



Regarding the Acquisition of Manufacturing and Marketing Approval for the New Siderophore Cephalosporin Antibiotic Fetroja[®](cefiderocol) Intravenous Infusion 1g vial in Japan

OSAKA, Japan, November 30, 2023 - Shionogi & Co., Ltd. (Head Office: Osaka, Japan; Chief Executive Officer: Isao Teshirogi, Ph.D.; hereafter "Shionogi") announced that Fetroja[®](cefiderocol) intravenous infusion 1g vial has obtained manufacturing and marketing approval from the Ministry of Health, Labour and Welfare as of today.

Fetroja[®] is a new siderophore cephalosporin antibiotic developed by Shionogi, and an application for manufacturing and sales approval in Japan was filed on March 24, 2022¹. Fetroja[®] is a medication that effectively penetrates the outer membrane of gram-negative bacteria, including multidrug-resistant bacteria, and exhibits antimicrobial activity. It has been approved for various infectious diseases caused by susceptible strains of *Escherichia coli*, *Citrobacter species*, *Klebsiella pneumoniae*, *Enterobacter species*, *Serratia marcescens*, *Proteus species*, *Morganella morganii*, *Pseudomonas aeruginosa*, *Burkholderia species*, *Stenotrophomonas maltophilia*, and *Acinetobacter species*, which are resistant to carbapenem antibiotics. It is expected to provide a new treatment option for Japanese patients suffering from infections caused by drug-resistant bacteria. Furthermore, Shionogi is actively working towards the development and provision of susceptibility testing for Fetroja[®] as part of promoting appropriate use of antimicrobial agents.

Antimicrobial resistance (AMR) or the acquisition of bacterial resistance to antibiotics, is a global public health threat that humanity faces, and it is an urgent and important issue that needs to be addressed on a global scale.² The previous approach to appropriate use of antibiotics was to limit the use of new antibiotics to specific cases in order to suppress the emergence of new resistant bacteria. However, the development of new antibiotics incurs enormous costs, and even if successful, their use is restricted, making it difficult to maintain a revenue system that supports the continuous research and development of new antibiotics. As a part of the AMR measures in such a situation, subscription-based reimbursement models (where countries pay a fixed fee to pharmaceutical companies, separate from the prescription volume of antibiotics, in exchange for the ability to receive antibiotics when needed) have been introduced in countries such as the UK, and Fetroja[®] was also adopted in December 2020³. The trial implementation of the "Anti-Bacterial Drug Assurance Support Project" has also commenced in Japan, ensuring a certain amount of revenue for pharmaceutical companies engaged in the sale of antimicrobial agents. Fetroja[®] has been selected as the first designated drug for this program, starting from November 2023.

Shionogi has identified "Protect people from the threat of infectious diseases" as a material issue (materiality) to address, and is working towards achieving comprehensive care for infectious diseases. We are committed to protecting the health of people by delivering the necessary infectious disease treatments to patients around the world as quickly as possible, in order to contribute to the successful management of global challenges such as COVID-19 and AMR.

[Click here](#) to learn more about our efforts to address drug resistance.

About the Anti-Bacterial Drug Assurance Support Project

The Anti-Bacterial Drug Assurance Support Project is a system introduced by the Ministry of Health, Labour and Welfare as part of its efforts to address AMR, started from 2023. The purpose of this system is to promote measures against drug resistance by creating a mechanism to support companies financially while they cooperate with the government's efforts to maintain appropriate levels of sales of antimicrobial agents (in order to maintain a treatment environment with antimicrobial agents) and to encourage the development of antimicrobial agents, allowing Japan to take a leading role in international discussions on global health.

About Fetroja[®](cefiderocol)

Cefiderocol for injection is the first and only siderophore cephalosporin antibiotic for the treatment of serious Gram-negative infections. It has a novel mechanism for penetrating the outer cell membrane of Gram-negative pathogens by acting as a siderophore. In addition to entering cells by passive diffusion through porin channels, cefiderocol binds to ferric iron and is actively transported into bacterial cells through the outer membrane via the bacterial iron transporters, which function to incorporate this essential nutrient for bacteria. These mechanisms allow cefiderocol to achieve high concentrations in the periplasmic space where it can bind to penicillin-binding proteins and inhibit cell wall synthesis in the bacterial cells. Cefiderocol has already obtained approval in Europe and is sold under the product name Fetcroja[®] in Europe and Fetroja[®] in the United States. Approval application has also been completed in Taiwan, and it is currently under review by regulatory authorities⁴. It is listed on the World Health Organization's Essential Medicines List, and preparations are underway through a collaborative agreement with The Global Antibiotic Research and Development Partnership (GARDP) and Clinton Health Access Initiative (CHAI) to improve access to this new antibacterial agent for patients in many low- and middle-income countries and high- and middle-income countries⁵.

Reference:

1. [Press release on March 24, 2022](#)
Regarding the Filing for Approval of Cefiderocol in Japan
2. WHO. Antimicrobial resistance. Who.int. Published October 13, 2020.
<https://www.who.int/news-room/fact-sheets/detail/antimicrobial-resistance>
3. [Press release on December 21, 2020](#)
Shionogi's Novel Antibiotic, Fetcroja[®] (Cefidercol), has been Selected by UK's NICE / NHSE&I as Part of an Antimicrobial Subscription Style Reimbursement Model
4. [Press release on December 13, 2022](#)
New Drug Application of New Siderophore Cephalosporin Antibacterial Drug Cefiderocol Accepted for Review in Taiwan
5. [Press release on June 15, 2022](#)
Shionogi, GARDP and CHAI announce landmark license and collaboration agreements to treat bacterial infections by expanding access to cefiderocol in 135 countries

Forward-Looking Statements

This announcement contains forward-looking statements. These statements are based on expectations in light of the information currently available, assumptions that are subject to risks and uncertainties which could cause actual results to differ materially from these statements. Risks and uncertainties include general domestic and international economic conditions such as general industry and market conditions, and changes of interest rate and currency exchange rate. These risks and uncertainties particularly apply with respect to product-related forward-looking statements. Product risks and uncertainties include, but are not limited to, completion and discontinuation of clinical trials; obtaining regulatory approvals; claims and concerns about product safety and efficacy; technological advances; adverse outcome of important litigation; domestic and foreign healthcare reforms

and changes of laws and regulations. Also for existing products, there are manufacturing and marketing risks, which include, but are not limited to, inability to build production capacity to meet demand, lack of availability of raw materials and entry of competitive products. The company disclaims any intention or obligation to update or revise any forward-looking statements whether as a result of new information, future events or otherwise.

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SHIONOGI Website Inquiry Form : <https://www.shionogi.com/global/en/contact.html>