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Media Brief

Victoria-based diabetes researchers receive $2 million in grants to find a breakthrough to this serious condition. Could one of Melbourne's researchers hold the key to a cure for the fastest-growing chronic condition?

Story Outline:

- We are offering a story of hope – the efforts of extraordinary researchers who work tirelessly to understand the causes and consequences of diabetes and to find a cure.
- Each year, diabetes researchers apply for funding support from the Diabetes Australia Research Program (DARP). With the growing number of people diagnosed and living with diabetes, this has now become the fastest-growing chronic condition in Victoria.
- Just over 365,000 Victorians are living with the condition and a further 125,000 are estimated to live with undiagnosed type 2 diabetes.
- 31 Victorian researchers have received $2 million – 60% of the national total. We have selected three from a long list of incredible grant recipients to be available for media.
- The researchers below are available to talk to media and explain the potential of their work to change lives.

Assoc. Professor Michelle Keske – Deakin University

Home-based vascular therapy for improving exercise tolerance and glycaemia in type 2 diabetes:

Research into exercise intolerance. As a decreased ability to perform physical exercise is common in people with type 2 diabetes. Exercise intolerance significantly reduces quality of life making independent living difficult.

Assoc Professor John Wentworth – The Walter and Eliza Hall Institute of Medical Research

In-home islet autoantibody testing to empower families to prevent type 1 diabetes:

Like a rapid antigen test (RAT) to detect COVID-19, this research is hoping to bring the cost down to less than $20 per test and offer it to the general population.

Doctor Arpeeta Sharma – The Baker Heart and Diabetes Institute *Modulating soluble guanylate cyclase activity to improve type 2 diabetic and hypertensive heart function:*

This study has the potential to identify a new drug therapy to improve the lives of people living with diabetes with hard-to-treat hypertension and heart failure. People with type 2 diabetes often have high blood pressure and are 2 -3 times more likely to develop cardiovascular disease.

Diabetes Victoria

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Research grants for Melbourne's brightest in hope one may hold the key to a diabetes cure

Melbourne's brilliant capacity and record in undertaking world-class health and medical research has again been proven with 31 Victorian-based researchers securing more than $2 million from the 2022 Diabetes Australia Research Program grant round.

Diabetes Victoria CEO, Mr Craig Bennett said, "Each year, the most outstanding projects covering a range of basic, clinical, psychosocial and translational diabetes-related research are selected on merit, following peer review. Each general grant recipient receives funding of around $70,000.

"Every dollar directed towards diabetes research is critical. Each funded project may hold a vital key to the next development or breakthrough, potentially helping to make a real difference to many lives," he said.

Diabetes research continues to bring hope to people living with all types of diabetes, and there's no time to wait as diabetes is now the fastest-growing chronic condition in Victoria.

"Almost 370,000 Victorians live with diabetes and we estimate that some 125,000 more live with undiagnosed type 2 diabetes," he said.

The Victorian recipients of the 2022 Diabetes Australia Research Program general grants come from many of Melbourne's most well-known institutions including Monash University, the University of Melbourne, Deakin University, St Vincent's Institute of Medical Research, Baker Heart & Diabetes Institute, the Centre for Eye Research Australia, La Trobe University, the Murdoch Children's Research Institute, the Royal Melbourne Hospital and the Walter and Eliza Hall Institute of Medical Research.

Mr Bennett said, "Each of the supported research projects is important and will throw light on the causes and consequences of the different types of diabetes. There are three projects in particular that are fascinating.

"The first is a home-based vascular therapy for improving exercise tolerance and glycaemia in type 2 diabetes, to be undertaken by Associate Professor Michelle Keske at Deakin University and in collaboration with Institute for Physical Activity and Nutrition (IPAN)," he said.

Exercise intolerance means a decreased ability to perform physical exercise. This is common in people with type 2 diabetes and significantly reduces quality of life, making independent living difficult.

Mr Bennett said, "The other is led by Associate Professor John Wentworth who is researching an in-home islet autoantibody test for detecting type 1 diabetes. John works with the Walter and Eliza Hall Institute of Medical Research and collaborates with Melbourne Health/the Royal Melbourne Hospital, Lions Diabetes Foundation and JDRF.

"Similar to COVID-19 Rapid Antigen Tests, this could mean a new way to identify type 1 diabetes in children and young adults who are at high risk quickly, easily, and at a lower cost.

"The third project has the potential to identify a new drug therapy to improve the lives of people living with diabetes with hard-to-treat hypertension and heart failure, by Doctor Arpeeta Sharma," he said.

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Victoria's 2022 DARP recipients

Researcher	Institute	Project Title
Dr Dragana Dragoljevic	Baker Heart and Diabetes Institute	Determining if diabetes interacts with clonal haematopoiesis to promote atherosclerotic cardiovascular disease.
Dr Arpeeta Sharma	Baker Heart and Diabetes Institute	Modulating soluble guanylate cyclase activity to improve type 2 diabetic and hypertensive heart function.
Assoc Professor Michelle Keske	Deakin University	Home-based vascular therapy for improving exercise tolerance and glycaemia in type 2 diabetes.
Assoc Professor Peter van Wijngaarden	Centre for Eye Research Australia	Novel imaging & artificial intelligence for improved diabetic retinopathy screening.
Dr Gunveen Kaur	Deakin University	Does short-term high-calorie high-fat feeding impair skeletal muscle microvascular blood flow and increase the risk of pre-diabetes in humans?
Dr Greg Kowalski	Deakin University	A novel 'liquid biopsy' to study in vivo beta-cell insulin synthesis in humans.
Dr Amelia Lake	Deakin University	Implementing quarterly professional-mode flash glucose monitoring in a collaborative care model for type 2 diabetes: exploration of clinician/patient dyads in the GP-OSMOTIC qualitative sub-study.
Professor Bodil Rasmussen	Deakin University	Psychosocial well-being among new mothers with type 1 or type 2 diabetes: Refining and testing a novel screening tool derived from the Postnatal Wellbeing Transition Questionnaire.
Dr Chris Shaw	Deakin University	Deciphering the mechanisms of postprandial glucose disposal.
Dr Michael De Silva	La Trobe University	Cell therapy for the treatment of obesity-induced brain injury and cognitive impairment.
Dr Miles De Blasio	Monash University	Targeting cardiac adiponectin signalling as a novel treatment for cardiac lipotoxicity.
Professor Mark Febbraio	Monash University	Role of extracellular vesicles in exercise-induced protection of liver steatosis and insulin resistance.
Professor Karin Jandeleit-Dahm	Monash University	Point of care detection of early kidney disease using infrared spectroscopy.
Dr Sarah Marshal	Monash University	Sulforaphane, a vasoprotective compound to reduce maternal vascular complications in human gestational diabetes.
Dr Muthukumar Mohan	Monash University	A pro-resolving approach as a novel interventional treatment against the vascular complications of diabetes.

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Dr Chengxue (Helena) Qin	Monash University	Resolving inflammation to treat vessel stiffness in diabetes.
Dr Adam Rose	Monash University	Investigating a novel hepatic glucagon signalling node.
Dr Carlos Rosado	Monash University	Exploring the intracrine effects of GLP-1 peptides.
Dr Jacqueline Schiesser	Murdoch Children's Research Institute	A scorecard for human islets.
Dr Kim Loh	St Vincent's Institute of Medical Research	SIK3 as a new therapeutic target for improving ß-cell function in diabetes.
Dr Andrew Sutherland	St Vincent's Institute of Medical Research	IL-17RC regulated mechanisms of type 1 diabetes protection: the role of gut microbiota.
Professor Helen Thomas	St Vincent's Institute of Medical Research	New ways to treat checkpoint inhibitor induced type 1 diabetes.
Assoc Professor John Wentworth	The Walter and Eliza Hall Institute of Medical Research	In-home islet autoantibody testing to empower families to prevent type 1 diabetes.
Dr Aleena Ali	University of Melbourne	Genetics in diabetes: towards precision medicine.
Dr Devy Deliyanti	University of Melbourne	Regulatory B cells for the treatment of diabetic retinopathy.
Professor Lea Delbridge	University of Melbourne	Developing cardioprotective SGLT leads – especially for women.
Dr Helen Jiao	University of Melbourne	Reducing vision loss in diabetic retinopathy by protecting the outer blood-retinal barrier.
Dr Magdalene Montgomery	University of Melbourne	EMILIN1 - A novel therapeutic target for glycaemic control and liver disease.
Dr Benjamin Parker	University of Melbourne	Identification of C18ORF25 as a novel exercise regulated signalling factor for glycaemic control and insulin resistance.
Professor Matthew Watt	University of Melbourne	Targeting lipid droplet metabolism to improve insulin sensitivity and glycaemic control.
Dr Mervyn Kyi	The Royal Melbourne Hospital	Specialist Treatment of Inpatients: Caring for Diabetes - Type 1 (STOIC-D T1)

*We **support**, **empower** and **campaign for** all Victorians affected by, or at risk of, diabetes.*

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