to deliver the core elements of our slogan—Science. Value. Life. For details of Mitsubishi Chemical Group Corporation, please visit (<https://www.mcgc.com/english/>).

About CKD Corporation

CKD is a comprehensive machinery manufacturer engaged in development, production, sales and service of automated machinery and equipment products for industrial use. Based on automation and fluid control technologies, CKD supports a wide range of manufacturing sites producing a wide variety of products. As Japan's leading manufacturer of blister packaging machines for pharmaceutical products, we deliver customer safety and confidence from the standpoint of the machine manufacturer. We will continue to contribute to the protection of the global environment and the creation of an affluent society through our business, and work towards the realization of a sustainable society. For more information about CKD, please visit <https://www.ckd.co.jp/en/>.

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