Media Release

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BREAKTHROUGH IN FIGHT AGAINST COVID-19

NSW Health Pathology is leading the race with the development of a cutting-edge serology test that is key to slowing the COVID-19 pandemic.

NSW Health Pathology's Director of Public Health Pathology, Professor Dominic Dwyer, said the serology test can identify the presence of tell-tale antibodies produced to fight the virus, indicating that a person had been infected at one time.

"While this is not a test used for the diagnosis of individual cases, serology testing will help public health experts investigate how the virus is spreading in the community, so they can gain better insight into the full scope of the outbreak," Professor Dwyer said.

While current diagnostic testing is still the fastest, most reliable way to screen individual patients for a suspected COVID-19 infection, they only return a positive result if the person is still sick with the virus active in their system.

Serology testing shows if someone has been infected with COVID-19 previously and recovered prior to testing, enabling clinicians to better understand the way the virus is spreading. It builds a scientific picture of the extent of the virus in the community and will help guide the evolving public health response to the outbreak.

"Knowing the true number of COVID-19 cases and the extent of the virus' spread is crucial to slowing this pandemic and making informed public health decisions," Professor Dwyer said.

"Thanks to this breakthrough, we are much better placed to answer questions we could not have answered before through the current diagnostic testing," Professor Dwyer said.

Serology testing will help experts better understand how the virus spreads in certain populations such as aged care residents. It is also being used to monitor exposure in healthcare workers, which can assist with infection control and personal protective equipment guidelines.

NSW Health Pathology's expert team at Institute of Clinical Pathology & Medical Research (ICPMR) Westmead developed serology testing using two highly specialised scientific methods.

The first method, antibody neutralisation, uses a serum from the patient's blood sample to test against a sample of the virus. If the serum kills the virus, it means the person has certain antibodies that indicate they have been exposed to the virus in the past.

The second method, immunofluorescence, involves adding a chemical dye to the patient's blood sample that lights up the antibodies under the microscope and shows them binding to the virus.

Media contact: Elisha Whitburn – 0419 669 142

For further information, contact:
Elisha Whitburn, Media Relations Manager, NSW Health Pathology
Tel: 0419 669 142 Email: elisha.whitburn@health.nsw.gov.au