

## For Immediate Release

# Wastewater surveillance to monitor COVID-19 starts in Osaka Prefecture

*Joint press release by Hokkaido University and Shionogi & Co., Ltd.*

On April 15, 2021, Hokkaido University and Shionogi & Co., Ltd. will start to monitor COVID-19 in Osaka Prefecture based on wastewater-based epidemiology (WBE), with the cooperation of the Prefectural Government.

The joint project aims to carry out quantification and genetic analysis (variant/mutation detection) of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in wastewater for understanding and predicting epidemics of COVID-19. The monitoring period is three months, from April 15 to June 14, 2021.

SARS-CoV-2 has been detected in the feces of a significant proportion of infected individuals. Research on WBE of SARS-CoV-2, which aims to acquire population-level epidemiological information by routine monitoring of the virus in wastewater, has been accelerating across the world. In some countries and regions in Europe and the United States, WBE has been implemented for early detection of COVID-19 epidemics, judgment of convergence, and confirmation of invasion/outbreak trends of variants with high infection/proliferation ability. Although the genetic material (RNA) of SARS-CoV-2 can be frequently detected in wastewater, the presence of infectious SARS-CoV-2 in influent wastewater at wastewater treatment plants has not yet been reported.

In Japan, there have been fewer reported cases of COVID-19 infection per capita compared to the United States and some European countries and regions, and therefore, for social implementation, the challenges had been to develop a virus detection method with increased sensitivity and an infrastructure with high-throughput PCR detection and genomic analysis. Hokkaido University and Shionogi have jointly developed a highly sensitive detection technology for SARS-CoV-2 in wastewater that can overcome these challenges, and have achieved automation of the detection process.

This time, the collaborative team starts large-scale monitoring based on the cooperation of sample collection by Osaka Prefecture, by utilizing a highly sensitive virus detection method developed by Hokkaido University and Shionogi, and a high-throughput system for analyzing the viral load of collected wastewater and genomic information of the virus (variant detection), which was constructed by four parties including Robotic Biology Institute, Inc., and iLAC Co., Ltd.\*

\* [Press Release on March 19, 2021](#)

Establishing an Automated System for the Analysis of SARS-CoV-2 in Wastewater

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**Hokkaido University**

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Founded in 1876 as Sapporo Agricultural College, Hokkaido University is one of the oldest, largest, and most prestigious universities in Japan. The university attracts prospective students all around the globe with the diverse degree programs offered and the all year round scenic beauty. The campuses are located in the cities of Sapporo and Hakodate of Hokkaido and 21 facilities are spread throughout Hokkaido and mainland Japan, contributing towards the resolution of global issues.

<https://www.global.hokudai.ac.jp/>

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Shionogi is committed to “protect people worldwide from the threat of infectious diseases” as our key focus. We are not limiting ourselves to the research and development of therapeutics, but are also pursuing total care for infectious diseases, through awareness building, prevention, diagnosis, and addressing exacerbations, as well as the treating the infection itself. As a leading company to fight infectious diseases, in order to contribute to the recovery of social security and safety through the early termination of COVID 19, we are working on the development of new therapeutic drugs and vaccines and maximizing the value of existing compounds. In addition, we will strengthen our efforts, including collaboration with external partners, to provide healthcare solutions to a larger number of patients.

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