

Issue 22

COVID-19

Thursday, March 19

Hello. This is Kohno Shigeru, the President of Nagasaki University.

For the time being, this is the last issue of the series on COVID-19 in March.

This issue is a summary of the interview with Prof. Yasuda Jiro from the Institute of Tropical Medicine.

As you know, there is not enough capacity for the PCR test to diagnose COVID-19 in Japan. To overcome this, the development of simple and rapid assay is urgently needed.

One method is the LAMP (Loop-Mediated Isothermal Amplification) assay developed by Prof. Yasuda in collaboration with a laboratory instrument company. Both LAMP and PCR are gene amplification methods. PCR requires a series of temperature changes to amplify specific genes, while LAMP proceeds with gene amplification under an isothermal condition (constant temperature).

Therefore, the device for the LAMP assay was miniaturized to save weight. In fact, the device developed by Prof. Yasuda's group is A4-size, approximately 2 kg with a battery-drive. The device can be operated without electric power supply. Thus, the assay can be used in places where electricity is unreliable, particularly in developing countries.

Furthermore, real-time PCR requires at least two to three hours to get results, while LAMP takes only about 10 minutes to get positive results, which is a great advantage.

The development of the assay kit is in the final stage and Prof. Yasuda is currently working with various organizations to prepare for implementation at medical institutions and health care centers in Nagasaki City and Nagasaki Prefecture.

With the support of the Nagasaki prefectural government, the LAMP assay has been introduced to major hospitals including the Nagasaki University Hospital and health care centers in Nagasaki prefecture. The assay could be used in islands such as Iki, where the first confirmed case of COVID-19 in Nagasaki Prefecture was reported.

The new semester will start next month. Many students who went on vacation in foreign countries or stayed in Europe as a part of class recently will come back to Nagasaki. The University must introduce measures to prevent the spread of infection in the campus as soon as possible.

In addition to students, the faculty members of the University should also pay attention to the expansion of COVID-19 in the campus. Recently it was reported that a faculty member of Koriyama Women's University (Koriyama City, Fukushima Prefecture) was infected with SARS-CoV-2. The faculty member traveled abroad on a personal trip without informing the university and had continued to work on campus after returning. As a result, Koriyama Women's University campus was closed and the graduation ceremony was canceled. I request that our faculty members act in a responsible manner. I believe that all faculty and staff can maintain the trust and respect of society by complying with the university's code of conduct.

Prof. Tanaka Yoshimasa translated the guidelines for pneumonia caused by the novel coronavirus published in China. The document is now available in Japanese on the University's website.

<http://www.nagasaki-u.ac.jp/ja/about/info/news/news3073.html>

PS

Email Issues 11 to 15 were translated into English.

Please share with our international faculty and staff as well as colleagues at overseas stations.

<https://nudrive.nagasaki->

[u.ac.jp/public/mrxcwAXKLQaAelcBzYxweSzMgcMWItqZgoITjHOPoHOU](https://nudrive.nagasaki-u.ac.jp/public/mrxcwAXKLQaAelcBzYxweSzMgcMWItqZgoITjHOPoHOU)

Pass: Planetary Health 2020