

## **FUJIFILM Toyama Chemical starts a Phase I Clinical Trial of FF-21101 for the Treatment of Advanced Solid Tumors in Japan**

FF-21101 specifically delivers radiation to the cancer tissues and is expected to demonstrate efficacy in shrinking solid tumors

TOKYO, April 24, 2020 — FUJIFILM Toyama Chemical Co., Ltd. (President: Junji Okada) announces that it has begun a phase I clinical trial of anticancer agent “FF-21101” in Japan, for the treatment of cancer patients with refractory advanced solid tumors, who have experienced a recurrence or remote metastasis. The study will evaluate the safety, tolerability, pharmacokinetics, and efficacy of FF-21101 for advanced ovarian, biliary tract, and head-and-neck solid tumor cancers.

FUJIFILM Corporation developed FF-21101, which employs an antibody that conjugates radioisotope (RI) of yttrium ( $^{90}\text{Y}$ )<sup>\*1</sup> (armed antibody<sup>\*2</sup>). Through antigen-antibody reactions<sup>\*3</sup>, FF-21101 accumulates selectively in cancer tissues that express the antigen P-cadherin<sup>\*4</sup>, and specifically delivers radiation emitted by yttrium ( $^{90}\text{Y}$ ) to the cancer tissues. By targeting P-cadherin, the investigational therapy is expected to demonstrate efficacy in shrinking solid tumors.

In 2016, FUJIFILM Corporation began a U.S. clinical study of FF-21101 for the treatment of advanced solid tumors in cancer patients.

In addition to FF-21101, FUJIFILM Toyama Chemical is actively working to develop therapeutic radiopharmaceuticals such as F-1515 (lutetium [ $^{177}\text{Lu}$ ] DOTA-octreotate) for neuroendocrine tumors<sup>\*5</sup>, and F-1614 (3-iodobenzylguanidine [ $^{131}\text{I}$ ]) for refractory pheochromocytoma<sup>\*6</sup>, among others.

FUJIFILM Toyama Chemical is contributing to healthcare by striving to improve medicine and enhance the quality of life.

\*1 A radioisotope that emits radiation suited for treatment (beta rays). Its physical half-life is 64 hours.

\*2 An antibody that has been chemically linked with RI and toxins, it is expected to attack cancer tissues.

\*3 A phenomenon whereby antigens, such as foreign substances that have entered the body, or specific proteins that express in cancer, combine with the protein antibodies created by immune cells.

\*4 A protein that is known to express on the cell surface of numerous solid cancers and be involved in cancer’s proliferation and metastasis.

\*5 A tumor derived from neuroendocrine cells that distribute widely throughout the body. Although it develops in a variety of organs all over the body, it occurs especially frequently in the pancreas, digestive tract, and the lungs.

\*6 A neuroendocrine tumor that develops mainly from the adrenal medulla (a part of the adrenal gland located above the kidney, consisting of cells that secrete hormones).

[About FUJIFILM Toyama Chemical Co., Ltd.]

FUJIFILM Toyama Chemical Co., Ltd. conducts the research, development, manufacture, and sales of radiopharmaceuticals and small molecule pharmaceutical products. Under close cooperation with FUJIFILM Corporation, it aims to develop innovative diagnostic and therapeutic radiopharmaceuticals, as well as therapeutic

drugs having unique mechanisms of action in the fields of “oncology,” “central nervous system diseases,” and “infectious diseases” where significant unmet medical needs still exist. It also works to develop new medicines utilizing drug delivery system (DDS) technologies, designed to deliver the required amount of a drug in a timely manner to the specific body area. By exploring synergy with in vitro diagnostic devices and reagents owned by Fujifilm group companies, the company will expand its offering of comprehensive solutions from diagnosis to treatment. FUJIFILM Toyama Chemical have expanded its business areas to medical IoT solutions including a system to support pharmacists’ drug dispensing auditing work, and a transportation device that enables strict temperature control suited for blood products, cells and tissue used for regenerative medicine. Through the development and supply of high-quality, high added-value new drugs and products that support the clinical settings, FUJIFILM Toyama Chemical strives to solve various social challenges, and contribute to improving medicine and enhancing the quality of life. For more information, please visit <http://fftc.fujifilm.co.jp/en/>

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