**ASX Release**
**25 May 2020**

**ASX code: PIQ**

# Proteomics International receives COVID-19 research grants

Highlights

- **Two grants totalling $200,000 awarded under the Western Australian COVID-19 Research Grants Program**
- **Funding will support Proteomics International's recently announced research programs to:**
  - **develop a rapid diagnostic test for the identification of the SARS-CoV-2 virus based on easy to collect saliva samples**
  - **isolate biomarkers that give insights into the progression of the COVID-19 disease to determine why some people are more severely affected than others**
- **Both areas of research are aimed at improved medical treatment of patients to assist in the re-opening of Australian and global borders**

Proteomics International Laboratories Ltd (Proteomics International; ASX: PIQ), a pioneer in predictive diagnostics, announces it has been awarded two grants under the Western Australian COVID-19 Research Grants Program, which is funded by the Department of Health Western Australia and the Western Australian Health Translation Network (WAHTN).

The grants will support the Company's current COVID-19 research programs to develop a rapid diagnostic test for the identification of the SARS-CoV-2 virus, and to isolate biomarkers that give insights into the progression of the COVID-19 disease [ASX: 7 April 2020].

Across the two programs the grants total $200,000 with the work set to be completed over the next 8-12 months.

**Program 1: Protein Biomarkers for COVID-19 disease susceptibility/ response**

It is not understood why some people have only a mild response to COVID-19 yet other apparently healthy people end up in intensive care. According to the World Health Organisation, global data shows that 80% of people with COVID-19 disease have no symptoms or just a mild infection, whereas 14% of infections are severe and require oxygen, and 6% are critical infections requiring ventilation.

The difference could be due to protein 'fingerprints' that can be found in the patient's blood. These ‘fingerprints’ - known as biomarkers - have the potential to become a simple blood test that predicts which patients are at greatest risk of requiring significant medical intervention.

Scientists at Proteomics International have teamed up with respiratory physicians at The University of Western Australia Medical School to address this question. The team will analyse collections of blood samples taken from patients at diagnosis to (a) identify whether there are biomarkers in mild COVID-19 patients that are protective in that individual, and (b) determine if there are biomarkers that predict a severe or critical infection.

The analysis will be performed using state-of-the-art mass spectrometry instruments housed in the recently expanded Western Australian Proteomics Facility which is operated jointly by Proteomics International and The University of Western Australia [ASX: 26 November 2019].

The identification of such biomarkers could provide a new diagnostic test for clinicians to triage patients when they present with first diagnosis, enabling better planning and allocation of limited hospital resources. This is an area of significant unmet need in global COVID-19 diagnostics.

If successful, the research program will enable earlier medical intervention in patients having a prognosis of severe or critical infection. This could lead to significant improvements in patient outcomes to the benefit of the individual and the WA and global public health systems.

**Program 2: A rapid, non-invasive immunoassay-based diagnostic test for direct detection of the SARS-CoV-2 virus**

COVID-19 has spread rapidly around the globe and appears to be a highly contagious disease, yet infection by the SARS-CoV-2 virus can be difficult to detect. In pre-emptive screening studies, global data is suggesting that of those who have tested positive for SARS-CoV-2, approximately half were reported as having no symptoms.

If there are no symptoms then, without testing, there can be no diagnosis and the individual will not know they are infectious. So-called asymptomatic cases are considered the real and present risk of significant undetected community transmission of COVID-19.

This research program seeks to develop a rapid, non-invasive diagnostic test for direct detection of the SARS-CoV-2 virus in patients. As part of the grant the Company will also collaborate with the Heart and Lung Research Institute of Western Australia on a separate program for serology testing (used to identify whether people have been exposed to the virus by seeing if they have developed antibodies against it).

The current testing process detects the presence of viral RNA in the patient (using a technique called RT-PCR) after taking a deep nasal swab. This approach to testing faces challenges on two fronts. Firstly, the sampling method is not simple and may cause the patient brief discomfort, and secondly, the technology can be technically demanding compared to standard pathology laboratory tests.

The research team brought together for this project uses experts in assay development to seek to build a new diagnostic test platform for COVID-19, called an immunoassay. Assays using this technology platform are preferred by many laboratories as they are quick, simple to carry out, and able to handle a large number of samples in parallel.

The new diagnostic test will target detection of the virus in saliva because it is easy to collect and analyse.

The successful development of a new diagnostic test for infections due to COVID-19 could provide a significant improvement in testing capabilities nationally and worldwide.

Universal testing for COVID-19 would significantly increase the probability of detecting asymptomatic cases of the disease. Isolation of such patients could immediately reduce the risk and number of community transmissions of the SARS-COV-2 virus, and greater testing may enable the earlier relaxation of social distancing measures to the benefit of the economy and community quality of life.

Authorised by Dr Richard Lipscombe (Managing Director) on behalf of the Board of PIQ.

ENDS

**About Proteomics International Laboratories (PILL)** (www.proteomicsinternational.com)
Proteomics International (Perth, Western Australia) is a wholly owned subsidiary and trading name of PILL (ASX: PIQ), a medical technology Company at the forefront of predictive diagnostics and bio-analytical services. The Company specialises in the area of proteomics – the industrial scale study of the structure and function of proteins. It received the world's first ISO 17025 laboratory accreditation for proteomics services, and operates from state-of-the-art facilities located on Perth's QEII Medical Campus.

Proteomics International's business model is centred on the commercialisation of the Company's high-speed, low cost predictive test for diabetic kidney disease, PromarkerD. The Company offsets the cash burn from R&D and product development through provision of specialist analytical services, whilst using its proprietary Promarker™ technology platform to create a pipeline of novel diagnostic tests.

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