



# News Release

Development Bank of Japan Inc.

July 5, 2024

## **DBJ a Winner at ADFIAP Awards 2024**

### **Recognition Given to**

**Financial support for Toray's medical device development**

**— Support for the development of medical devices for the treatment of ARDS through Special Investment Operations —**

Development Bank of Japan Inc. (DBJ) has been adjudged a winner by the Association of Development Financing Institutions in Asia and the Pacific (ADFIAP<sup>\*1</sup>) for outstanding work in the category of Technology Development. In selecting DBJ for the award, ADFIAP cited the *providing financial support for the development of medical devices for the treatment of acute respiratory distress syndrome (hereinafter referred to as "ARDS") conducted by Toray Industries, Inc. (hereinafter referred to as "Toray") using Special Investment Operations*<sup>\*2</sup>. The 2024 awards were presented at the ADFIAP General Meeting held on the 15<sup>th</sup> and 17<sup>th</sup> of May 2024.

The ADFIAP Awards recognize the work of development finance institutions with distinguished achievements in the Asia–Pacific region. The aim of the awards is to publicize deals and projects which are both outstanding and instructive, as well as to share financial methods and techniques.

ARDS is a disease that causes severe respiratory failure triggered by pneumonia or sepsis. Currently, there is no direct treatment for ARDS, and according to the ARDS Clinical Practice Guidelines 2021 prepared by the Japanese Society of Intensive Care Medicine, the mortality rate due to ARDS is as high as 25–40%. According to the National Institute of Infectious Diseases, most of the severe cases and deaths of COVID-19 develop ARDS due to pneumonia, and the development of effective new therapies is desired.

Toray developed Toraymyxin<sup>®</sup>, a first-in-class blood purifier that selectively adsorbs and removes endotoxin, one of the bacterial toxins, as a medical device used in the treatment of sepsis. It is covered by insurance for cases of septic shock and is sold mainly in emergency and critical care

centers and intensive care units (ICUs).

In the treatment of ARDS, it is presumed to be useful to simultaneously remove cytokines (proteins) and activated leukocytes (cells involved in inflammation), which are causative agents of serious inflammatory reactions, etc. In order to give fibers the ability to adsorb and remove these causative agents, chemical reactions under severe conditions are required, but conventional techniques have not been able to maintain the fiber shape under severe conditions. Toray's innovative NANODESIGN<sup>®\*3</sup> has overcome this problem by nano-level controlling and conjugating the arrangement of polymers to have high stability against chemical reactions.

In pre-clinical studies in 2018, Toray confirmed the ability of the adsorbent to selectively remove both cytokines and activated leukocytes without removing cells and proteins necessary for health maintenance. Toray is currently developing a blood purification device packed with this adsorbent to treat ARDS.

DBJ believes that Toray's efforts will contribute to strengthening the competitiveness of Toray and the industrial competitiveness of our country's life sciences business through the realization of effective and innovative therapies for diseases for which there are no effective treatments worldwide and has decided to provide support by utilizing the DBJ Startups and Innovation Fund<sup>\*4</sup>, which was established in November 2022 as part of its Special Investment Operations program.

DBJ will continue to use Special Investment Operations to actively support our customers' efforts to develop markets for growth capital, revitalize the local economy, and strengthen competitiveness.

\*<sup>1</sup>ADFIAP

Official name Association of Development Financing Institutions in Asia and the Pacific  
Establishment October 1976 (headquarters: Manila, Philippines)  
Membership 91 institutions in 40 countries and regions (as of May 15, 2024)

\*<sup>2</sup>Special Investment Operations, established as an intensive but temporary scheme to supply growth capital from the perspective of promoting the competitiveness of Japanese enterprises along with regional revitalization, draws only a portion of the investment (industrial investment) from the Japanese government, enough to encourage the private sector to supply growth capital.

\*<sup>3</sup>NANODESIGN® (NANODESIGN® is a registered trademark of Toray.)

A conjugate cross section forming technology in which the flow of a plurality of polymers are divided into multiple fine flow streams, and the fibers are designed by combining "these multiple flow streams". Toray's unique innovative technology enables the design of previously unattainable special conjugate cross sections at will and with high precision.

\*<sup>4</sup>This fund was established to promote the creation and nurturing of startups and the development of innovation ecosystems under the Special Investment Operations category.

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