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Shimadzu and Shionogi partner to explore wastewater viral infections

June 3, 2021 | News

The business partnership enables automatic detection of viruses in wastewater, infection status, and outbreak trends of mutant strains at an early stage by utilizing wastewater monitoring data



Japanese firms Shimadzu Corporation and Shionogi & Co. have inked the basic agreement of business partnership to target an early social implementation of wastewater surveillance for viruses in the field of infectious diseases, including the novel coronavirus (SARS-CoV-2).

Shimadzu and Shionogi will establish a consortium toward the early social implementation of wastewater monitoring by PCR under this business partnership. Wastewater monitoring based on wastewater-based epidemiology has high expectations as a technology that can grasp the infection status of COVID-19.

SARS-CoV-2 has been detected in the feces of a significant proportion of infected individuals. In the United States and the Netherlands, the amount of SARS-CoV-2 contained in the sewage of facilities and cities is regularly monitored to detect epidemics at an early stage and determine convergence. 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 has not yet been reported.

Shimadzu is providing facilities for the elderly, educational institutions, and accommodation facilities with a service named “Kyoto-Model” which is a PCR system that both wastewater and test in human through Shimazu Techno-Research Inc., its subsidiary. The Kyoto-Model had demonstrated it’s effectiveness by conducting the proof-of-concept study with the cooperation of prefectural government of Kyoto. The study had conducted with the technical supports of Kyoto University, Kanazawa University, and Toyama Prefectural University.

Shionogi and Hokkaido University have developed a highly sensitive virus detection method to monitor wastewater at wastewater treatment plants in cooperation with the Prefectural Government of Osaka.

Based on this Basic Agreement of Business Partnership, Shimazu and Shionogi will combine their strengths and cooperate with academia and partner companies to enable automatic detection of viruses in wastewater, infection status, and outbreak trends of mutant strains at an early stage by utilizing wastewater monitoring data. Shimazu and Shionogi are aiming to build a social system for wastewater monitoring.