

PRESS RELEASE

31 May 2021

**Agreement between Chiyoda Corporation and Shionogi Pharma
on the Development of Continuous Manufacturing Technology for API's and Intermediates and to Study the
Establishment of a Joint Venture for commercialization of the technology**

Chiyoda Corporation (Chiyoda) and Shionogi Pharma Co., Ltd. (Shionogi Pharma) are pleased to announce that we have entered into an agreement to cooperate in the development of technology for Continuous Manufacturing (CM) for API's*¹ and Intermediates and to study the establishment of a joint venture company for a contract development and manufacturing business based on CM technology.

We believe that CM technology will reduce the time required for development of manufacturing methods for pharmaceutical ingredients and, as announced in the press release 'Cooperation between Chiyoda Corporation and Shionogi Pharma in the Development of Continuous Manufacturing Technology for API's and Intermediates' dated September 7, 2020, have been collaborating in the development of CM technology for API's and Intermediates. The technology will also improve the efficiency of commercial production of pharmaceutical ingredients by conserving manpower and space. This agreement will accelerate the development of high value-added CM technology.

In addition to Chiyoda and Shionogi Pharma, Fujimoto Chemicals Co., Ltd (Fujimoto Chemicals) has also expressed an interest in participating in the study to establish a joint venture company. We expect Fujimoto Chemicals will add value to the development of CM technology in areas such as development of a continuous synthetic process and a stable supply chain of antibacterial agents in Japan.

We are also conducting discussions with Yokogawa Electric Corporation regarding development of the technology. In addition, various activity such as alliance for module equipment development with equipment manufacturers, joint research with the University of Tokyo are proceeding to enhance technology development.

Chiyoda and Shionogi Pharma will continue discussions regarding the development of CM technology and a possible joint venture.

<Reference>

About Chiyoda Corporation

Since its founding in 1948, Chiyoda Corporation has executed projects worldwide, including the engineering, procurement and construction (EPC) of plants in the oil and gas, chemical, environmental and life sciences industries.

About Shionogi Pharma Co., Ltd.

Shionogi Pharma was launched on April 1, 2019 with the mission of becoming a 'technology development and manufacturing company trusted by customer's. In addition to developing manufacturing methods for bulk drugs, formulation development and commercial production, Shionogi Pharma has established a system to provide a "full-range of services", including support for analytical method development and facility design using pharmaceutical engineering technology.

About Fujimoto Chemicals Co., Ltd

Fujimoto Chemicals has been engaged in the production and sales of bulk pharmaceuticals and intermediates since its establishment in 1953. With trading company functions, a research, production and quality assurance system for bulk pharmaceuticals and intermediates, chemical synthesis plants and highly pharmacologically active manufacturing facilities, Fujimoto Chemicals provides manufacturing services as a contract manufacturing company based on development proposals with high technological capabilities

About Yokogawa Electric Corporation

Since its establishment in 1915, Yokogawa has utilized its deep knowledge of plant operational technology (OT), IT and industry to help customers visualize issues and optimize their business activities, thereby contributing to the creation of new value and sustainable growth.

*¹ API : Active Pharmaceutical Ingredients

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