

# Press Release

Shionogi Pharma Co., Ltd.  
Chiyoda Corporation  
Taisei Corporation  
Fujimoto Chemicals Co., Ltd.  
Takenaka Corporation  
Yokogawa Electric Corporation  
Nagase & Co., Ltd.

April 1, 2022

## **Notice of Commencement of Business of Pharmira Co., Ltd., a Joint Venture for Contract Development and Manufacturing of Active Pharmaceutical Ingredients and Intermediates**

Shionogi Pharma Co., Ltd. (headquartered in Settsu, Osaka; President & CEO: Ryuichi Kume; “Shionogi Pharma”) today announces that Pharmira Co., Ltd. (hereafter the “joint venture”), in which Shionogi Pharma, Chiyoda Corporation (headquartered in Yokohama, Kanagawa Pref.; President & COO: Masakazu Sakakida; “Chiyoda”), Taisei Corporation (headquartered in Shinjuku-ku, Tokyo; President & CEO: Yoshiro Aikawa; “Taisei”), Fujimoto Chemicals Co., Ltd. (headquartered in Chuo-ku, Osaka; President & CEO: Kazumasa Fujimoto; hereinafter “Fujimoto Chemicals”), Takenaka Corporation (headquartered in Chuo-ku, Osaka; President: Masato Sasaki; “Takenaka”), Yokogawa Electric Corporation (headquartered in Musashino City, Tokyo; President & CEO: Hitoshi Nara; “Yokogawa Electric”), and Nagase & Co., Ltd. (headquartered in Chuo-ku, Tokyo; Representative Director and President: Kenji Asakura; “Nagase”) invest, has commenced development of a technology for Continuous Manufacturing (CM) of active pharmaceutical ingredients (APIs) and intermediates and a contract development and manufacturing business using CM technology.

### 1. Basic information on the joint venture

Representative	Representative Director & President: Masanori Nishiwaki (Executive Officer and General Manager of the Technology Development Division of Shionogi Pharma)
Company name and meaning	Pharmira Co., Ltd. Meaning: The name Pharmira derives from “pharmaceutical” and “ <i>mirai</i> (future).” The meaning behind the name is “to cultivate the future of the pharmaceuticals industry with Pharmira’s technology”

	Logo:  Website: <a href="https://www.pharmira.co.jp/">https://www.pharmira.co.jp/</a>
Address	1-3 Kuise Terajima 2-chome, Amagasaki City, Hyogo Prefecture
Date of establishment	November 25, 2021
Commencement date of business	April 1, 2022
Shareholder composition/ Investment ratio*1	Shionogi Pharma: 50.1%, Chiyoda: 17.0%, Taisei: 15.9%, Fujimoto Chemicals: 10.0%, Takenaka: 5.3%, Yokogawa Electric: 1.1%*2, Nagase: 0.7% *1 The second decimal place has been rounded off. *2 The joint venture and Yokogawa Electric executed an investment agreement on February 4, 2022.

## 2. Project outline

Aiming to transform the manufacturing technologies of APIs and intermediates, companies with specialized technologies and functions have come together to carry out contract development and manufacturing services. Following drastic changes in the environment surrounding APIs and intermediates in recent years, further acceleration of pharmaceutical development and building a stable supply network for APIs have become urgent issues, especially against the threat of infectious diseases. By introducing CM technology as an innovative new technology in response to these environmental changes, it is expected that the time required for development of manufacturing methods in the pharmaceutical development stage will be shortened. CM technology is also expected to improve the efficiency of commercial production of pharmaceutical ingredients by conserving manpower and space and to enable advanced quality assurance for high-quality pharmaceutical products.

In order to meet diverse customer needs, the joint venture will use both well-established batch manufacturing technology and innovative CM technology to provide full-range, one-stop manufacturing services of APIs and intermediates, from development of drug manufacturing methods to manufacture of APIs for clinical trials and commercial production. Upon introduction, CM will be applied mainly to the reaction and crystallization processes, which are expected to have significant benefits by switching to CM. By applying CM from the development stage, it is possible to accelerate the development of pharmaceutical products while ensuring high quality and process safety. By contributing to greater efficiency of new drug development and a stable supply of high-quality drugs, the joint venture will strive to advance and improve the global medicine environment.

## 3. Overview of each shareholder company

### Shionogi Pharma Co., Ltd

Shionogi Pharma Co., Ltd. launched its business on April 1, 2019 with the mission of becoming a “technology-development-oriented manufacturing company” trusted by customers. In addition to various contract services that range from the development of manufacturing methods for APIs and formulation development to commercial production, it has established a system to provide “full-range services,” including support for analytical method development and facility design using pharmaceutical engineering technology.

### Chiyoda Corporation

Since its founding in 1948, Chiyoda Corporation has undertaken numerous projects worldwide, focusing on engineering, procurement and construction of plants (EPC) in the fields of energy (including oil and gas), chemistry, the environment, and life sciences.

### Taisei Corporation

Taisei Corporation was founded in 1873, and since the Engineering Division was established in 1968 to design and construct API plants, it has provided customers with manufacturing facilities in a wide range of fields, including life sciences such as pharmaceuticals and food.

Guided by the Taisei Group Philosophy, “To create a vibrant environment for all members of society,” Taisei Corporation seeks in an environmentally sustainable manner to create safe and attractive spaces with exceptional value and to create a global community filled with hopes and dreams for the benefit of future generations.

### Fujimoto Chemicals Co., Ltd.

Since its establishment in 1953, Fujimoto Chemical Co., Ltd. has been engaged mainly in the production and sales of APIs and intermediates. By implementing a strict quality assurance system and by fully leveraging its multiple chemical synthesis manufacturing facilities, including facilities for high-potency active pharmaceutical ingredients (HPAPIs), the Company provides integrated services, from development to commercial manufacturing.

### Takenaka Corporation

Since its founding, Takenaka Corporation has provided optimal solutions to meet the needs of the era based on its management philosophy: "Contribute to society by passing on the best works to future generations." By harnessing the strengths of the entire corporate group, the Company will contribute to urban creation by building cities and towns where people can live in safety and security while at the same time helping realize a sustainable society by addressing various issues, in cooperation with investing companies, to ensure stable supply of APIs.

### Yokogawa Electric Corporation

Yokogawa Electric Corporation provides advanced technologies and optimized solutions in the areas of measurement, control, and information to customers across a broad range of industries, including energy, chemicals, materials, pharmaceuticals, food, and water. Yokogawa Electric is contributing to the realization of a sustainable society by creating new value through businesses in three industry segments: Energy & Sustainability, Materials and Life.

### Nagase & Co., Ltd.

Since its founding in 1832, Nagase & Co., Ltd. has been mainly engaged in the import and export of chemical products and has cultivated technological and information-gathering capabilities and built a global network. Going beyond the conventional framework of a chemicals trading company, Nagase will strive as a business designer that creates a sustainable future to contribute to the development of a sustainable society.

Contact Information

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Shionogi Pharma Co., Ltd. website: <https://www.shionogi-ph.co.jp>

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