

Collaborative Search for Microorganisms in Vietnam

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Astellas Pharma Inc.
Chugai Pharmaceutical Co., Ltd.

The National Institute of Technology and Evaluation (NITE; headquarters: Tokyo; director general: Makoto Misonou), Astellas Pharma Inc. (“Astellas”; headquarters: Tokyo; President and CEO: Toichi Takenaka), and Chugai Pharmaceutical Co., Ltd. (“Chugai”; headquarters: Tokyo; President and CEO, Osamu Nagayama) will start the first industry-government collaborative research program in November to jointly search, collect and isolate microorganisms in Vietnam and assess their potential for industrial use. The use of a collaborative framework NITE has built up jointly with the Vietnamese government will make it possible for each of the three companies to collect microorganisms that meet their own needs in Vietnam.

Positioning

This joint research program will be conducted as part of the “Construction of a Genetic Resource Library of Unidentified Microbes Based on Genome Information” project undertaken by the New Energy and Industrial Technology Development Organization (NEDO).

Objective

Numerous new strains of microorganisms have been discovered in a search undertaken by NITE in Indonesia and other Southeast Asian countries. Based on these discoveries, researchers from Chugai and Astellas will respectively collect and isolate microorganisms from Vietnam, where a wealth of living organisms are available through ways that meet the objectives of each company. Each company will aim to discover lead compounds for drug candidates from these microorganisms.

NITE has been supplying microorganisms which they collected abroad. Japanese pharmaceutical companies have been strongly interested in having direct access to countries rich in organisms such as Southeast Asia in order to search for unknown microorganisms, but this has been difficult due to various constraints such as the Convention on Biological Diversity (CBD). The NITE-initiated joint research program will make this possible.

NITE has concluded a treaty with the Vietnamese government regarding the conservation and continuous use of microorganisms and other biogenetic resources. It has been engaged in a joint research project with Vietnam National University, Hanoi, since 2004. This project has contributed to Vietnam, a

country rich in microorganism resources, by promoting the technology transfer and the development of microbiology in the country.

By using the framework of collaboration built up by NITE, the new collaborative project facilitates access to biogenetic resources in accordance with the CBD, which is difficult for individual companies. This will be the first overseas project jointly undertaken by industry and government in which Japanese companies will have access to biogenetic resources in Southeast Asia and can use them to meet their needs with the support of a governmental organization.

Astellas has been studying the fermentation of natural products as one of its core R&D fields and has developed a number of innovative drugs such as the immunosuppressant tacrolimus and the injectable antifungal agent micafungin. Through the new collaborative research project, Astellas will further accelerate the discovery and development of new compounds derived from natural products, which is one of its most significant strengths.

Chugai Pharmaceutical has access to one of the world's largest compound libraries based on an agreement with F. Hoffmann-La Roche (headquarters: Basel, Switzerland; chairman and CEO: Franz B. Humer), with which Chugai is in a strategic alliance. In addition, Chugai believes that natural resources are important as a screening source. The new collaborative project is very significant because it makes it possible for Chugai to screen not only microorganisms in Japan but biogenetic resources in Vietnam as well, providing a greater opportunity to discover more lead compounds.