

Media Release

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



Friday, 17 February, 2017

WORLD CLASS CANCER RESEARCH BOOST TO SAVE LIVES

Victorians fighting cancer will get an even better chance of survival thanks to an Andrews Labor Government funding boost to do more clinical trials and undertake the next generation of research into the deadly disease.

Minister for Health Jill Hennessy today announced \$20 million over four years for the Victorian Comprehensive Cancer Centre (VCCC) alliance to deliver new clinical trials for cancer patients, as well as an additional \$12.2 million to support cancer research projects through the latest Victorian Cancer Agency funding round.

The VCCC alliance brings together the work of 10 leading Melbourne-based institutions to accelerate the control and cure of cancer. A key part of this work is ground-breaking clinical trials.

Clinical trials are vital for advancing cancer breakthroughs by testing the latest treatments, drugs and medical devices that can deliver even better patient outcomes and save lives.

The Labor Government's new funding boost will ensure more cancer patients can take part in the trials, including those living in rural and regional Victoria.

The Victorian Cancer Agency grants complement this investment by fast-tracking the conversion of research into clinical practice and new treatments that deliver better cancer care.

The latest grants continue this work with new projects focusing on lung cancer, ovarian and other rare cancers, head and neck cancer, prostate cancer, triple negative breast cancer, colorectal and pancreatic cancer, advanced melanoma, non-Hodgkin lymphoma and acute myeloid leukaemia.

It also includes the first ever Allied Health and Nursing Clinical Research Fellowship that will see a new project investigating how exercise can improve quality of life for lung cancer survivors.

More Victorians than ever before are surviving cancer, with the five-year survival rate for cancer increasing from 47 per cent in 1985 to 67 per cent in 2014.

This is testament to ongoing investment in cancer prevention, treatment and research in Victoria but we know we need to do more to continue to save more lives – in 2015, 31,628 Victorians were diagnosed with cancer and 10,937 died from the disease – this is still too many.

Through our *Victorian Cancer Plan 2016-20* we're working hard to turn this around, setting an ambitious target of saving 10,000 lives from cancer in the next 10 years.

Quotes attributable to Minister for Health Jill Hennessy

"We're putting cancer patients first and investing in world leading cancer research and clinical trials that have the power to save lives and one day find a cure."

"Our globally-renowned cancer experts are at the forefront of life-changing discoveries that will see more cancer patients beat the deadly disease."

"Victorian Cancer Agency grants rapidly turn around breakthroughs in cancer research into clinical practice, ensuring patients can get new treatments sooner."

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VICTORIAN CANCER AGENCY GRANT RECIPIENTS

2016 Workforce Funding Recipients

Dr Catherine Granger

Victorian Cancer Agency Allied Health and Nursing Clinical Research Fellowship, The University of Melbourne

Cancer and Physical ACTivity (CAPACITY) Trial: Implementation of a self-management program in the lung cancer model of care

My vision is to improve the quality of survival of people with lung cancer through implementing exercise into practice. The majority of people with operable lung cancer now survive yet they suffer significant physical hardship. New models of care are urgently required to minimise morbidity for this large and vulnerable group. This project will test the benefit of an exercise and education self-management program for people undergoing surgery for lung cancer to improve quality of life and physical function. I am a physiotherapist clinician researcher with an international profile as a leader in my field of exercise and lung cancer.

Associate Professor Clare Scott

Victorian Cancer Agency Medical Clinical Research Fellowship, The Walter and Eliza Hall Institute Of Medical Research

Pre-clinical models of ovarian cancer sub-types and other rare cancers to enable new therapeutic approaches

Survival rates for most rare cancers have not improved as they have done for more common cancers. Many more Australians diagnosed with certain sub-types of ovarian cancer and other rare cancers will die from their disease. Our aim is to predict which treatment approaches will more successfully match individual cancers by better understanding the "wiring" or control of these rare cancers. Newly developed pre-clinical laboratory models for ovarian cancer can fast-track analysis of the cancer with greater precision. We are poised to extend this approach to other rare cancer types.

Dr Nicholas Clemons

Victorian Cancer Agency Mid-Career Research Fellowship, Peter MacCallum Cancer Centre

A new paradigm for targeting mutant p53 tumours

Over half of all cancers contain mutations in a gene called TP53, also known as the "guardian of the genome". Mutation of TP53 provides tumour cells with a growth and survival advantage, and leads to resistance to chemotherapy and poor outcomes for patients. We have identified a potential "Achilles heel" in cancers with TP53 mutations that can be targeted with new and existing drugs. In this project I will establish a new paradigm for treating tumours with TP53 mutations that will be applicable to a large number of patients across all types of cancer.

Dr Charbel Darido

Victorian Cancer Agency Mid-Career Research Fellowship, Peter MacCallum Cancer Centre

Novel therapeutic approaches against squamous cell carcinoma of the head and neck

Human head and neck cancer is a devastating disease with poor survival rates. We have recently discovered the genetic defects that trigger head and neck cancer development. This proposal will explore novel treatment strategies aimed at targeting the genetic defects. Our results will lead to new personalised therapies for head and neck cancer patients that are likely to improve their outcomes.

Dr Luc Furic

Victorian Cancer Agency Mid-Career Research Fellowship, Monash University

Targeting MYC driven prostate cancer by combining targeted radionuclide therapy with ribosome biogenesis inhibition as a new therapy in castration resistant prostate cancer and neuroendocrine prostate cancer

Currently prostate cancer is well managed clinically in its early stages. Unfortunately, in a significant proportion of patients the disease will recur and eventually develop into a lethal form known as "castration resistant prostate cancer". Current targeted therapies in prostate cancer have been mostly focused on inhibiting the activity of the receptor for the male hormone testosterone, the androgen receptor. In this project we will test if the inhibition of the protein synthesis machinery in the cell in combination with radionuclide-targeted therapy is a viable novel therapeutic approach to treat advanced prostate cancer.

Dr Belinda Parker

Victorian Cancer Agency Mid-Career Research Fellowship, La Trobe University

Using immune markers to individualise therapy for patients with triple negative breast cancer

Of all breast cancer types, triple negative breast cancer (TNBC) is a particular challenge for clinicians. This is because targeted therapies for TNBC patients are not available and over 20% develop deadly cancer spread within the first few years of diagnosis, despite being treated with chemotherapy. This proposal will validate novel immune biomarkers as predictors of chemotherapeutic benefit before and during treatment. Identifying biomarkers that predict therapeutic response could not only spare non-responsive patients the side effects of chemotherapy but also inform on patients that may benefit from additional therapies currently being trialled, such as immune activating therapies.

Dr Tracy Putoczki

Victorian Cancer Agency Mid-Career Research Fellowship, The Walter and Eliza Hall Institute Of Medical Research

A new therapeutic opportunity to improve patient response to current treatments for colorectal and pancreatic cancers

Colorectal and pancreatic cancers are among the deadliest cancers in Australia, for which we still have only limited treatment options for patients with advanced disease. Both of these cancers produce soluble molecules called cytokines that provide the instructions a cancer needs to grow. We are interested in a cytokine called Interleukin-11 that we have shown is important to help cancers to continue to grow during chemotherapy treatments. Together with our industry partner, CSL, we are exploring how a new antibody that targets Interleukin-11 can overcome tumour resistance to chemotherapy, with the aim of increasing patient survival and quality of life.

Dr Sarah Best

Victorian Cancer Agency Early Career Seed Grant, The Walter and Eliza Hall Institute Of Medical Research

Pre-clinical investigation of non-small cell lung cancer

Lung cancer remains a deadly cause of cancer-related death in Australia, with limited research tools available to study the most aggressive sub types of this disease. This project aims to address this major gap by developing sophisticated lab (pre-clinical) models of lung cancer, and investigating the efficacy of novel treatments in preventing tumour growth. These studies will combine immunotherapy with the targeting of key cell signalling pathways (PI-3K) in squamous cell carcinoma. Using a pre-clinical adenocarcinoma model, we also aim to identify 'cancer biomarkers' using a blood test. These models have foreseeable impact on early detection and treatment of lung cancer.

Dr Laura MacPherson

Victorian Cancer Agency Early Career Seed Grant, Peter MacCallum Cancer Centre

Understanding the role of HDAC-3 in acute myeloid leukaemia stem cell survival

Acute Myeloid Leukaemia (AML) is sustained by stem cells that possess the ability to self renew indefinitely and regenerate after therapy. We have previously performed a screen of over 1000 epigenetic proteins in AML stem cells to identify new targets important for stem cell survival. From this, the lead candidate was an epigenetic enzyme named HDAC-3. In this proposed study, we will use sophisticated cellular, molecular and genomic approaches to understand how HDAC-3 is critical to AML stem cell survival. Our findings will support use and development of new inhibitors that specially target HDAC-3 and eradicate AML stem cells.

2016 Funded Translational Research Projects

Project: Development of a novel combined radiotherapy / immunotherapy approach in patients with diffuse large B cell lymphoma

Investigators: Dr Eliza Hawkes (Lead Applicant), Associate Professor Hui Gan, Dr Richard Khor, Associate Professor Jake Shortt, Dr Geoff Chong, Professor Andrew Grigg, Dr Nicole Haynes, Professor Andrew Scott, Professor Farshad Foroudi, Professor Michael MacManus, Professor Alexander Dobrovic, Professor David Ritchie

Research Organisations: Olivia Newton-John Cancer Research Institute, La Trobe University, Austin Health, Monash Health, Peter MacCallum Cancer Centre, University of Melbourne

Funding: \$2,200,000 over 36 months

Project Description: Diffuse large B-cell lymphoma (DLBCL) is the most common non-Hodgkin lymphoma. Standard first-line treatment achieves cure in approximately half of patients however 30% die from relapsed lymphoma. Immunotherapies (such as “programmed-cell-death-1-” or “programmed-cell-death-ligand-1-” inhibitors; ‘PD1/PDL1i’) fight cancer by blocking barriers to immune-system activity. Immune control of lymphoma provides the prospect of cure, even when chemotherapy has failed. Radiotherapy has striking effects on the immune system and can boost responses to these immunotherapies. The effect of concurrent radiotherapy and immunotherapy in DLBCL is unproven. This study will evaluate the safety and effect of simultaneous radiotherapy plus PDL1i in relapsed DLBCL patients.

Project: Novel approaches for overcoming resistance to therapies for advanced melanoma

Investigators: Professor Grant MacArthur (Lead Applicant), Professor Jonathan Cebon, Dr Mark Shackleton, Dr Andrew Haydon, Dr Andreas Behren, Dr Paul Neeson, Associate Professor Philip Parente, Dr Craig Underhill, Mr Paul White, Dr Shahneen Sandhu, Associate Professor Alexander Dobrovic, Professor Stephen Fox, Dr Karen Sheppard, Professor Rodney Hicks, Associate Professor Kieran Harvey, Associate Professor Anthony Papenfuss

Research Organisations: Peter MacCallum Cancer Centre, The University of Melbourne Olivia Newton-John Cancer Wellness and Research Centre, Alfred Hospital, Eastern Health, Border Medical Oncology, Melbourne Melanoma Project Consumer Reference Group, Walter and Eliza Hall Institute of Medical Research

Funding: \$2,250,000 over 36 months

Project Description: Remarkable progress has been made to significantly extend survival in patients with advanced melanoma. Yet relapse is common and limits the full extent of the potential of these new therapies. Working with the MMP Consumer Group, we have identified the biggest issues in resistance to the new therapies: relapse of BRAF-inhibitors; lack of response of some patients to the new PD1 therapies; and finally control of brain metastases. We will address these issues by running first in clinic trials and integrating the clinical trials with detailed understanding of why some patients respond well and others do not.

Project: Combination of radionuclide 177Lu-PSMA therapy with pembrolizumab in patients with metastatic castration-resistant prostate cancer

Investigators: Dr Shahneen Sandhu (Lead Applicant), Associate Professor Michael Hofman, Associate Professor Paul Neeson, Professor Rodney Hicks, Associate Professor Scott Williams, Associate Professor Guy Toner,

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Professor Ian Davis, Dr Nicole Haynes, Dr Luc Furic, Dr Carleen Cullinane, Dr Ben Tran, Associate Professor Andrew Weickhardt, Dr David Pook, Dr John Violet, Dr Craig Gedye, Mr Mathias Bressel, Associate Professor Lisa Horvath

Research Organisations: Peter MacCallum Cancer Centre, The University of Melbourne, Monash University, Austin Health, Monash Medical Centre, Calvary Mater Newcastle, Chris O'Brien Lifehouse, Garvan Institute for Medical Research

Funding: \$1,600,000 over 36 months

Project Description: We need to develop new therapies for prostate cancer (PC). Cancer immunotherapies such as anti-program death mAbs (pembrolizumab) have been designated breakthrough treatments for many cancers but have not had success as a single agent in PC. Novel combinations are needed to improve responses in PC. Radiotherapy combined with checkpoint blockade can enhance tumour responses. Most PCs express PSMA. We have developed a radiolabelled therapy (¹⁷⁷Lu-PSMA) that delivers radiotherapy to PSMA expressing PCs. We will test the safety and effectiveness of Lu-PSMA in combination with pembrolizumab and define the group of patients that benefit most from this combination.

Project: The International Acute Myeloid Leukaemia Platform Consortium

Investigators: Associate Professor Andrew Wei (Lead Applicant), Professor Andrew Roberts, Professor Mark Dawson, Associate Professor John Reynolds, Professor David Ritchie, Associate Professor Paul Ekert, Dr Adam Ivey

Research Organisations: Monash University, Royal Melbourne Hospital, Peter MacCallum Cancer Centre, Murdoch Children's Research Institute, Alfred Health

Funding: \$1,500,000 over 36 months

Project Description: Victoria will lead an international effort to develop an innovative and perpetual clinical trial "platform" to screen new targeted drugs for clinical activity in acute myeloid leukaemia (AML). The IAPC will link clinical teams from the Australasian Leukaemia and Lymphoma Group (ALLG) and the National Cancer Research Institute (NCRI) in the UK. The first wave of trials will test novel immunotherapy drugs, inhibitors of cell survival and modulators of gene regulation. Clinical outcomes will be assessed using personalised molecular techniques with unprecedented sensitivity and developed by Victoria's best clinician AML scientists forming a new precision medicine laboratory network.