Media Release

The Hon Jill Hennessy MP
Minister for Health
Minister for Ambulance Services

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NEW RESEARCH TO FAST-TRACK MEDICAL BREAKTHROUGHS

The Andrews Labor Government has funded 13 pioneering medical research projects that will fast-track breakthroughs in health and medical research into better care and treatments for patients.

Minister for Health Jill Hennessy today announced the recipients of the inaugural round of the Victorian Medical Research Acceleration Fund, which has invested $3 million into new projects that fast-track the translation of early stage health and medical research into everyday clinical practice and patient care.

By harnessing the power of new breakthroughs, this research will deliver better health outcomes for patients and save lives, both in Victoria and across the world.

The process was overseen by the Science Medical Research and Technology Ministerial Advisory Panel comprising leading scientists, academics, clinicians and industry experts.

Focus areas range from improving diagnosis and access to new treatments for cancer, mental illness, stroke, asthma and respiratory diseases, vision loss, dementia, sepsis, heart disease and rare genetic disorders.

Projects include the development of new technologies to treat severe asthma, a 'virtual hospital' providing greater accessibility to treatment and support for patients with chronic disease, a new treatment for ovarian cancer and a cure for weight loss in patients with cancer.

These innovative projects also leverage funding from philanthropic, industry and international sources, which means a further $7 million will be invested into Victoria's world-leading medical research sector.

The fund is part of the Labor Government's $20 million plan to ensure Victoria stays a world leader in ground-breaking health and medical research that has the power to change lives.

The plan, *Healthier Lives, Stronger Economy: Victoria's Health and Medical Research Strategy 2016-2020,* outlines our key priorities over four years to support new and evolving fields of world class medical research.

It provides the potential for the creation of new business opportunities, job and economic growth across Victoria and enhances Victoria's reputation as a world leader in health and medical research.

Quotes attributable to Minister for Health Jill Hennessy

"These cutting-edge projects show exactly why Victoria is at the forefront of ground-breaking medical research across the globe."

"Victoria's is proudly home to the best and brightest medical minds who are leading the way in revolutionary discoveries that will save lives."

Quote attributable to Parliamentary Secretary for Medical Research Frank McGuire

"These significant investments will build on Victoria's reputation as a world leader in medical research, attracting global investment and creating new jobs."

"We're giving our world-class researchers the support they need to translate their findings into everyday care for patients."

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Victorian Medical Research Acceleration Fund recipients –project summaries

An implant to treat Glaucoma - Vivid White Pty Ltd ($100,000)

Glaucoma is a chronic eye disease. It can cause blindness as a result of progressive optic nerve damage caused primarily by increased fluid pressure inside the eye. Current surgical techniques and implants have a high level of variability and failure rate.

Vivid White Pty Ltd is developing a novel micro-fluidics ocular surgical implant for the treatment of Glaucoma. The implant aims to protect the eye, and the external tissues around it from a build-up of fluid pressure.

Improving the lives of people living with dementia - Monash University ($100,000)

Dementia is a collection of symptoms that are caused by disorders affecting the brain. It affects thinking, behaviour and the ability to perform everyday tasks. In Australia, approximately 400,000 people are living with dementia and is the second leading cause of death of Australians.

The Faculty of Pharmacy and Pharmaceutical Sciences at Monash University, working alongside the University of College London and University of North Carolina, are developing a common data model to investigate guideline-recommended medicine use, rehospitalisation and mortality in people with dementia after a heart attack. The international collaboration will investigate whether prescribing differences will affect someone's susceptibility to heart attacks and disease trajectory.

Assessing MAPS – an intervention for bipolar disease - Deakin University ($99,872)

Bipolar disorder is a chronic mental health condition with strong changes in mood and energy. One in 50 adult Australians experience bipolar disorder each year.

A team at Deakin University is developing MyMAPS, an innovative blended face-to-face and mobile application psychosocial intervention for bipolar disorder. This project aims to build on the successful MAPS relapse prevention intervention to reduce bipolar disorder relapse and improve functioning, wellbeing and quality of life of adults with bipolar disorder.

A better way to detect sepsis – Burnet Institute ($100,000)

Sepsis is a severe, life-threatening inflammatory reaction to infections, which kills over 8 million people each year worldwide, including 3000 Australians. Survival rates are very low without antibiotic treatment within hours of onset. However, current detection methods take too long, with standard tests of blood culture taking approximately 24 hours to complete.

The Burnet Institute is developing a point-of-care (POC) test for early detection of sepsis that will give a result in less than 15 minutes from a single drop of blood. This is made possible by new insights into neutrophil (the most abundant type of white blood cell) activation during infection.

A 21st century method to diagnosing bipolar disorder – Monash University ($100,000)

Bipolar disorder, schizophrenia and major depressive disorders are commonly misdiagnosed with enormous personal, social and economic costs.

Monash University is conducting collaborative clinical, technical and user-interface research to accelerate translation of an online visual test to reduce misdiagnosis of bipolar disorder. An acute diagnosis of mental illness symptoms will improve the personal lives of affected individuals and reduce societal and economic costs.

Improved techniques to diagnose rare genetic disorders– Austin Health ($100,000)

Rare genetic disorders affect 7-8 per cent of Australians, including almost 500,000 Victorians. Whole exome sequencing (WES), the current technique of choice for diagnosing these patients, only diagnoses 25-30 per cent of patients, as WES does not assess the majority of non-coding variants that affect gene functions.

Austin Health is developing the *Austin Health/GeNE Undiagnosed Diseases Program* to discover more disease genes for adults. The program uses a comprehensive diagnosis strategy based on whole genome sequencing,

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novel techniques for analysing gene expression, evaluation of gene function and crowd-sourced assessments to improve diagnosis.

Improving the lives of people with pulmonary fibrosis – Baker Health and Diabetes Institute ($97,403)

Pulmonary fibrosis (scarring of the lung) is a progressive respiratory disease with death after 2-3 years. It makes your lungs stiff and cause some people to become ill very quickly, or worsen more slowly, over months or years.

The Baker Health and Diabetes Institute is developing an inhaled Formyl Peptide Receptor (FPR) agonist for pulmonary fibrosis. They will validate that FPR agonist has therapeutic benefit and then design and profile up to 20 FPR agonists in preclinical models of pulmonary fibrosis. This activity will provide a candidate that will progress towards formal preclinical development.

A support package for Stroke Survivors – Monash University ($99,356)

A stroke is a medical emergency where the brain is damaged from an interruption of its blood supply. It can occur in two main ways, either there is a blood clot that blocks a blood vessel or a blood vessel in the brain breaks.

Monash University is conducting a pilot test with 150 survivors of stroke to develop a novel e-health self-management intervention to support discharged patients. The test will assist to understand how to reduce co-morbidity after stroke and the need for hospital readmission.

Treating severe asthma and other chronic respiratory diseases – University of Melbourne ($201,236)

Over 2.5 million Australians suffer from asthma. It is a long-term lung condition in which a person's airways become inflamed, narrow and swell and produce extra mucus, making it difficult to breathe.

The University of Melbourne is designing a new technology to treat severe asthmas and other chronic respiratory diseases. The technology comprises of a inhaled casein kinases 1 inhibitor, the first inhaled medication for asthma since the introduction of inhaled steroids in 1972. It will reduce the number and severity of episodes of worsening asthma.

Virtual Hospitals*:* a new way to care for patients – Monash University ($500,000)

Chronic disease accounts for 80 per cent of the total burden of ill health in Australia and poses one of the greatest health challenges for our community. This is exemplified by frequent avoidable re-hospitalisations due to poor transition of care between hospitals and the community.

Monash University are developing and evaluating an eHealth 'Virtual Hospital' an integrated patient management system, to improve the care of patients with chronic diseases. It has the capability of delivering real time care for patients, including follow-up, patient monitoring with wearable devices and online consultation and advice.

Treating patients with abnormal heart rhythm - InCarda Therapeutics Australia Pty Ltd ($450,000)

Paroxysmal atrial fibrillation (PAF), a form of arrhythmia, is an irregular, often rapid heart rate that commonly causes poor blood flow from the heart. Approximately 12 million people worldwide suffer from PAF and can quickly progress to permanent atrial fibrillation (AF), a condition that has no treatment.

InCarda Therapeutics Australia Pty Ltd is conducting a Phase-2 clinical study to evaluate the safety, tolerability and efficacy of different doses and dosing regimens of Inhaled Flecainide to terminate symptomatic recent-onset AF in subject with PAF.

Finding a treatment for ovarian cancer – Cartherics Pty Ltd ($500,000)

Ovarian cancer is the sixth most common cause of cancer-related death in Australian women and is the fifth most common cancer in women worldwide. It arises from the cells on the outside of the ovary; the germ cell type that arises from the cells which produce eggs; and the rare stromal type arising from supporting tissues within the ovary.

Cartherics Pty Ltd is developing and translating a novel, dual specific cytotoxic CAR-T cell immunotherapy for treatment of relapsed ovarian cancer.

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Helping those suffering from cancer-cachexia – La Trobe University ($500,000)

Cancer-cachexia is a term describing marked weight loss in patients with cancer that cannot be reversed by normal nutritional support. It causes severe muscle wasting and potentially death in some cases. Cancer-cachexia, at least in the more advanced stages, cannot be fully cured by eating more or by taking nutritional supplements.

La Trobe University is progressing a treatment to cure cancer-cachexia and commencing a first 'in human' trial to obtain safety and efficacy data in humans. The project brings together scientists from La Trobe University, Olivia Newton-John Cancer Research Institute, and the Karolinska Institute.

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