Proteomics investigates biomarkers for early detection blood test for asbestos-related cancer mesothelioma

- PILL commences the search for protein biomarkers in the blood that could be used to diagnose mesothelioma.
- World Health Organisation estimates put the cost of treatment, compensation and settlement upwards of AU$667,000 for every sufferer.
- Mesothelioma kills 59,000 people annually.

Perth life sciences company Proteomics International Laboratories Ltd (PILL, ASX: PIQ) has begun the detailed search for proteins associated with asbestos-related cancer mesothelioma.

The research aims to develop a simple blood test for the disease, which could lead to early diagnosis for some of the many thousands of currently undiagnosed people who will die from mesothelioma each year. PILL has already secured clinical samples for the work, and will undertake the research in collaboration with The University of Western Australia Medical School.

PILL managing director Dr Richard Lipscombe said patients are usually diagnosed later in life, often in their 70’s, because there is a long latency period between asbestos exposure and the manifestation of symptoms. “Early detection is crucial because there is a strong correlation between the age of diagnosis and survival. Patients will often only survive for one to two years after diagnosis” he said.

The last global review of the economic impact of asbestos-related conditions, undertaken by the World Health Organisation in 2008, estimated that the direct economic consequence of these diseases would reach US$2.4 billion that year. Asbestos accounts for more than half of the work-related cancer deaths in industrialised countries.

The report found the total cost per person for treatment, compensation and settlement was AU$667,000, and there is evidence that this figure continues to grow.

Clinical Professor Bill Musk, who heads asbestos research at UWA, said asbestos is the only cause of mesothelioma so biomarker research could provide insight into the biological mechanism behind the cancer process in general. “Treatments for mesothelioma are evolving and although there is no ‘cure’ there are some people who have a tumour response that may be improved by earlier diagnosis,” he said. “So screening asbestos-exposed people for the presence of a biomarker could allow earlier diagnosis and possible complete remission. Because of Wittenoom and the high utilisation of asbestos in WA we have many cases to study.”
PILL's mesothelioma research is made possible by the company's proprietary biomarker discovery platform Promarker, which searches for protein ‘fingerprints’ in the blood. This disruptive technology can identify proteins that can distinguish between people who have a disease and people who do not, using only a simple blood test.

The Promarker platform has already been used to successfully develop a test for diabetic kidney disease, known as PromarkerD, which is currently being commercialised in Central America and China. PILL is also using the Promarker platform to investigate biomarkers associated with endometriosis, a condition that affects one in ten women in their reproductive years.

The technology is so versatile it can be used to map samples from any biological source.

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About Proteomics International Laboratories (PILL)
Proteomics International is a wholly owned subsidiary of PILL (ASX: PIQ), a life science company focused on the area of proteomics – the industrial scale study of the structure and function of proteins. In the last few years, proteins have become the drug class of choice for the pharmaceutical industry because of their intimate role in biological systems. Thus proteomics technology is now playing a key role in understanding disease, from finding new diagnostic biomarkers to determining drug targets, and discovering new biopharmaceutical drugs.

PILL is recognised as a global leader in the field of proteomics. It received the world's first ISO 17025 laboratory accreditation for proteomics services, and operates from state-of-the-art facilities at the Harry Perkins Institute of Medical Research in Perth, Western Australia. The Company's business model uses its proprietary technology platform across three integrated areas, each massive growth markets:

1. Diagnostics: Biomarkers of disease and personalised medicine - focus on diabetic kidney disease.
   By 2020 the biomarkers market is estimated to double in size to $45.6 billion, and the personalised medicine market is forecast to be worth over $149 billion.

2. Analytical services: Specialist contract research fee-for-service model – focus on biosimilars QC.
   The global biosimilars market is expected to reach $6.2 billion by 2020, almost trebling from its 2015 level, as it seeks to replicate the multiple billion dollar blockbuster drugs that are coming off patent.

3. Drug discovery: Therapeutic peptide drug discovery - focus on painkillers and antibiotics.
   The global peptide therapeutics market is currently estimated to be worth $18 billion and is expected to increase at over 10% per year during 2016-2025.

In combination these areas offer, respectively, medium term products, near term cash flow, and blue sky potential by harnessing one complementary workflow centred on proteins.