

Shionogi Announces Launch of Mutational Analysis Services for Wastewater-based Epidemiological Surveillance of the Novel Coronavirus

OSAKA, Japan, December 7, 2021 - Shionogi & Co., Ltd. (hereafter "Shionogi") announced the launch of our mutational analysis service for the wastewater-based epidemiological surveillance of the novel coronavirus (SARS-CoV-2) .

Shionogi launched its SARS-CoV-2 quantitative measurement service, testing the inflow to municipal sewage treatment plants, in June 2021¹. Our newly launched mutational analysis services will not only provide quantitative measurements but also contribute to the understanding of the development and spread of variants in the target area. This technology can detect not only existing variants, such as the Alpha and Delta, but also the Omicron variant, which was designated as the most alarming ‘variant of concern’² by the World Health Organization (WHO) on November 26, 2021.

Since the start of the pandemic caused by SARS-CoV-2, emergence of a new variant has often signaled the onset of a new wave of infection. Therefore, early detection and proper monitoring of the virus and its variants, including their prevalence, can help to prevent the spread of infection. Shionogi has been working with Hokkaido University on the mutational analysis of SARS-CoV-2 in wastewater in Japan and has demonstrated the ability to predict the emergence of a variant before the confirmation of its presence by the local government³. Since similar cases have been recorded in the Europe and the United States, where implementation of wastewater-based epidemiological surveys is increasing, mutational analysis in such surveys is expected to be an effective means for the early detection of variants⁴. Furthermore, Shionogi is discussing a business alliance with Shimadzu Corporation with the goal of expanding the implementation of wastewater-based epidemiological services⁵.

Shionogi is committed to “Protect people worldwide from the threat of infectious diseases” as our key focus. We are working towards total care for infectious diseases, through building awareness, epidemiological surveillance, prevention, diagnosis, and addressing exacerbations, as well as treating the infection itself. By strengthening our collaborations with external partners and combining our capabilities, we will create a system that enables detection of the status of infection and the emergence of variants rapidly and accurately based on wastewater monitoring.

Forward-Looking Statements

This announcement contains forward-looking statements. These statements are based on expectations in light of the information currently available, assumptions that are subject to risks and uncertainties which could cause actual results to differ materially from these statements. Risks and uncertainties include general domestic and international economic conditions such as general industry and market conditions, and changes of interest rate and currency exchange rate. These risks and uncertainties particularly apply with respect to product-related forward-looking statements. Product risks and uncertainties include, but are not limited to, completion and discontinuation of clinical trials; obtaining regulatory approvals; claims and concerns about product safety and efficacy; technological advances; adverse outcome of important litigation; domestic and foreign healthcare reforms and changes of laws and regulations. Also for existing products, there are manufacturing and marketing risks, which include, but are not limited to, inability to build production capacity to meet demand, lack

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of availability of raw materials and entry of competitive products. The company disclaims any intention or obligation to update or revise any forward-looking statements whether as a result of new information, future events or otherwise.

For Further Information, Contact:

SHIONOGI Website Inquiry Form : <https://www.shionogi.com/global/en/contact.html>

Reference:

1. [Press release on June 14, 2021](#)
SHIONOGI Announces the Start of the Wastewater Epidemiological Surveillance Service for the Novel Coronavirus in Japan
2. Classification of Omicron (B.1.1.529): SARS-CoV-2 Variant of Concern
[https://www.who.int/news/item/26-11-2021-classification-of-omicron-\(b.1.1.529\)-sars-cov-2-variant-of-concern](https://www.who.int/news/item/26-11-2021-classification-of-omicron-(b.1.1.529)-sars-cov-2-variant-of-concern)
3. 北島正章, 岩本遼. 2021. 下水中の新型コロナウイルスの高感度検出および変異解析法の開発. 水環境学会誌 vol.44, No.11, 2021, p370-375
4. Testing and sequencing of sewage ramped up to help tackle COVID-19 outbreaks
<https://www.gov.uk/government/news/testing-and-sequencing-of-sewage-ramped-up-to-help-tackle-covid-19-outbreaks>
5. [Press release on June 2, 2021](#)
Notice Regarding the Signing of Basic Agreement of Business Partnership between SHIMADZU and SHIONOGI for Wastewater Surveillance for Viruses in the Field of Infectious Diseases, Including Novel Coronavirus

Our efforts against COVID-19 are updated on our website as needed. A considerable amount of valuable information on COVID-19 from other websites is also summarized on this page, so please use it for reference: [SHIONOGI website](#)