Test confirms no trace of coronavirus in Canberra's sewage

July 3 2020

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A comprehensive testing program has found no traces of SARS-CoV-2 in Canberra's sewage system.

The testing program, carried out by experts from ANU, examined

Canberra's sewage water for traces of the coronavirus which causes COVID-19, SARS-CoV-2.

Testing sewage is a rapid and inexpensive way of tracking the coronavirus and potential community transmission.

ANU environmental epidemiologist and project lead, Dr. Aparna Lal, said the testing of daily samples throughout May found no SARS-CoV-2 in sewage from Canberra.

"We tested 25 samples in May from Icon Water's sewage treatment plant, covering the whole of ACT population, and found no traces of SARS-CoV-2 RNA," she said. "This coincides with the period that the ACT was declared free of any new coronavirus cases. These are excellent outcomes, and show the Canberra community are listening to and following health advice and that we are all working extremely hard to stop the potential spread of COVID-19."

The samples from Icon Water's sewage treatment plant were analyzed using advanced genetic testing, to detect SARS-CoV2 and a range of other viruses. While genetic material for a number of viruses was identified, indicating the test worked, no traces of SARS-CoV2 were found in the ACT sewage system.

Dr. Lal, based at the ANU Research School of Population Health, said sewage testing allowed health authorities to effectively track the potential spread of viruses like SARS-CoV2 outside of patient testing or hospital reporting.

"This shows us that we can actively monitor the presence of SARS-CoV2 through sewage and that based on all the samples we have processed there are no high levels of undetected community transmission in the ACT," Dr. Lal said. "I want to thank Icon Water for allowing us to

access samples from their sewage treatment plant. Without their support this important work would not be possible. It's great to have them putting the wellbeing of our community at the top of their priorities."

The samples collected by Dr. Lal were assessed in laboratories at the ANU John Curtin School of Medical Research (JCSMR).

"As we ease social distancing measures, we will continue to monitor the ACT's sewage on a daily basis to further support the Territory's public health response to the pandemic," Dr. Lal said.

Professor Graham Mann, JCSMR Director, thanked all the collaborators involved.

"Our researchers are really pleased to be making this contribution to control of the pandemic," he said.

Dr. Pawan Parajuli, who is conducting the advanced genetic testing at JCSMR said: "We have validated the method behind this test and shown that it can work. We are now optimizing it to make the test more sensitive so we can recover and detect even more viruses from each sewage sample."

The sewage program forms part of a comprehensive COVID-19 testing program at ANU leveraging the expertise of more than 30 researchers.

Provided by Australian National University