

# BIOPHARMICA LIMITED

Bridging Biotechnology Borders

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ASX Announcement

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## Federal Gov Funds BioPharmica DAS Project

BioPharmica Limited (ASX: BPH) today announced that its bacterial diagnostics project with Diagnostic Array Systems Pty Ltd has been awarded \$206,000 in funding from the Federal Government Biotechnology Innovation Fund (BIF).

The federal government funding has been provided to determine the analytical capability of a *bacterial DNA test* for infectious diseases developed by Diagnostic Array Systems (DAS) founders Dr Benjamin Fry and Dr Viraj Nawagamuwa.

DAS is developing patent pending biotechnology to increase the speed and effectiveness of diagnostic testing for a range of infectious diseases with a number of global market opportunities.

The company's initial focus is on the large potential markets for diagnosing Lung Diseases such as Pneumonia, Whooping Cough and Meningitis. Infection of the respiratory tract continues to be the most frequent and important cause of short-term illness in countries such as the USA.

Current tests (such as culture) for diagnosing bacteria related diseases are notoriously unreliable and prevent doctors from treating patients effectively. No single test is presently available that can enable a pathology laboratory to identify all potential bacterial causes of a disease and have critical limitations.

Market potential in the USA for pneumonia alone provides a large market opportunity with ten million doctors visits, three million cases and five hundred thousand hospitalisations. Pneumonia is the sixth leading cause of death and number one of cause of death as a result of infectious diseases. The aggregate cost of care in the United States for community-acquired pneumonia is in excess of US\$4.4 billion annually. Of those patients hospitalised for pneumonia, the average mortality rate is 14%.

The bacterial DNA test is being developed to play a critical role in the clinical management of lung disease by (a) confirming lung disease (b) identifying the responsible bacteria (c) assessing its severity; and (d) suggesting the most effective therapy in a faster and more accurate process.

The Federal Government BIF grant has been awarded to determine the analytical capability of a bacterial DNA biochip to detect infectious diseases (including pneumonia) prior to commercialisation. BIF is a merit-based competitive grants program which aims to increase the rate of commercialisation of promising biotechnology developed in Australia. It provides financial assistance to companies to demonstrate proof-of-concept between the research stage of a biotechnology project and the early stage of its commercialisation.

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### About BioPharmica Ltd

BioPharmica (ASX code: BPH) is working to commercialise breakthrough biomedical research, with large potential markets, developed in Australian universities, medical institutes and hospitals. The company operates a portfolio of biomedical projects including:

Products that detect and treat breast, colorectal and prostate cancer with the University of Western Australia and the world-class research team in the Laboratory for Cancer Medicine at the Western Australian Institute for Medical Research (WAIMR). The research is based on a candidate tumour suppressor gene. WAIMR is a venture including the Royal Perth Hospital, Sir Charles Gairdner Hospital, Fremantle Hospital and the University of Western Australia. In recognition of its potential in detecting and treating cancer the research has received over \$1M in research funding from the NHMRC, Cancer Council of WA, the National Breast Cancer Foundation and the Medical Research Foundation of Royal Perth Hospital.

Diagnostic tests to identify which specific bacterium is causing an infectious disease by using the genetic structure (DNA) of bacteria in conjunction with Diagnostic Array Systems Pty Ltd. In using bacterial DNA testing the process can be faster and much more accurate. Founders Dr Benjamin Fry and Dr Viraj Nawagamuwa are both world leaders in the genetic structure of bacteria.

New methods for monitoring the effects of drugs on the brain through brain electrical activity (EEG) with Cortical Dynamics Pty Ltd. A monitor is being developed to assist an anesthetist to maintain patients at the right level of consciousness. The monitor is to assist doctors to fine tune the amount of drugs applied to ensure patients do not wake up unexpectedly during an operation to minimize side effects from post-operative recall of surgical procedures and excessive drug use. Reports indicate about 0.1% of patients undergoing general anaesthesia (20,000 in Australia last year) have some recall of the operation, ranging from doctors comments through to surgical manipulations or even pain. Ethics approval has been received for an initial trial to be conducted at Royal Melbourne Hospital. Inventor Dr David Liley is a researcher and senior lecturer in Biophysics and deputy director of the Centre for Intelligent Systems and Complex Processes.

A fibre optic probe to be used in biosensors for diagnostic testing and drug development with Swinburne University of Technology and Dr Paul Stoddart from the Centre for Imaging and Applied Optics. The SERS Probe technology is being developed to enable a biosensor using light as a method to detect and monitor biological and chemical targets on the microscopic tip of an optical fibre. The SERS Probe technology has the potential to enable biomedical device manufacturers to rapidly expand their product development pipeline using SERS capable fibre optic probes. Biosensor manufacturers have seen rapid growth with the 2003 worldwide market for biosensors at US \$ 7.3 billion.

David Breeze,

Chairman  
BioPharmica Ltd