



**Black swan
research.**



IN SEARCH OF THE UNEXPECTED.

Before explorer Willem de Vlamingh drifted down the West Australian coast in 1697, it was assumed that all swans were white. In Europe, all swans that had hitherto been seen were white. Therefore, the thinking went, all swans must be white. But in the waters of what is now known as the Swan River, the Dutchman found something which turned the accepted truth on its head. It was a controversial, if accidental outcome (de Vlamingh was looking for survivors of

a shipwreck). Indeed his story was doubted for almost 30 years until a pair of black birds were taken to Jakarta in the Dutch East Indies for exhibition. What's interesting about the discovery is that its importance and influence have proved to be far greater than what de Vlamingh actually set out to achieve. (While he did stumble across *cygnus atratus*, he actually found no survivors.) Noted author Nassim Nicholas Taleb drew upon the Dutchman's tale in his influential 2007 book, *The Black Swan*.



Taleb contends that almost every scientific discovery, medical breakthrough, artistic accomplishment and historical event has been unpredictable and often accidental.

His 'Black Swan Events' have extreme impacts, and after the event can be rationalised to the point of looking predictable.

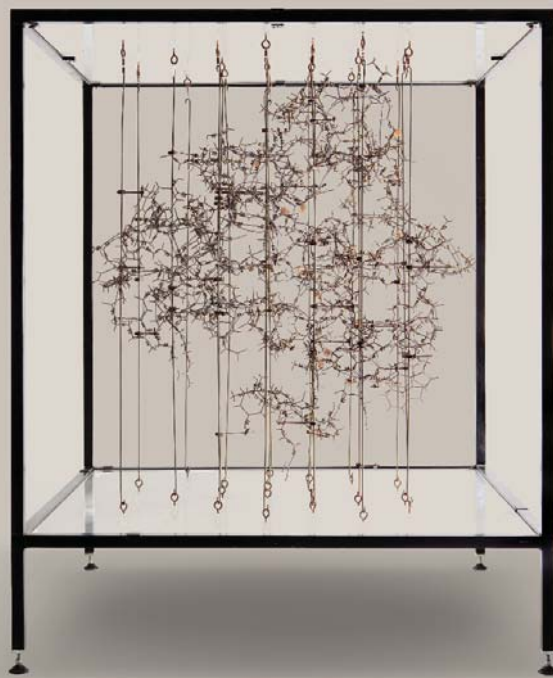
Taleb cites the discovery of penicillin. Alexander Fleming wasn't looking to invent the most efficacious life-saving drug in history, but by noticing the potential in

a contaminated petri dish, he did so anyway.

And the world hasn't looked back.

At St Vincent's Institute, while we work diligently each day to find new and better means of preventing and treating common diseases, we haven't forgotten the importance of keeping our minds open to the possibilities of the unexpected.

Because if we don't recognise the accidental and serendipitous, we might just miss precisely the thing we are looking for.



PROTEIN CRYSTALLOGRAPHY AT SVI. HATCHED FROM A BLACK SWAN EGG.

If you've ever wandered the back corridors of the Institute, you might have come across a rather beautiful but somewhat dusty installation of Perspex and wire.

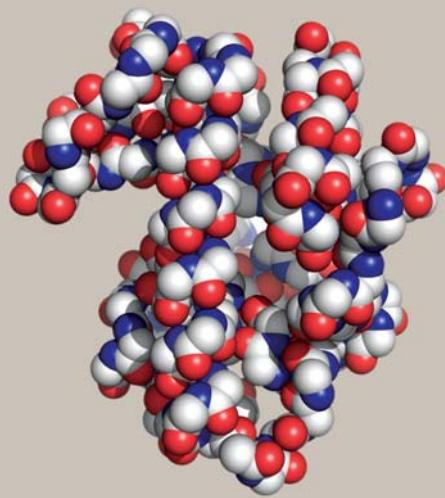
It represents the architecture of the first protein structure 'solved' at SVI – a protein called lysozyme from the egg of an Australian black swan.

In 1978, Neil Isaacs, who went on to become the Joseph Black Professor of Chemistry at the University of Glasgow,

was lured to SVI to establish a protein crystallography laboratory, the first of its kind in Australia.

The process had been developed overseas some years before, and gave researchers the ability to work out the 3-dimensional structure of a protein, which allows biological processes to be seen at their most fundamental level.

Today, these structures help us develop 'smart drugs' that are specifically designed to interact with a particular disease-causing protein.



Remarkably, in 1978, Isaacs and his team gathered much of the information on the structure of the black swan lysozyme from a low-power X-ray generator and a single camera.

Using the basic tools and primitive computing facilities available at the time, Isaacs and an assistant spent an entire, un-airconditioned summer painstakingly reconstructing their discovery by hand; today it sits in wire and Perspex in the halls of the Institute.

This achievement allowed the group

to garner the grants they needed to set up the unit with more up-to-date equipment, technical help and software.

From this hand-fashioned beginning, St Vincent's Institute has gone on to solve more crystal structures than the combined efforts of all the other labs in Australian medical research institutes.

An outcome that Willem de Vlamingh himself would never have anticipated.

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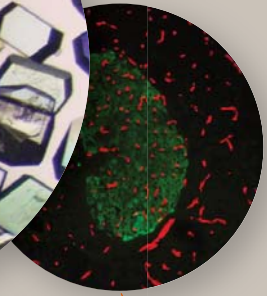
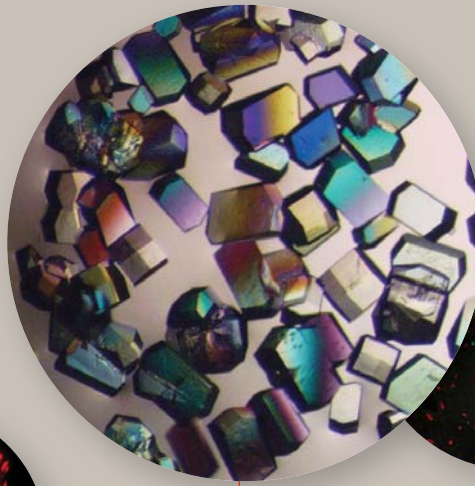
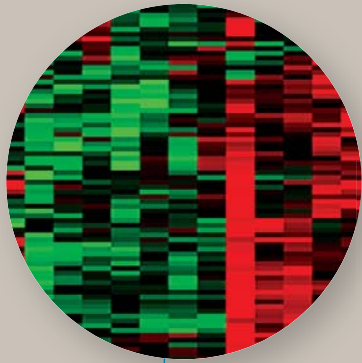
Independent
audit report

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Event supporters



OUR VALUES

OUR MISSION

THIS IS SVI

DISEASES STUDIED

SVI is an independent institute conducting medical research into the cause, prevention and treatment of diseases that are common and have serious effects on health. We strive, through our research, to help alleviate the enormous financial, emotional and physical impacts of these diseases on individuals, their families and the community.

Type 1 diabetes, obesity and type 2 diabetes, heart disease, bone diseases such as arthritis and osteoporosis, cancer, infectious diseases, Alzheimer's disease and other neurological disorders.

To carry out high-quality biomedical research in order to make discoveries that will improve the health of the community by prevention or better treatment of common diseases that cause premature death or reduced quality of life.

We value excellence, integrity, creativity, collaboration, individual drive, persistence, and the challenging of dogma.



09



Immunology Lab

Thomas Kay
Jonathan Chee
Kate Graham
Gaurang Jhala
Michael Jovanovic
Balasubramanian
Krishnamurthy
Thomas Loudovaris
Lina Mariana
Natalie Sanders
Nirupa
Seethanandan
Anne Thorburn
Emma Thorburn

● ARMING KILLER T CELLS IN TYPE 1 DIABETES

Cytotoxic T lymphocytes (CTL) kill pancreatic beta cells during the development of type 1 diabetes. We are studying where CTL become activated and armed with molecules required for killing beta cells. Autoreactive CTL initially proliferate and

acquire limited cytotoxic effector molecule expression in the pancreatic lymph nodes. CTL found within the islet undergo further proliferation, but more strikingly acquire much higher expression of granzyme B and interferon gamma, molecules associated with cytotoxic effector function. This increased

cytotoxic differentiation appears to take place in the islet itself. The data provide in vivo support that a third signal in addition to T cell receptor ligation and co-stimulation is required for CTL differentiation and that this stimulus is produced in the inflamed target tissue.

● **PEOPLE WITH TYPE 1** diabetes cannot make insulin, the hormone that regulates the body's use of glucose. Insulin is produced by beta cells, found in small clumps of cells, called islets, within the pancreas. In type 1 diabetes, beta cells are mistakenly attacked and destroyed by the immune system. We study how this occurs, and work to find ways of preventing it from happening. We have begun applying our findings from work in mice to people with type 1 diabetes by establishing a human islet transplant program, using human islets for laboratory studies, and studying the role of the human immune response in type 1 diabetes.



Islet Biology Lab

Helen Thomas
Eveline Angstetra
Rochelle Ayala-Perez
Peter Campbell
Caroline Dobrzelski
Lorraine Elkerdout
Sarah Emmert
Stacey Fynch
Mugdha Jogtekar
Olga Luft
Zia Mollah
Mark McKenzie
Lisa Sampurno
Yuxing Zhao

Autoimmunity Lab

Janette Allison
Cameron Kos

● THE IMPORTANCE OF BCL-2 FAMILY PRO-SURVIVAL PROTEINS

The death of beta cells is controlled by members of the Bcl-2 family of proteins. A sub-group within this family includes the pro-survival proteins Bcl-xL, Mcl-1, Bcl-2, Bcl-w and A1. We are studying the importance

of these proteins for beta cell survival by deleting their genes in mouse beta cells. We found that beta cells lacking Bcl-xL developed normally in the mouse but were abnormally sensitive to cell death caused by a number of different cell death stimuli including cytotoxic drugs, proinflammatory cytokines and death

receptor agents. We are now testing mice that lack the Mcl-1 protein in beta cells to determine its importance in beta cell survival. Expression of these pro-survival proteins may protect beta cells from cell death stimuli due to mediators implicated in type 1 diabetes and death/degeneration of transplanted islets.

● BETA CELL DEATH

The Autoimmunity Laboratory is using genetically modified mouse models to address the mechanisms of beta cell death with special emphasis on cell death pathways involving the Bcl-2 family of proteins.

Immunology and Diabetes



Immunogenetics Lab

Thomas Brodnicki
Michelle Ashton
Colleen Elso
Sean Ivory
Leanne Mackin
Pravin Rajasekaran
Iris Tan

● GENETIC INTERPLAY BETWEEN INFECTION AND TYPE 1 DIABETES

The NOD mouse strain is susceptible to spontaneous autoimmune diabetes and to infection by *Listeria*, a bacterium that causes food poisoning. We replaced a genomic region on chromosome 13 in NOD mice with one derived

from the C57BL/6 mouse strain, which is resistant to *Listeria* infection. These genetically-altered NOD mice exhibited increased resistance to *Listeria*, but exacerbated diabetes. Certain immune cells were also affected by swapping this chromosome region between these two mouse strains.

Our ongoing work is focused on characterising this chromosome to determine if a single gene regulates a checkpoint between immunity and autoimmunity. It may be that particular diabetogenic alleles are maintained in mouse and human populations because

they provide resistance to bacterial infection.

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Type 1 diabetes



Human T cell Lab

Stuart Mannering
Rochana Chand
Joseph Chantlar
Hayley Moon
Max Joffe

● **ANALYZING T-CELL MEDIATED ISLET GRAFT REJECTION**
Islet transplantation is an emerging treatment for some patients with T1D. Islet transplants may be subject to both an allo-immune and a recrudescant autoimmune response. The aim of this project is to distinguish and measure both allo-and

auto-immune responses in the blood of islet transplant recipients. To do this we are using extracts from the donor's spleen tissue and allogeneic islets to stimulate T-cell responses in vitro. We will use this approach to measure changes in the strength and specificity of the recipient's immune

response at different times following islet transplantation. Insights into the dynamics of islet graft rejection will lead to enhanced graft survival for future islet transplant recipients.

SVI
RESEARCH
UNITS

- **PROTEINS ARE ONE** of the body's essential building blocks. In addition to contributing to the structure of the body, proteins also act as molecular engines, controlling all of the body's functions. Determining the structure of a protein can help us to understand its function. Crystallography allows us to 'see' the 3-D structure of proteins at the atomic level. The protein's 3-D structure can then be used to help design new drugs for the treatment of disease. In the Structural Biology Unit, incorporating the Biota Structural Biology Laboratory and the ACRF Rational Drug Discovery Facility, we examine the structure of proteins implicated in cancer, brain disease and bacterial and viral infection.

Structural Biology

- **ATTACKING BONE CANCER**
Parathyroid hormone-related protein (PTHrP) plays a vital role in the embryonic development of the skeleton and other tissues. When it is produced in excess by cancers it can cause hypercalcaemia, and its local production by breast cancer cells has been implicated in the pathogenesis of bone metastasis formation in that disease. Antibodies have been developed that neutralise the action of PTHrP through its receptor, PTH1R, without influencing parathyroid hormone action through the same receptor. Such neutralising antibodies against PTHrP are therapeutically effective in animal models of the humoral hypercalcaemia of malignancy and of bone metastasis formation. We determined the 3-D atomic structure of the complex between PTHrP and a neutralising monoclonal anti-PTHrP antibody. The structure explains how the antibody discriminates between the two hormones and provides

information that could be used in the development of novel agonists and antagonists of their common receptor. Our work on PTHrP is in collaboration with SVI's Professor Jack Martin.

FIGHTING RESISTANCE
Platinum-based anticancer drugs, such as cisplatin, are highly effective chemotherapeutic agents and are used extensively for the treatment of solid tumours. However, their effectiveness is limited by the incidence of drug resistance, which has been associated with an overexpression of pi class glutathione S-transferase (GSTP1-1), an important enzyme in the mercapturic acid detoxification pathway. Ethacraplatin (EA-CPT), a trans-Pt(IV) carboxylate complex containing ethacrynate ligands, was designed as a platinum anti-cancer prodrug that could also target cytosolic GST enzymes. Ethacrynic acid is a diuretic in clinical use and a potent inhibitor of GST that has been

extensively investigated by many labs. EA-CPT is an excellent inhibitor of GST activity in live mammalian cells compared to either cisplatin or ethacrynic acid. We carried out structural investigations in order to understand the nature of the drug-protein interactions between EA-CPT and GSTP1-1. EA-CPT preferentially docks at the dimer interface of GSTP1-1 and subsequent reactivity with the enzyme results in docking of the ethacrynate ligands at the active site and binding of the Pt moiety to the dimer interface. The activation of the inhibitor by its target enzyme and covalent binding accounts for the strong inhibition of enzymatic activity and irreversible deactivation by the platinum prodrug. This work is in collaboration with Professor Mario Lo Bello, University of Rome 'Tor Vergata', Italy and Professor Paul Dyson, Ecole Polytechnique Fédérale de Lausanne, Switzerland.

- **A blossoming career**

With her recently awarded PhD in hand, Dr Lorien Parker left the Institute in 2009 to take up a post-doctoral position at RIKEN in Yokohama City, Japan. Lorien has since been awarded an NHMRC postdoctoral training fellowship which funds four years of research – two years overseas and two years back in Australia. Lorien will return to SVI after her post-doc and will use her newly acquired skills to help unlock the mysteries of protein structure and its relationship to human disease. Professor Parker says, "We are thrilled that Lorien will be returning to us and look forward to the knowledge and new approaches that she will bring with her after her experience in one of the world's leading structural biology centres."



Protein crystals



RESEARCH UNIT

- Michael Parker
- Daniel Andrews
- David Ascher
- Brett Bennetts
- Matthew Chung
- Gabriela Crespi
- Susanne Feil
- Michael Gorman
- Nancy Hancock
- Jessica Holien
- Louis Italiano
- Jack King-Scott
- Sara Lawrence
- Dene Littler
- Belinda Mitchell
- Luke Miles
- Craig Morton
- Tracy Nero
- Hooi-Ling Ng
- Lorlen Parker
- Galina Polekhina
- Kher Shing Tan
- Julian Tang
- Jerome Wielens

- THE MAJOR FOCUS of research in the Unit is an enzyme known as AMP-activated protein kinase (AMPK). AMPK is one of the body's major energy regulators. A requirement for life is that energy metabolism is tightly coupled to demand. AMPK does this at the single cell level by boosting energy metabolism when energy levels are low. At the whole body level, AMPK controls appetite. A major motivation for studying this enzyme is that it is at the heart of the health benefits of diet and exercise and for this reason its study is relevant to metabolic diseases, including obesity, type 2 diabetes, cardiovascular disease and cancer.

Protein Chemistry and Metabolism

- **ACTIVATING AMPK**
AMPK has attracted global attention because of its potential role in metabolic diseases. Weight loss and insulin-sensitising hormones stimulate AMPK activity in skeletal muscle to burn off fat. AMPK is also activated by some common glucose lowering drugs used for patients with type 2 diabetes, such as metformin. AMPK regulates the burning and storage of fats and sugars, and affects the level of sugars, fats and cholesterol in the bloodstream, with the potential to offset the effects of obesity, heart disease, diabetes and other age-onset diseases. AMPK can also suppress the growth of cancers. AMPK is an $\alpha\beta\gamma$ heterotrimer with an α catalytic subunit and β and γ regulatory subunits. AMPK activation depends on phosphorylation of its α subunit on Thr-172 by either upstream kinase LKB1 or Calmodulin-dependent kinase kinase β .

Previously we had found that the N-terminal myristoylation of the β subunit was essential for AMPK membrane binding. We have now found that the myristoyl group inhibits AMPK phosphorylation on Thr-172 by the upstream kinases and AMP binding to the γ subunit relieves this inhibition. This now explains the molecular basis of the initial step in AMPK activation in response to metabolic stress as occurs during exercise with depletion of ATP.

AMPK AND BONE DENSITY

Diet and exercise are known to influence bone density. We obtained genetic evidence that AMPK plays a role in maintaining bone density. Germline deletion of either AMPK β subunits 1 or 2 in mice resulted in reduced trabecular bone density and mass. This may indicate that in AMPK β 1 and β 2 null mice, exercise-mediated maintenance of bone density is impaired.

However, neither strain of mice had altered numbers of the bone-forming osteoblasts or bone-resorbing osteoclasts, so the underlying mechanism involved is not clear. Future studies will be required to identify how AMPK regulates bone density.

● Bowing out gracefully

After 40 years, the automated protein sequencing technology invented at SVI and used world-wide has been superseded by new mass spectrometry techniques. Protein sequencing was the forerunner to DNA sequencing, which led to the genetic engineering revolution. The first automated protein sequencer, developed by founding Director, Pehr Edman, and Geoffrey Begg, sits on display in the foyer of the Institute. In 1993 Professor Bruce Kemp used the technology to sequence AMP-activated kinase. Professor Kemp says, "It is amazing to reflect on the great impact of protein sequencing and how technology has evolved: sensitivity has improved approximately 1 million fold, and what took weeks in 1993 can now be done in a couple of hours with a mass spectrometer."



Obesity and type 2 diabetes

3



RESEARCH UNIT

Bruce Kemp
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ZhiPing Chen
Sandra Galic
Kimberley Hewitt
Jane Honeyman
Frosa Katsis
Naomi Ling
Belinda Mitchell
Ee Von Miao
Jonathan Oakhill
Hayley O'Neill
John Scott
Rohan Steel
Gregory Steinberg
Shanna Tam
Bryce van Denderen
Sheena Wee

- **DESPITE MAJOR ADVANCES** in treatment and prevention, cardiovascular diseases (heart attack, stroke and heart failure) remain major causes of premature death and disability in our community. Our research covers a broad spectrum of new strategies, from basic laboratory to clinical and community studies, for the prevention and treatment of these important diseases.

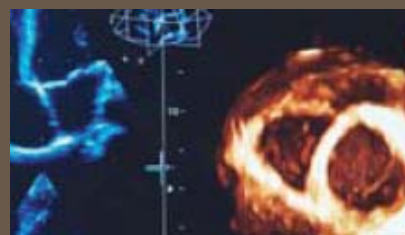
Molecular Cardiology

- **A PROBLEM OF THE HEART**
Heart failure is fundamentally a disease of heart muscle. In collaboration with cardiologists and surgeons at St Vincent's Health we have established a cardiac tissue bank. With patient consent, small pieces of heart muscle are taken during open heart surgery. Together with colleagues from Melbourne and Monash Universities, we are comparing heart muscle from patients with and without heart failure to identify why the muscle is unable to work properly in heart failure. These studies are giving important new insights into why people with obesity and diabetes are more likely to develop heart failure.

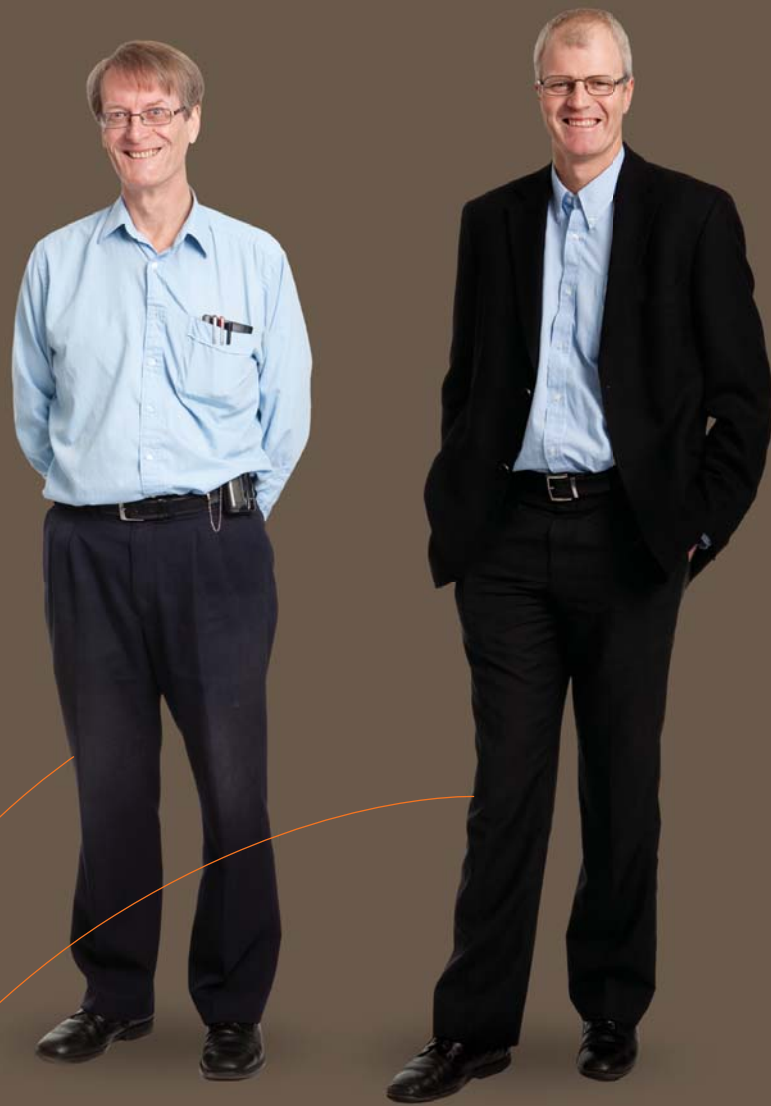
SCREENING FOR DISEASE
SCREEN-HF is a community-based investigation aimed at discovering whether a blood test for a protein called NT-proBNP can identify people at increased risk of heart failure. SCREEN-HF is a collaboration with cardiologists at St Vincent's Health and Melbourne and Monash Universities. We have recruited 4000 people from the community and measured their blood levels of NT-proBNP. We are now performing echocardiographic tests to assess how well their heart muscle is working, and we will follow-up these individuals over 5 years to see which ones develop heart failure. Identifying people before or at the earliest stages of heart failure will help us ensure they receive currently available treatments for the prevention and treatment of heart failure.

- **Taking research to the community**

Associate Professor Duncan Campbell and colleagues have committed themselves to spending the next 5 years evaluating whether a simple blood test can be used to identify people who could benefit from existing treatments that are highly effective in preventing heart disease. The team is measuring the levels of a protein called NT-pro BNP in the blood of a large group of community volunteers. Over the next 5 years the group will be followed to see who goes on to develop heart failure. The team hopes that the results of the study will allow them to use NT-pro BNP blood levels in the future to predict those at risk of heart disease before they are affected by it.



Echocardiogram of the heart



RESEARCH UNIT

Duncan Campbell
David Prior
Duncan E. Campbell
Francoise Campbell
Kimberly Hewitt
Robyn Kelly
Aileen Lim
Laura Stamp

- THE BONE CELL Biology and Disease Unit investigates the ways in which cells of bone communicate with each other to determine how much bone is formed and broken down. This is a process that continues throughout life, and it needs to be very closely managed in order for normal bone structure to be maintained. If bone breakdown exceeds bone formation, then bone becomes fragile, and osteoporotic fractures can follow. This also occurs in joint destruction in arthritic conditions. Understanding the cells of bone also helps us to understand cancer of the bone (osteosarcoma) and the processes by which certain cancers are particularly prone to grow as secondary deposits in bone, especially breast, prostate cancer and certain cancers of the blood.

Bone Cell Biology and Disease

- THE IMPORTANCE OF COMMUNICATION

Our major aim is to understand how cells of bone communicate with each other to control bone remodelling, a process by which a small amount of bone is resorbed by osteoclasts and the space refilled by osteoblasts which form the same amount of bone; this equal activity of two different cell types is known as coupling. At any one time remodelling takes place at many sites distributed asynchronously throughout the skeleton. The purpose of remodelling is to remove old bone, repair damaged bone, to respond to pressure changes, and to control the body's calcium metabolism.

This year we have made significant progress in understanding more about osteocytes. Osteocytes are cells embedded within the hard matrix of bone. They form a complex network of tunnels that allow communication

within the hard tissue of bone, and allow the osteocytes to send signals to cells on the bone surface. In this way, osteocytes can control bone formation and bone resorption.

We have discovered that cardiotrophin-1, which is produced by osteoclasts, inhibits production of an osteocyte-specific protein, sclerostin.

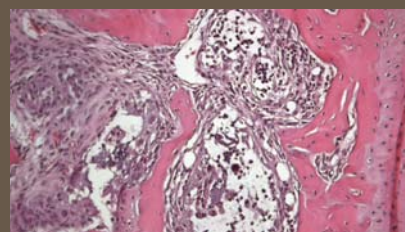
We also discovered that oncostatin M is produced by osteocytes and osteoblasts. Like cardiotrophin-1, oncostatin M also inhibits sclerostin production and stimulates bone formation. Oncostatin M also influences bone resorption and the differentiation of fat cells (adipocytes). We have discovered that the way oncostatin M affects bone formation, fat cell formation and bone resorption involves two different communication pathways, making the development of therapeutic agents targeted to these

pathways a worthwhile future goal.

In our continuing work on the actions of parathyroid hormone (PTH) and its related protein (PTHrP), we have found that both of these factors stimulate production of a chemokine, Cxcl1. This chemokine is released by osteoblasts and attracts the cells required to form osteoclasts to the bone surface. This new data will help us to understand how osteoblasts control the differentiation of osteoclasts.

- Tipping the balance

Researchers in the Bone Cell Biology and Disease Unit study the balance of bone breakdown and formation across a spectrum of bone diseases, including osteoporosis, arthritis and cancer. Their ability to conduct this research was greatly enhanced in 2009 with the arrival of an expert dedicated to the study of arthritis. Dr Nicole Walsh, a researcher who studied models of arthritis for 5 years at Harvard and at Massachusetts Medical School in the U.S., is a valuable addition to the Unit's research capacity in major diseases of bone. If only the imbalances in bone were this easy to address!



Stained section from arthritis affected bone

Arthritis, osteoporosis and cancer



RESEARCH UNIT

- Jack Martin
- Natalie Simms
- Elizabeth Allan
- Emma Baker (with the Stem Cell Regulation Unit)
- Holly Brennan
- Ling Yeong Chia
- Blessing Crimmin-Irwin
- Jonathan Gooi
- Pat Ho
- Peece Kokowski (with the Stem Cell Regulation Unit)
- Benoit Legoff
- Narelle McGregor
- Kong Wah Ng
- Celeste Nota (with the Stem Cell Regulation Unit)
- Suei Pompolo
- Ingrid Poulton
- Julie Quach
- Evange Romas
- Hasnawati Saleh
- Mirahireza (Farzin) Takyar (with the Stem Cell Regulation Unit)
- Emma Walker
- Nicole Walsh

- THE STEM CELL Regulation Unit investigates how adult stem cells can replicate themselves (a process termed self-renewal) or commit to become a mature cell type (a process called differentiation). When there are defects in self-renewal or differentiation processes, the stem cell (or its progeny) can become cancerous. We are primarily interested in the regulation of blood stem cells and we also research cancer of the bone lineage. We work closely with the Bone Cell Biology and Disease Unit to determine how cells of the bone lineage (which are associated with developing blood cells in the bone marrow) influence blood cell formation.

Stem Cell Regulation

- RESPONDING TO CANCER

Cancer treatments, especially chemotherapy and irradiation procedures, negatively affect blood cell production in the patient. This puts the patient at risk of infection and bleeding. Blood cells are formed from blood stem cells in specialised places in the body termed microenvironments. The major site of blood cell production is the bone marrow, located within the bone cavity. There are a number of different non-blood cell types in the bone marrow that have been identified as being important in helping to produce blood cells. These include cells of the bone lineage, vasculature, fat cells and cells of the sympathetic nervous system. We are determining the effects of cancer treatments on each of these different cells of the bone marrow microenvironment.

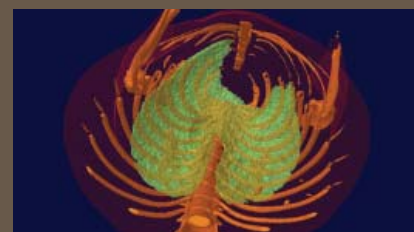
Our ultimate goal is to understand how these therapies impact upon the important regulatory cells of blood cell production and to determine methods of improving their recovery after cancer treatments.

MODELLING ANAEMIA

We have developed and characterised a new model of a blood cell disease that shows similarity to a little understood human disease known as refractory anaemia. This model will help us to understand how and why refractory anemia develops. One exciting finding from this work is our demonstration of a link between the development of these diseases and mitochondrial function.

- Imaging cancer

In 2009, Drs Louise Purton and Carl Walkley were awarded \$500,000 by The Ian Potter Foundation, to fund their research into blood and bone cancers. The money went towards the purchase of a suite of cutting-edge equipment, including an instrument called a microCT. This equipment is the first of its kind in Victoria, and allows researchers to image the complete internal 3D structure of a live mouse. The research expertise at the Institute and the new, world class tools available will cement SVI's position as one of the best places in the world for research into diseases of the bone and blood.



3D model of the upper body of a mouse



RESEARCH UNIT

- Louise Purton
- Carl Walkley
- Maria Askmyr
- Emma Baker (with the Bone Cell Biology and Disease Unit)
- Meryn Chalmers
- Ankita Gupte
- Jean Handy
- Tanja Jovic
- Pece Kocovski (with the Bone Cell Biology and Disease Unit)
- Celeste Nota (with the Bone Cell Biology and Disease Unit)
- Megan Russell
- Sofie Singprant Soderberg
- Mirahreza (Farzin) Takyar (with the Bone Cell Biology and Disease Unit)
- Kirby White

- **LEUKAEMIA IS A** cancer of the blood cells. The different types of blood cells – red blood cells, white blood cells and platelets – are all derived from a primitive cell, called a stem cell. There is a complex series of developmental steps that must occur in order for a stem cell to differentiate into the different blood cells. If this process goes wrong, leukaemia can develop. We focus on understanding how blood cells mature and how leukaemia disrupts normal blood cell maturation. We study these processes by creating mouse models of leukaemia which mimic human disease.

Haematology and Leukaemia

- **DISCOVERING NEW LEUKAEMIA TREATMENTS**
T cell leukaemia cells resemble normal developing T cell precursors. Consequently, the study of T cell precursor development in the thymus is important in order to elucidate the molecular mechanisms of leukaemogenesis. We are attempting to identify new T cell oncogenes using a novel retroviral cDNA library screening method in primary mouse cells. Additionally, we are creating leukaemia/lymphoma mouse models of T cell and other blood cell lineages using retroviral overexpression. We use multiparameter flow cytometry and cell sorting to analyse these models.

LEUKAEMIA GENES

The prognosis of both children and adults with T-cell acute lymphoblastic leukaemia (T-ALL) is the worst of all cases of human ALL.

Whilst great strides have been made by intensifying chemotherapy regimes, further dosage increases would cause harmful and perhaps fatal side effects. Therefore, more specific therapies are needed. In order to develop such therapies, it is paramount to identify the causative mutations that underlie leukaemia development.

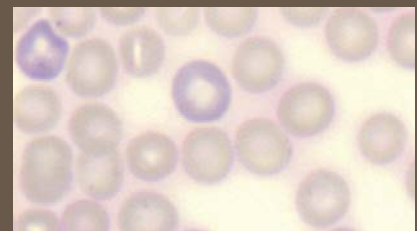
We have identified an Ets transcription factor as a gene responsible for T cell lymphoma in mice. Using a retroviral overexpression strategy we will be able to elucidate how this transcription factor perturbs T cell development and induces lymphoma. This will be accomplished with genomic analysis of normal and leukaemic cells by microarray. Subsequently, we are planning to identify Ets downstream targets that could potentially be used for preliminary drug screens. By utilising shRNAs which knockdown gene expression we will also identify the normal role of this Ets

transcription factor in T cell development and blood cell maturation. Importantly, this will illuminate the potential therapeutic ability of inhibitors of downstream targets of the Ets transcription factor and whether they will have the capacity to negatively impact T cell development.

The potential significance of this research is that chemotherapy and associated side effects will be considerably reduced if a specific Ets transcription factor inhibitor can be developed. Additionally, specific inhibitors may be more effective in maintaining leukaemia-free survival as they would be targeted to the specific cause of the leukaemia.

● Genes behaving badly

Non-Hodgkin lymphomas are cancers of the lymphatic system and are the most common type of blood cancer diagnosed in Australia. They occur when developing B and T cells undergo a malignant change. Having identified a gene that causes T cell lymphoma in mice, Dr David Izon spent much of 2009 working to find out how the gene causes disease. Once this is done, David hopes to be able to find ways to stop the gene from acting, with the aim of developing more effective treatments for this cancer.



Blood film from a leukaemic mouse showing primitive red blood cells



RESEARCH UNIT

- David Izon
- Meryn Chalmers
- Charley Mackenzie-Kludas
- Monique Smeets

- **DNA DAMAGE IS** a key determinant of the onset and severity of cancer. At the same time, almost all cancer therapies act by causing DNA damage. Better understanding of DNA damage responses is therefore likely to improve our knowledge of how cancer develops and could reveal new approaches to cancer therapy. Our laboratory is interested in the molecular mechanisms by which cells deal with DNA damage. We study how human as well as yeast cells sense that their DNA is damaged and how specific DNA lesions are repaired, and we have discovered novel proteins with important roles in these processes.

Molecular Genetics

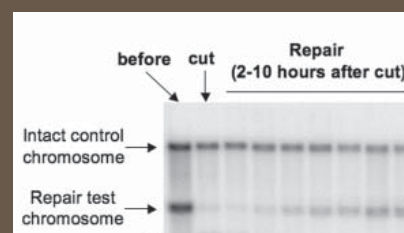
- **DOUBLE LIVES OF DNA DAMAGE RESPONSE PROTEINS**

Cells constantly receive a diverse range of signals from the environment and from within, and cell growth depends on the proper integration and coordination of responses to different signals. As a result, several proteins play roles in multiple different pathways to enable signalling crosstalk. A key example is cell division, where the genome needs to be accurately copied and then equally separated between two daughter cells, which depends on coordination with cell wall and cell membrane remodelling processes. We found that two proteins previously linked to roles in maintaining genome integrity, Mdt1 and components of the Ccr4-NOT complex, also function in cell wall integrity pathways.

Mdt1 is required for cell survival in response to blocked DNA double strand breaks and alternative telomere maintenance, and we have now found that it also has functions in the response to cell wall toxins in yeast, and as a backup to a MAP kinase cell integrity pathway under basal conditions. The Ccr4-NOT mRNA deadenylase complex is required for survival of DNA replication stress during S phase, and in addition, it is also required for the organisation of yeast septins, which regulate cell morphogenesis and cytokinesis. The dual functions of these proteins in genome integrity and cell wall integrity highlight the extent of the crosstalk between these two key aspects of cell function.

- **Targeted damage**

It is ironic that cancer develops as a result of DNA damage, and is then treated with chemotherapeutic drugs which themselves work by damaging DNA. A/Prof Jörg Heierhorst and his team are working to find out how DNA damage causes cells to become cancerous, and hope that in doing so they will also be able to develop new treatments to specifically damage the DNA of the 'right' cells: the cancerous ones.



An experiment showing repair of a broken chromosome



RESEARCH UNIT

- Jörg Heierhorst
- Lindus Conlan
- Andrew Hammet
- Nicolas Hoch
- Sabine Jurado
- Xianning Lai
- Nora Tenis
- Bryce van Denderen

- IN HIGHER EUKARYOTES, controlled cell proliferation and differentiation is required for normal growth and development. Deregulation of cell growth pathways leading to unrestrained cell division is a primary characteristic of cancerous cells. Therefore, defining the causes of increased cellular division is fundamental to understanding carcinogenesis. Our group is interested in understanding the molecular mechanisms of cell division and how deregulation of these pathways contributes to the development of human cancer. Our research ultimately aims to develop new approaches for cancer therapy.

Cell Cycle and Cancer

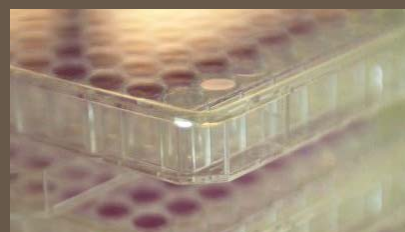
- **CONTROLLING METASTASIS**
Cyclin-dependent kinases (CDKs) promote cell cycle progression by phosphorylation of cell cycle regulators. Deregulated CDK activity results in the development of many human cancers due to increased cell division. New data in our laboratory demonstrate that CDKs can phosphorylate the breast cancer metastasis suppressor protein, BRMS1, which suppresses metastasis of various cancers through transcriptional repression. This work suggests that CDK-mediated phosphorylation of BRMS1 controls metastasis. This data suggests for the first time that, in addition to promoting the proliferation of cancer cells, deregulated CDKs may promote metastasis.

MODULATING CELL CYCLE
The ubiquitination pathway involves the covalent binding of ubiquitin to proteins. The recent approval of the proteasome inhibitor bortezomib for the treatment of multiple myeloma indicates that this pathway offers new avenues for cancer therapy. Ubiquitin-conjugating enzymes (Ubcs) and ubiquitin ligases, which attach ubiquitin to proteins, are pivotal in ubiquitination. The attachment of ubiquitin to specific lysines in substrates and in ubiquitin is important for generating diverse substrate-ubiquitin structures, providing versatility to this pathway, and allowing targeting of proteins to different fates. The mechanism of lysine selection, however, remains poorly understood. We have shown that the compatibility of amino acids adjacent to substrate or ubiquitin lysines with catalytic core residues of the Ubc Cdc34 is critical

for lysine selection and can specify if a substrate is mono- or polyubiquitinated. This new concept may be a general mechanism in directing the mode of ubiquitination in Ubcs. Ultimately, these regulatory regions may represent new drug target sites to be used to modulate the activity of different E2s and E3s for cancer treatment.

● Cycling cells

Randy Suryadinata completed the research work for his PhD in 2009, under the supervision of Dr Boris Sarcevic. Rather than follow the usual path of an overseas postdoc, Randy has chosen to remain in Boris' lab for another year, to follow through on some exciting recent developments from his last months in the lab. Boris says, "Randy's results suggest a new and unexpected role for proteins called CDKs in cancer metastasis. This suggests for the first time that these proteins not only control the abnormal growth of cancer cells, but also their spread to various organs, which is the major cause of death from cancer."





RESEARCH UNIT

● Boris Sarcevic
● Martin Sadowski
● Randy Suryadinata

- **THE CYTOSKELETON PROVIDES** a scaffold for a cell's inner workings. The major components of the cytoskeleton are actin filaments and microtubules. Both are involved in cell motility and cell division. Changes in the structure of the actin cytoskeleton are responsible for the ability of cancer cells to migrate within the body. In the Cytoskeleton and Cancer Unit, we are studying the role of a family of proteins known as LIM kinase (LIMK) 1 and 2 with the aim of identifying small molecules that can inhibit these enzymes and possibly cancer metastasis.

Cytoskeleton and Cancer

- **LIM KINASES IN METASTASIS AND DRUG RESISTANCE** LIMK1 and LIMK2 are regulators of the actin cytoskeleton. Both enzymes inhibit actin depolymerisation by inhibiting the activity of cofilin, an actin depolymerising enzyme, resulting in accumulation of actin filaments. While the role of LIMK1 in cancer metastasis is well established, that of its family member, LIMK2, is not yet known. We now have evidence that LIMK2 has a different function to that of LIMK1. We have identified a new substrate for LIMK2, known as twinfilin. High levels of LIMK2 and twinfilin result in resistance to anti-cancer drugs in cancer cells. Inhibition of LIMK2 and twinfilin increases sensitivity to these drugs. Because of the involvement of these two family members in cancer, they are good candidates for the development of small drug molecules to inhibit their activity.

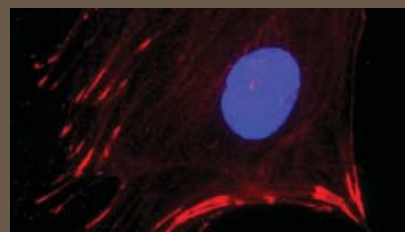
We are now testing such compounds for their ability to inhibit the proliferation and invasion of an invasive human breast cancer cell line in a 3D culture that mimics cells grown in the body. Furthermore, we are testing these compounds for their ability to increase the cells' sensitivity to anti-cancer drugs.

LIMK2 IN FAT CELLS Obesity is an important factor in insulin resistance and type 2 diabetes. Adipocytes (fat cells) become dysfunctional with obesity; however, the mechanisms linking obesity to insulin resistance are still poorly defined. We have generated mice lacking the expression of one of the LIMK2 isoforms (LIMK2a). These mice are obese, have enlarged adipocytes and are insulin resistant. Importantly, the insulin resistance is evident in vivo, but not in isolated tissues, indicating that LIMK2a deletion influences systemic metabolism.

Furthermore, because enlarged adipocytes are an independent predictor of type 2 diabetes, inflammation and lipotoxicity, understanding how LIMK2 regulates adipocyte function is important in order to better understand obesity-induced insulin resistance. LIMKs are important regulators of the cytoskeleton. It is well established that alterations of the actin cytoskeleton and decreased tubulin and vimentin synthesis are important in the regulation of adipogenesis. We are currently assessing the role of LIMK2a in adipose tissue development, cytoskeleton remodelling and secretory function and are exploring the cellular mechanisms and pathways by which LIMK2a controls obesity, through the identification of new LIMK2 substrates in adipose tissue.

- **Fighting childhood cancer**

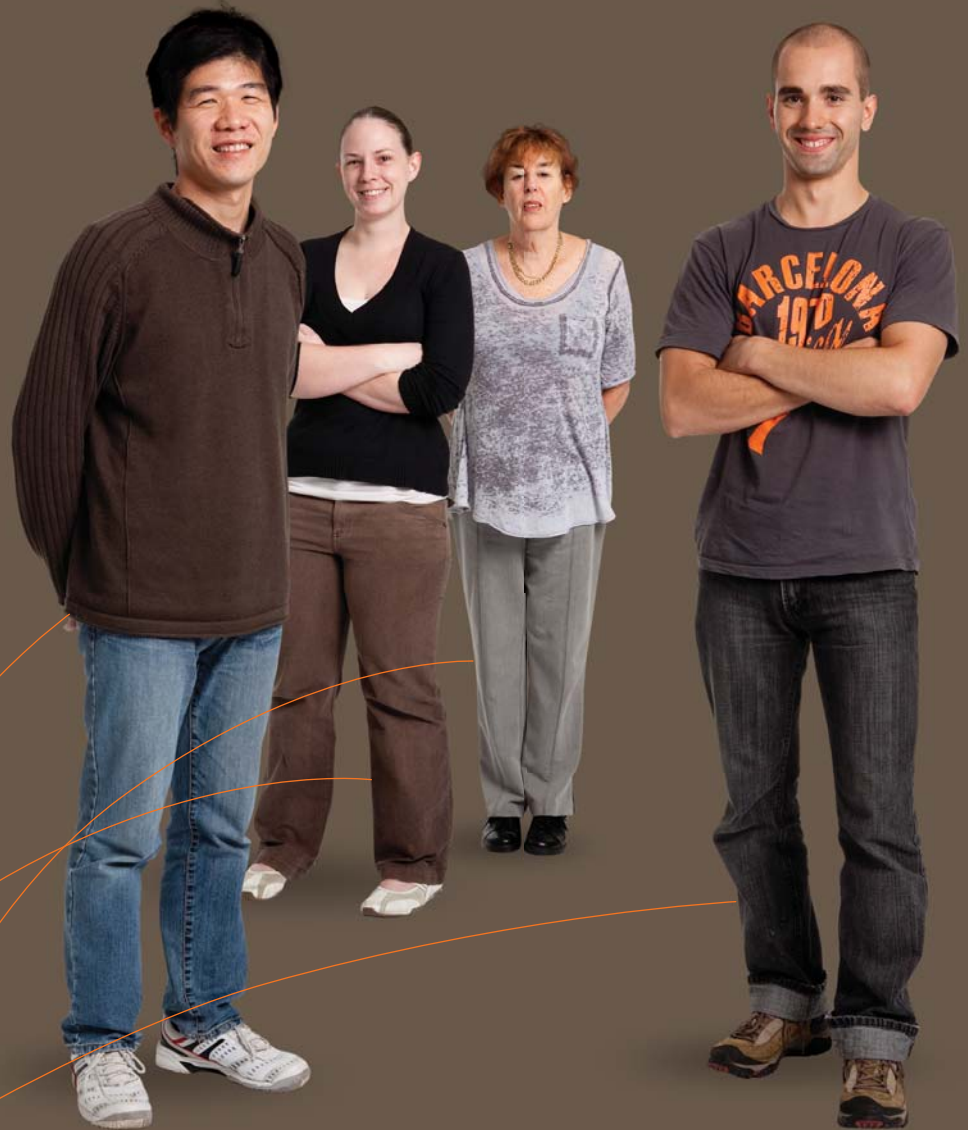
Spanish student Cristina Gamell Fulla arrived in Dr Ora Bernard's lab for a short placement in 2009. After 3 months in Melbourne, Cristina returned to Barcelona to complete her PhD. Ora was happy to hear that Cristina will return to the lab in 2010, funded by a grant from the Children's Oncology Foundation. Cristina will continue her research into the role of Ora's favourite proteins, LIMK1 and 2 in childhood tumours, where they are thought to play an important role in the spread of these cancers.



Cell stained for expression of LIMK1

10

Cancer



RESEARCH UNIT

- Ora Bernard
- Juliana Antonipollai
- Sheng Chen
- Rong Li
- Kevin Mittelstaedt
- Alice Schofield
- Tiong Zhou

- **PHARMACOGENOMICS IS THE** study of how an individual's genetic makeup affects the course of disease and responses to medication. Work at SVI combines traditional sciences, such as biochemistry, with recent advances in our knowledge of genetics and drug discovery. This allows us to identify genes that are involved in disease and help design drugs to stop them from working. We have recently identified genes involved in the spread of cancer and those associated with the onset of diabetic kidney damage. We have identified and are currently testing several anti-cancer drugs for breast cancer.

Pharmacogenomics

- **INHIBITING BREAST CANCER METASTASIS**

Metastasis is the primary cause of mortality associated with cancer, yet the molecular mechanisms leading to metastatic spread are poorly understood. Over the past several years our laboratory has studied a number of cell culture and animal-based models of metastasis using a range of genomic profiling technologies in order to identify 'culprit genes' that contribute to metastasis. We have been particularly interested in identifying genes that act very early in the metastatic process as these are potential drug targets. We have also been using a combined genomic and drug-response profiling technique to identify drugs that block the process of metastasis. One class of agents we are perusing are the antioxidants.

Considerable prior research has been performed to characterise the largely beneficial effects of dietary antioxidants as cancer preventatives, however little has been done to explore the potential beneficial effects of these agents in patients with established and advanced forms of breast cancer.

- **NEW DRUG TARGETS IN THE DIABETIC KIDNEY**

Diabetes often leads to the development of a form of kidney damage known as diabetic nephropathy. Kidney damage in this condition is characterised by an increased accumulation of extracellular matrix (e.g., collagen) brought about by a high glucose environment. Using a high throughput genomic analysis approach, we have identified several genes that act together and appear to play a critical role in the generation and subsequent pathological consequences of accumulated extracellular matrix.

One of these specific genes may also play a role in other disease states and be responsible for modulating drug activity within specific tissues that are the target of current therapies. We are collaborating with the Institute's Structural Biology Unit to elucidate the crystal structure of these protein complexes and design specific inhibitors to block this potential therapeutic target. Eventual drug candidates will be tested in animal models of the disease.

- **New and better drugs**

For some years now, Mark Waltham and his team have been working at developing new drugs to stop the spread of breast cancer. In 2009, they were awarded several highly competitive grants to further their research. These will allow the team to carry out the pre-clinical studies that are necessary before a patient trial can be initiated. The funding will also help the group develop tests to identify the patients who will best benefit from the new drugs.



High resolution phase contrast X-ray of a mouse leg with breast cancer-induced bone destruction

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Cancer



RESEARCH UNIT

- Mark Waltham
- Shie Foong Kok
- Walter Pfister
- Sam Rudstern
- Annabel Southey
- Timothy Tan
- Sarah Vickery

- **CANCER CELLS CAN** move from the primary tumour and spread in the body to form a new cancer deposit (a 'secondary' tumour or 'metastasis'). Breast cancer most commonly metastasises to the bones, liver and lungs. Our studies focus on matrix metalloproteinases (MMPs) – enzymes that cells use to cut through tissue and modify molecular processes – and epithelial mesenchymal plasticity (EMP), which allows carcinoma cells to migrate, invade tissue and survive outside of the tissue in the circulation. We study MMPs and EMP to better understand how breast cancer metastasises (especially to bone) so that better diagnostics and therapies can be developed.

VBCRC Invasion and Metastasis

- **MMP13**
MMPs are extracellular enzymes, making them attractive therapeutic targets. MMP13 is upregulated in breast cancer and is also involved in the bone remodelling that occurs in breast-bone metastases. MMP13 inhibitors appear to lack most of the undesirable side effects seen with other drugs that act on MMPs and do not inhibit those MMPs that are already helping the body fight cancers. We have tested one of these 'designer' MMP13 inhibitors, Cmpd-1, and found that it delays both the growth of the primary tumour and the onset of associated bone lesions in breast cancer models.

The involvement of MMP13 in both primary and secondary breast cancer was further confirmed using MMP-13 knockout mice.

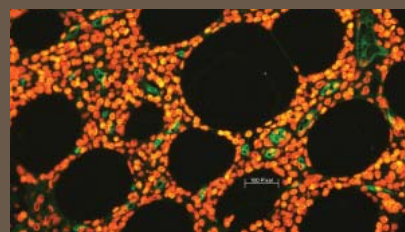
EPITHELIAL MESENCHYMAL PLASTICITY

The PMC42 human breast cancer cell line provides a unique system in which EMP can be regulated by growth factors or hypoxia, allowing us to study the molecules that regulate and mediate EMP effects. Such studies have identified candidate effector molecules, which we are examining in clinical breast cancer specimens using immunohistochemistry and multiplex tandem PCR (MT-PCR). MT-PCR allows us to measure RNA levels of various EMP-related

genes in a single archival section. These studies complement ongoing bioinformatic analyses that have provided evidence of epithelial mesenchymal transition-associated gene expression in so-called human breast cancer stem cells.

- **Breast cancer hope**

Rik Thompson and his colleagues worked exhaustively throughout 2009 on a large national collaborative grant application to the National Breast Cancer Foundation. Recently their hard work paid off, with the announcement that the group has been awarded \$5 million to further their research into a new mechanism that causes recurrent breast cancer. Involving 26 researchers across 6 Australian states and territories, the grant proposes to look at ways to monitor and eradicate breast cancer cells that have migrated from the primary tumour and will eventually form secondary cancer deposits. It is these secondary cancers that result in the 2,700 Australian deaths from breast cancer each year.



Lymph node section from a breast cancer patient, showing MMP13 expression in green

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Cancer



RESEARCH UNIT

- Erik (Rik) Thompson
- Tony Blick
- Devika Gunasinghe (Dept. of Surgery, Melbourne University)
- Dexing Huang
- Honor Hugo
- Cleus Pinto
- Manisha Shah
- Anthony Tachtzidis
- Margaret Tiong (Dept. of Surgery, Melbourne University)
- Jenny Trinh
- Razan Watari
- Edwin Widofo (Dept. of Surgery, Melbourne University)

- THE NATIONAL SEROLOGY Reference Laboratory, Australia (NRL™) is committed to helping curb the spread of blood-borne and other infections by assuring the quality of and confidence in laboratory results in Australia and internationally. We deliver world's best practice quality assurance of Human Immunodeficiency Virus (HIV) and Hepatitis C Virus (HCV) tests and have defined and corrected large numbers of problems with testing performances and protocols. The integration of NRL's activities with applied research makes the laboratory unique. The research program focus is on developing better markers for clinical diagnosis, prognosis and vaccine development for HIV, HCV and other important viral infections.

National Serology Reference Laboratory

- IDENTIFICATION OF NATURAL ANTIBODIES THAT COMPLETELY BLOCK HIV-1 INFECTION

Worldwide efforts to identify antibodies that can block infection of a broad spectrum of HIV-1 strains have yielded only a few antibody candidates. Our studies have identified a small group of HIV-1 long-term non-progressors (LTNP) and long-term survivors (LTS) that generate such potent broadly reactive, anti-HIV-1 neutralizing antibodies (bNAbs). These results are a prelude to the identification of the regions in the viral envelope proteins involved, important to vaccine development. We are targeting HIV-1 infected individuals who have viral-attenuated infections or mutations in the co-receptor important for successful infection (CCR5), for the generation of

human monoclonal antibodies. Two recent publications highlight an international collaboration in identifying and characterising these HIV-1 bNAbs responses. Characterisation of the antibodies and the viral antigens responsible will make a major contribution to the development of a successful HIV-1 protective vaccine.

HIV SALIVA TESTING

The numbers of HIV diagnoses in Victoria more than doubled between 1999 and 2006, with the majority of cases in males who have sex with males (MSM). In response to this, the Department of Human Services provided funding for epidemiological studies to investigate the prevalence of undiagnosed HIV in Victoria. The collection of oral fluid specimens represents a simple,

non-invasive alternative to whole blood for testing. However, commercially available immunoassays show low sensitivity on these specimens. The NRL was approached to develop assays to detect the presence of anti-HIV antibodies in these samples. An in-house anti-HIV IgG antibody capture ELISA (GACELISA) (based on the method developed by Parry et al.) was set up and validated. We also developed a saliva-based Western blot assay for the confirmatory testing of samples repeatedly reactive in the GACELISA. These assays have been used to test samples to estimate the prevalence of HIV infection and the proportion of these infections that were undiagnosed in the MSM community.

- Helping out in Vietnam

The NRL conducted three training sessions last year in Hanoi, Vietnam, at the request of the World Health Organization. Staff of the NRL spent their time at the National Institute of Haematology and Blood Transfusion, lending their expertise to local staff to help improve the quality of testing for transfusion transmitted infections. The NRL's Thu-Anh Pham says, "It was great to spend time in a developing country and get an appreciation of the importance of the expertise that we have developed in Australia and how it can help others."



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Infectious disease



RESEARCH UNIT

Elizabeth M. Dax
Nilukshi Arachchi
Alicia Arnott
Thein Thein Aye
Susan Best
Penny Buxton
Liza Cabuang
Chris Chiu
Roderick Chappel
Stirling Dick
Wayne Dimech
Cathy Dunkley
Rosanna Fahmy
Barbara Francis
Helen Hasler
Lydia Hill
Marina Karakaltsas
Geraldine Kong
Sally Land
Mark Laniagan
Tamara McDonald
Dale McPhee
Alison Natoli
Louie Opatinov
Iena Panagiotopoulos
Megan Pate
Thu-Anh Pham
Kim Richards
Terri Sahin
Kathy Smeih
John Tomasov
Frank Torzillo
Linda Tsai
Joe Vinci
Robert Vinoya
Sandy Walker
Kim Wilson

SVI Director and Chair Report

2009 saw great progress in many areas of the Institute's activities and you can read about some of these highlights in this Annual Report. Planning for the Aikenhead Centre for Medical Discovery (ACMD) continued through-out 2009. This is an exciting project that will enable the entire St. Vincent's campus to share facilities enabling the exchange of clinical and research ideas and enhancing the culture of learning and research within the Hospital and its affiliated research facilities. The focus of the ACMD is the interaction between advanced technologies and medicine, including bionics, drug discovery, tissue and genetic engineering. Teaching will be a significant part of the ACMD, which will encompass The University of Melbourne's Clinical School, as well as teaching of engineering and science students to enhance cross-disciplinary approaches to research including disciplines such as biochemistry, engineering and mathematics. A recent new partner in the ACMD is the Australian Catholic University, with its very strong focus on nursing research, especially in the area of heart disease.

The Centre will be a very exciting opportunity for research-led medical practice and education that will form a strong basis for the future development of St Vincent's as a first rate academic health centre. In a time of significant change in the way that Australia's health care system is organised and funded it was great to have the opportunity to explain the ACMD and other SVI activities to the Prime Minister and the Minister for Health when they visited us in 2009. We especially acknowledge the assistance of SVI Director and Chair of the SVI Foundation Dr Susan Alberti AO in arranging these visits.

The year also saw the establishment of a new leadership structure in the Institute. Professor Michael Parker, the head of our flagship Structural Biology Unit, is now the Deputy Director of SVI. We have also appointed three Associate Directors: Drs Jörg Heierhorst (Molecular Genetics), Natalie Sims (Bone Cell Biology and Disease) and Louise Purton (Stem Cell Regulation). These are all outstanding scientists who bring great experience and knowledge. They are also tremendously

important role models for other Institute scientists. Completing the leadership team are our two most experienced and famous scientists, Professors Jack Martin and Bruce Kemp, both towering figures of Australian and international medical research. This is a very strong team with a good mixture of ages, sexes and areas of research focus and expertise. We look forward to their long involvement in leadership of SVI. Dr Purton will be away from the bench for part of 2010 on maternity leave. We thoroughly endorse flexible working arrangements for scientists with young families and Louise and Natalie are great advertisements for the ability to succeed at the highest level while raising children.

New senior staff at SVI include Drs Stuart Mannering and Tom Brodnicki, who both work on type 1 (juvenile) diabetes and have joined us from The Walter and Eliza Hall Institute. Stuart is committed to the difficult task of studying, in humans, the immune response that causes diabetes. Tom's expertise is in the genetics of diabetes. With the addition of their teams the Immunology and Diabetes Unit has



“The Centre will be a very exciting opportunity for research-led medical practice and education that will form a strong basis for the future development of St Vincent’s as a first rate academic health centre.”

become the largest in the Institute and its work is highlighted in this Annual Report. With its increased size and diverse expertise we have the opportunity to tackle very significant issues in type 1 diabetes. These include how the immune system can be re-programmed to no longer react against proteins such as insulin within the pancreatic beta cell, how genes linked to diabetes affect the immune system, and how white blood cells damage insulin-producing cells. With several experienced laboratory heads, our work spans human and animal research and focuses both on the immune system and insulin-producing cells.

One of the Unit’s major activities is The Islet Transplantation Program. This is a collaboration with groups around Australia to replace insulin-producing cells in patients who have major problems with the control of their diabetes. Our results continue to be very good, with a number of islet recipients now no longer needing insulin therapy. This is an exciting time for diabetes at SVI.

We also farewelled some significant staff members in 2009, including Dr Greg

Steinberg and Dr Robyn Starr. Greg returned to Canada to take up a Canada Research Chair in Obesity, Metabolism and Type 2 Diabetes at McMaster University. Greg made an enormous contribution to SVI in the 7 years he was here and we wish him well in his future career, and look forward to our continued collaboration. We also farewelled Robyn Starr, an outstanding researcher who made major contributions in the area of inflammation and was also very involved in science education and career development. Robyn is taking a well-earned break from research and is enjoying the opportunity to spend more time with her family.

Finally, thanks to many people for their financial support, especially given 2009 was a year of great turbulence in financial markets. The SVI Foundation has again done a wonderful job in raising funds. A particular highlight was The Ian Potter Foundation grant to purchase several important pieces of equipment featured elsewhere in this report. We also wish to acknowledge the vital contribution of the Federal (Independent Research Institutes

Infrastructure Support Scheme) and State Governments (Operational Infrastructure Support Scheme) to support the indirect costs of research, which includes costs of running the building and laboratories, information technology, administration and other vital parts of projects without which research simply could not be performed. We thank our outstanding Board, especially retiring Director Jeff Clifton who made a great contribution to the Board during SVI’s last building extension due to his expertise in Project Management. Our partners in the ACMD and the Trustees of the Mary Aikenhead Ministries all also deserve our heartfelt thanks.

BM Shanahan
SVI Chair

TWH Kay
SVI Director

“By global standards, medical research in Australia punches above its weight.”

The Prime Minister at the Launch of SVI's Stem Cell Regulation Appeal in 2009.



2009 Institute Highlights

2009 marked a year of many distinguished visitors to SVI: in March the Institute welcomed the Minister for Health and Ageing, The Hon Nicola Roxon MP, on a tour of the Institute and at a lunch with a capacity audience of philanthropists and representatives from the business and medical communities.

In August the Prime Minister, The Hon Kevin Rudd MP, launched SVI's Stem Cell Regulation Appeal at a dinner at The Park Hyatt hosted by SVI Foundation Chair, Dr Susan Alberti AO. In his speech the Prime Minister highlighted the importance of medical research to Australia's health outcomes.

The Victorian Minister for Innovation, The Hon Gavin Jennings MLC, also visited the Institute in August to launch the Victorian Government's \$25.7 million Operational Infrastructure Support Grants. In September, Professor David de Kretser AC, Governor of Victoria, toured SVI laboratories and gave a lunchtime audience an insight into his major research interest, andrology.

Following the launch of the Stem Cell Regulation Appeal in September, \$1.3 million was raised to fund major equipment purchases for the Institute. Spear-headed by Institute researchers Louise Purton, Carl Walkley and Natalie Sims, and kicked off by a generous \$500,000 grant from The Ian Potter Foundation, the funds will enable our researchers to focus on the prevention and treatment of diseases of the blood and bone, and will provide a world-

class resource for other research groups, both on and off the campus.

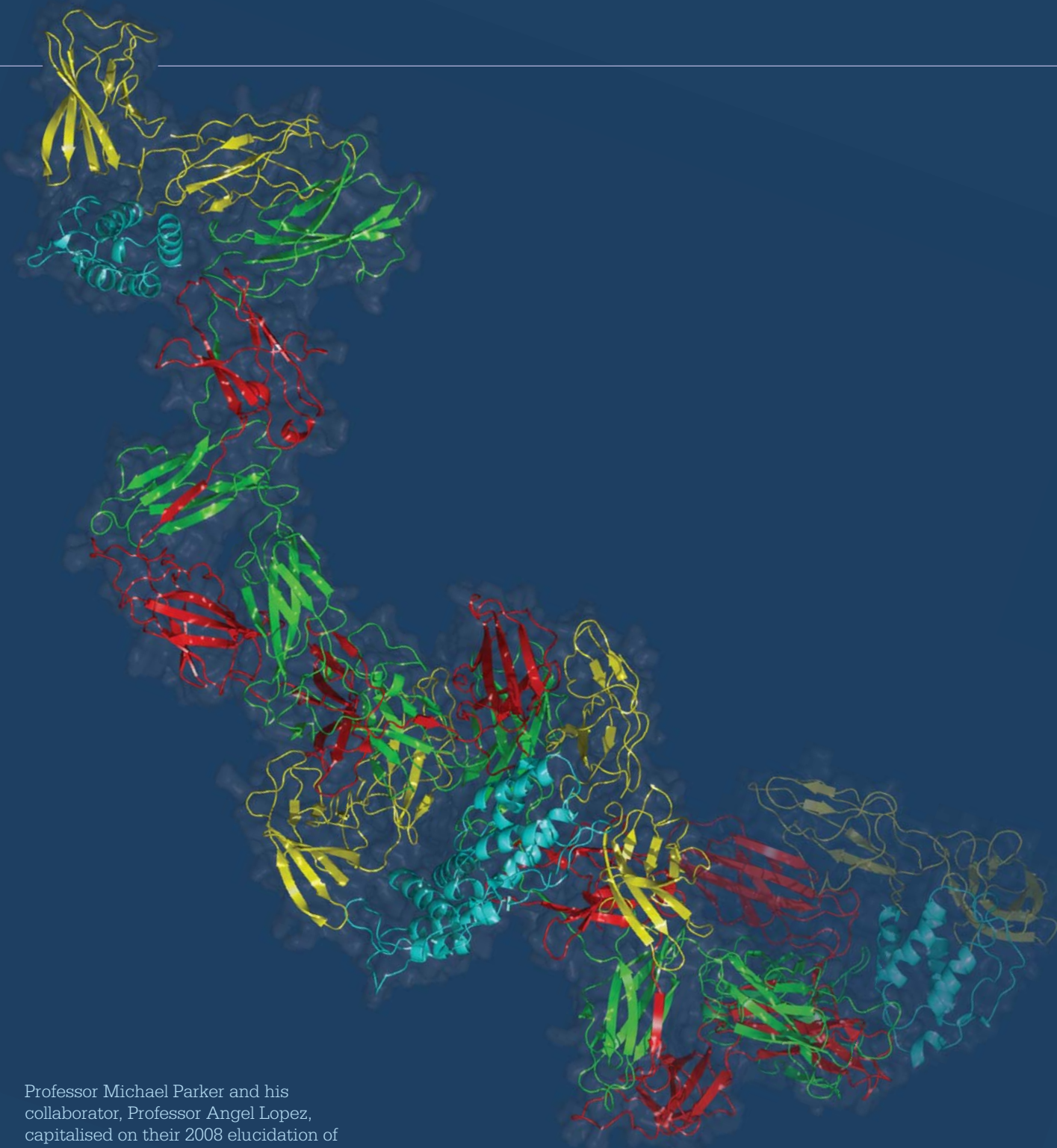
A \$3.7 million NHMRC Program Grant was awarded to Professor Michael Parker, Head of SVI's Structural Biology Unit and his collaborator, Angel Lopez at The Centre for Cancer Biology, Adelaide. The funds will enable Michael's team to continue research into the GM-CSF hormone receptor and related receptors, following on from the team's announcement in 2008 that they had established the 3D atomic structure of the receptor. Their research aims to find a drug compound to block its action and prevent the excessive production of white blood cells in leukaemia and inflammatory diseases such as rheumatoid arthritis. Michael was also awarded a special fast-tracked NHMRC grant for his research into the swine flu virus.



Victorian Governor, Professor David de Kretser AC, with SVI researcher, John Scott and Tom Kay.



Minister for Health and Ageing, The Hon Nicola Roxon MP, with SVI researcher, Helen Thomas.



Professor Michael Parker and his collaborator, Professor Angel Lopez, capitalised on their 2008 elucidation of the structure of a receptor implicated in blood cell cancers and inflammatory diseases by successfully applying for a \$3.7 million NHMRC Program Grant to further their research. The team will determine how the receptor is activated and will seek to link different forms of receptor assembly to different functions. They hope to use this information to develop new and more specific drugs to treat disease.

SVI students

St Vincent's Institute is a centre of excellence for research into diseases that have a high impact on the community, including type 1 diabetes, obesity and type 2 diabetes, heart disease, arthritis, osteoporosis, cancer and Alzheimer's disease.

SVI offers undergraduate and postgraduate training in cell biology, protein structural biology, biochemistry, immunology and cell signalling, as well as clinical research into diseases including cancer, diabetes and bone disease.

St Vincent's Student Society

The Student Society is run by students who organise both social and career development events throughout the year, including journal clubs, the comedy festival, rock climbing, interdepartmental soccer, movie evenings and the Postgraduate Ball. The annual Student Retreat, held in Anglesea in 2009, provides great educational and socialising opportunities for students.

Undergraduate Education

An Honours year at St Vincent's Institute offers you the chance to explore a stimulating area of research guided by leading scientists.

SVI Honours Programs

More information:
Dr Louise Purton,
Student Coordinator, SVI
Tel: 9288 2480 or email:
enquiries@svi.edu.au

<http://www.medstv.unimelb.edu.au/Prospective/Honours/>

Applications close on 30th November each year.

Undergraduate Research Opportunities Program (UROP)

UROP gives undergraduate students the opportunity to undertake paid work in a research laboratory one day a week during semester and full-time during the holidays to gain an insight into a medical research career.

More information:
www.bio21.com.au/urop.asp
Applications open in April and September and should be lodged directly with Bio21.

Postgraduate Education

Studying for your PhD at SVI will give you the opportunity to carry out research into major diseases under the supervision of leading Australian scientists. There are options to enrol through the University of Melbourne, Department of Biochemistry and the University of Melbourne Departments of Medicine and Surgery at St Vincent's Hospital.

SVI PhD Programs

More information:
Dr Louise Purton,
Student Coordinator, SVI
Tel: 9288 2480 or email:
enquiries@svi.edu.au

External Scholarships

There are several scholarship options available through the University of Melbourne, NHMRC and SVI:

Australian Postgraduate Awards (APA)

University of Melbourne, Melbourne Research Scholarships (MRS)

University of Melbourne, Melbourne International Research Scholarships (MRS)

<http://cms.services.unimelb.edu.au/scholarships/pgrad>

NHMRC Dora Lush Biomedical Postgraduate Research Scholarships

<http://www.nhmrc.gov.au/fellows/apply/granttype/scholars/lush.htm>

SVI Foundation PhD & Honours Student Awards

Students commencing full-time research at SVI are invited to apply for top-up PhD or Honours awards. Successful applicants will receive a \$5,000 p.a. top-up stipend for 3 years (PhD) or 1 year (Hons).

More information:
www.svi.edu.au/scholarships

Or contact: SVI Foundation Student Awards Coordinator
Tel: 9288 2480 or email:
enquiries@svi.edu.au

PhD applications due: 31 October 2010

Honours applications due: 30 November 2010



PhD – genes behaving badly in diabetes

PhD student Michelle Ashton was awarded an SVI Foundation Student Award in 2009, to support her PhD studies into type 1 diabetes.

“I started my PhD in 2009 in Tom Brodnicki’s lab, looking at a gene that influences susceptibility to type 1 diabetes. Over 140,000 Australians are affected by this disease, which arises when the immune system attacks and destroys insulin-producing cells. We still don’t understand exactly why this happens but we do know that it is dependent on complex interactions between genes and the environment. Our research has led us to identify a gene that affects diabetes susceptibility in mice, which has not been described before. My project involves identifying the function of this gene and its role in the immune system.

Last year I was awarded an SVI Foundation Student Award and, like many other students at SVI, I have found that this scholarship is critical for financing basic living expenses. The scholarship has given me the financial capacity to move out of home, to be closer to the Institute and to start an independent life.”

Congratulations to the students undertaking their studies at SVI who were awarded SVI Foundation Student Awards in 2009, sponsored by DANSU Group, Mr Hugh Dougherty, the SVI Support Group and the SVI 1000 Club:

Michelle Ashton (PhD)

Sean Ivory (Hons)

Shie Fong Kok (Hons)

Xianning Lai (PhD)

Hayley O’Neil (PhD)

Walter Pfister (PhD)

Alice Schofield (PhD)

Farzin Takyar (PhD)



2009 SVI student retreat at Anglesea.



Board of Directors

Ms Brenda Shanahan

BEC Bcomm, Chair, SVI
Ms Shanahan has a research background in finance in Australian and overseas economies and share markets. She is the Chair of Challenger Listed Investments Ltd, Chair of Clinuvet Pharmaceuticals Ltd, a board member of the Kimberley Foundation Australia, and Non Executive Director of JM Financial Group Ltd. She is a former Chair of St Vincent's Health, a former member of the Australian Stock Exchange, a former Executive of a stockbroking firm, a fund management company and an actuarial company.

Mr Douglas A Wright

FAICD FPRIA, Deputy Chair, SVI
Mr Wright is a public relations consultant and a founder and chair of Wrights. He is a director of Olympic Park Sports Medicine Centre. Mr Wright is vice chair of Worldcom, the largest global network of independent public relations firms and a member of the Australian Bankers' Association Small Business

Forum. He is a Fellow of the Public Relations Institute of Australia, an Associate Fellow of the Australian Marketing Institute and a member of the Counsellors' Academy of the Public Relations Society of America and the Institute of Chartered Public Relations (UK).

Dr Susan M Alberti AO HonLLD

Dr Alberti is co-founder and Managing Director of DANSU Group, acknowledged as one of Melbourne's major property developers and associate entities. Dr Alberti is National President of the Juvenile Diabetes Research Foundation Australia (JDRA), International Board Member of JDRA based in New York since 1995 and International Patron for Juvenile Diabetes Research Foundation. Dr Alberti also assisted in founding and organising the annual 'Walk to Cure' around Albert Park Lake, and is Chair of the Susan Alberti Charitable Foundation.

Mr Jeff Clifton

BCE DIPCe
Until July '09
Mr Clifton is Managing Director of Clifton Property Group, which consists of a development management group, Clifton Hall Consulting and a project management group, CBM Project Management. Both companies serve the Australian property industry and Mr Clifton has been in the property industry for over 35 years. Mr Clifton was formerly Executive Chairman of Farsands and Managing Director of the Clifton Coney Group, which are now part of Coffey International following a sale of the business. Mr Clifton is also a Director of OIML Pty Ltd, the responsible entity of the Timbercorp Primary Infrastructure Fund and Chairman of the Becton Development Fund No 1.

Mr Paul Holyoake

BEngMech (Hons) MEngSci
Mr Holyoake is currently Executive Chairman, Oakton Limited, an ASX listed, information technology services

company. From June 1988 to June 2005, Mr Holyoake was Managing Director and Chief Executive Officer, Oakton Limited.

Professor Thomas WH Kay BMedSc MBBS PhD Melb FRACP FRCPA

Professor Kay is Director of SVI. He holds a Professorial appointment within the Department of Medicine, St Vincent's Hospital and The University of Melbourne. He also holds the position of Honorary Endocrinologist at St Vincent's Hospital. Professor Kay's research interests are in the area of autoimmunity, particularly of type 1 (juvenile) diabetes.

Mr John T Macfarlane M Comm

Mr Macfarlane is Chairman of Deutsche Bank Group, Australia & New Zealand following seven years as President & CEO of Deutsche Bank, Japan. An economist by training, Mr Macfarlane held senior positions with Bankers Trust in Sydney, New York and New Zealand until its acquisition by Deutsche Bank



in 1999. He has served as: Director of the NZFE; member of the Global Markets Executive Committee, the Global Banking Executive Committee and the Global Regional Management Committee of Deutsche Bank; and Co-Chair of the Asia Pacific Deutsche Bank Executive Management Committee.

Professor James McCluskey
MBBS B Med Sci MD FRACP
FRCPA

Professor McCluskey is Pro Vice Chancellor, Research Partnerships at The University of Melbourne. He was formerly Associate Dean (Research), Faculty of Medicine Dentistry and Health Sciences and has been Head or Deputy Head, Department of Microbiology and Immunology for the last 12 years. He has led the development of the Peter Doherty Institute for Infection and Immunity at the University of Melbourne. He is also a Consultant Immunologist to the Victorian Transplantation and Immunogenetics Service, Australian Red Cross Blood Service.

Mr Michael McGinniss

BComm (Hons) MEc
Mr McGinniss retired from a senior position as a partner with PricewaterhouseCoopers, Chartered Accountants in 2000. Since his retirement, he has taken up a number of Board positions in the not-for-profit and commercial sectors and also serves as a Trustee of The Marian & EH Flack Trust.

Associate Professor Patricia O'Rourke

RN, Grad Dip App Sc (Nursing), GAICD
Associate Professor O'Rourke was appointed St Vincent's Chief Executive Officer in April 2009. She has more than 20 years experience in the healthcare industry, including nursing and senior management roles. In her previous role as Chief of Clinical Operations and Chief Nursing Officer at St Vincent's, her duties included leading regional and national projects, representing St Vincent's on a number of Department of Human Services committees, providing strategic

and operational advice to the CEO and clinical leadership to the Executive. Until October 2008 she was a member of the Board of Southern Health.

Ms Ruth O'Shannassy

BComm
Ms O'Shannassy worked in economic research in the finance industry in Melbourne before moving overseas. She spent seven years living and working offshore, primarily as a stockbroker in London and Asia before returning to Australia. She is a Board member of the Victorian Prostate Cancer Research Consortium.

Mr John Pizzey

BE(Chem) Fell Dip (Management)
FTSE FAICD FAIM
Mr Pizzey retired from Alcoa in December 2003 where he was Executive Vice President of Alcoa Inc (USA) and Group President, Primary Products. He was Chairman of the London Metal Exchange Ltd (UK) in 2003. Mr Pizzey is currently a Director of Alumina Ltd, Amcor Ltd and Iluka Resources Ltd. He is a former

member of the Board of Governors at Ivanhoe Grammar School.

Mr Gregory Robinson

BSc(Hons) MBA (Columbia)
Mr Robinson is Finance Director, Newcrest Mining, responsible for the group's finance function and for leading strategy, planning and business development activities. Prior to joining Newcrest, Mr Robinson was with the BHP Billiton Group for the period 2001 to 2006 where he held the positions of Project Director of the Corporation Alignment Project, Chief Finance and Chief Development Officer, Energy and Chief Financial Officer, Petroleum. He was also a member of the Energy Executive Committee and Group Executive Committee. Before joining BHP Billiton, Mr Robinson was Director of Investment Banking at Merrill Lynch & Co and headed the Asia Pacific Metals and Mining Group.

“Our quest to increase the understanding of the causes, prevention and treatment of disease.”

SVI Foundation Chair Report

Since its inception in 2002, the SVI Foundation has been raising funds to support SVI researchers in their fight against serious diseases that affect the daily lives of so many people all over the world. Like medical research, disease knows few boundaries.

The period from 2002 to 2009 has seen impressive growth in SVI research output and the number of SVI researchers has risen considerably in this time. Growing with the size of the Institute is the need for the Foundation to generate funding from philanthropic organizations and from the community at large.

Medical research is generally a long-term proposition and we therefore need to be able to plan for the future with some certainty. One of our key priorities is building a capital base that will provide us with a sustainable source of future investment income.

Our quest to increase the understanding of the causes, prevention and treatment of disease is underpinned by our scientists having access to cutting-edge technology and this continues to be our other primary funding priority.

Essential to the success of the Foundation has been our wonderful network of supporters around Australia, who help us create awareness of the excellent work of our team of dedicated and talented scientists, and of their funding needs. In 2009 the Foundation continued to widen our support base through a range of events and dinners aimed at tapping into interest in the Arts, Health and Sport.

I would like to thank our supporters, volunteers, donors and Foundation Board members for their commitment to research offering the hope of healthy lives for all those who are touched by disease.

God bless,



Dr Susan Alberti AO HonLLD
SVI Foundation Chair

Highlights

March

The Hon Nicola Roxon MP

The Minister for Health and Ageing toured the Institute and spoke to SVI supporters of the health challenges facing Australia and the role medical research plays in meeting these challenges.

May

SVI AFL Discovery Day Breakfast

Raising money for type 1 diabetes research was again the focus of the AFL Discovery Day breakfast. Over \$33,000 was raised by supporters of SVI, Collingwood and St Kilda at the breakfast, hosted by SVI ambassador Luke Darcy. Thank you to committee members Brian Cooney (Chair), Suzan Morlacci, Benni Aroni, Karen Plant, Jim Hatzimoisis, Christine Collins, Jessica Shearing, David Emerson and Misty Warren.

Continental Opera Night

SVI supporters gathered together for dinner at Mirka at Tolarnos to support SVI and share their love of opera.

Engaging the community: Heart disease seminar

Title: Prevention of Heart Disease

Speakers: A/Prof Jock Campbell and Dr David Prior

June

Director's Dinner

Guest speaker: Karl Fender
Managing Director, Fender Katsalidis Architects

September

Stem Cell Regulation Appeal Launch

SVI's Stem Cell Regulation Appeal was launched by the Prime Minister at The Park Hyatt on the 14th of August. The Appeal went on to raise a total of \$1.3 million to fund major equipment purchases, aiding research into diseases of the bone and blood.



SVI Foundation Chair, Sue Alberti, with the PM.

Visit by the Governor of Victoria

In September, Professor David de Kretser AC, Governor of Victoria, toured SVI laboratories and gave a lunchtime audience an insight into his major research interest, andrology.

Highlights

October

Charity Golf Day



A fine day on the Albert Park golf course in support of heart research at SVI.

SVI's second golf day at Albert Park Golf Course, sponsored by Alliance Insurance was a great success, raising \$52,000 for heart research at SVI and giving 'foodie' golfers an opportunity to socialise over great wine and gourmet food after a day of golf. Thank you to committee members Michael Dwyer, Leon Wiegard, Charlie Happell, Michael Kay, Barry Holbrook and Mark Pearce.



The SVI Support Group.

SVI Support Group Dinner

The SVI Support Group, led by Claire O'Callaghan, continued their support of students at SVI by raising \$29,495 at their annual SVI Support Group dinner at The Athenaeum Club.

November

Director's Dinner

Guest speaker: Christine Nixon
Chair, Victorian Bushfire
Reconstruction and Recovery Authority

Continental Opera Night

SVI supporters gathered once again for dinner at Mirka at Tolamos in support of SVI.

Trusts and Foundations

Thank you to the following Trusts and Foundations:

The Ian Potter Foundation funded several large equipment purchases through the Stem Cell Regulation Appeal.

The H & L Hecht Trust administered by Perpetual Trustees funded the purchase of a real-time PCR machine for research into type 1 diabetes.

The L.E.W. Carty Charitable Fund contributed to new equipment to study Alzheimer's disease.

The Angior Family Foundation funded a new thermal cycler.

The Marian & E.H. Flack Trust funded a number of pieces of equipment for research into diabetes.

The Baker Foundation funded a new project in the Stem Cell Regulation Unit.

The Mason Foundation funded a spectrophotometer.

The Cancer Research Trusts administered by Equity Trustees funded a new imaging system.

The Rebecca L Cooper Foundation funded a high throughput sampler for the FACS machine.

The Harold Mitchell Foundation funded travel scholarships to a PhD student and an early career post-doc.

St. Vincent's Hospital (Melbourne) Research Endowment Fund supported two research projects, on arthritis and diabetes.

We would like to thank the 1000 Club subscribers for 2009.



SVI Foundation Board

Dr Susan M Alberti AO

Chair, SVI Foundation Board
Dr Alberti is co-founder and Managing Director of DANSU Group, acknowledged as one of Melbourne's major property developers. She is National President of the Juvenile Diabetes Research Foundation Australia (JDRF), International Board Member of JDRF based in New York since 1995 and International Patron for the Juvenile Diabetes Research Foundation. She also assisted in founding and organising the annual 'Walk to Cure' around Albert Park Lake, and is Chair of the Susan Alberti Charitable Foundation.

Mr Benni Aroni

Deputy Chair, SVI Foundation Board
Mr Aroni is a qualified legal practitioner having been the managing partner of his own legal firm between 1982 and 1998. He has been a developer of Eureka Tower from 1998 to date. He now chairs Stralliance Developments, a property development and construction group. He was Vice President of JDRF Victoria between 1993 and 1998 and National Vice President from 1995. Subsequently he has focused his charity work on the SVI Foundation. He is and has been a Board member of several

companies, listed and unlisted.

Mr Robin Berry

CEO, SVI Foundation Board
Mr Berry has a background in the sports, health and leisure industry. He has extensive experience in corporate management, marketing of premium brands, sponsorship, manufacturing and the importing of sporting and leisure products.

Mr Tony Burgess

From September '09
Mr Burgess is Chief Executive Officer of Flagstaff Partners Pty Ltd, an independent corporate finance advisory firm. Mr Burgess has 30 years of experience in corporate finance in Melbourne, London and New York and was previously Global Co-head of Mergers & Acquisitions for Deutsche Bank AG, based in London. Mr Burgess holds an MBA (with Distinction) from Harvard Business School (1985) and a Bachelor of Commerce (with First Class Honours) from the University of Melbourne (1981). He is a member of CPA Australia and the Financial Services Institute of Australia. He is a Director of the listed investment company, Diversified United Investments Limited, and is a member of the Advisory Board to the Faculty of Business and Economics, University of Melbourne.

Mr Brian Cooney

Mr Cooney is one of Australia's leading individuals in the sports marketing industry. Specialising in sponsorship and event management, Mr Cooney has been responsible for some of the biggest commercial arrangements in Australian sport. In his senior management role with the worlds largest sports marketing company, IMG, he has wide experience in dealing with figures from Government and corporate Australia.

Ms Jeni Coutts

From February '09
Prior to starting her own Corporate Affairs consultancy in 2003, Ms Coutts held senior positions in Corporate Affairs with some of Australia's leading corporations including Transurban, Siemens, Hoechst and CitiPower. Her experience is wide ranging and has covered all facets of corporate affairs from issues, crisis and media management through to government, community and investor relations. She holds degrees in Public Relations/ Politics and Law and is a Board Member of Impact, a community-based not for profit organisation providing support services for people with intellectual and psychiatric disabilities and neurological disorders.

Mrs Maria Foti

From July '09
During the past 20 years Mrs Foti has been the co-founder and Managing Director of National Educational Advancement Programs (Neap) Pty Ltd and its associated companies. Neap is an education services provider and educational publisher to the senior secondary school market. With a background in teaching and design, she has also been involved in a number of family-owned businesses, most notably owning, operating and designing garments for a wholesale ladies' high fashion label and boutique.

Mr Bruce Guthrie

From July '09
Mr Guthrie has been a journalist and editor for more than 35 years, occupying some of the most senior positions in the Australian print media in that time. He has edited both of Melbourne's major daily newspapers, The Age and the Herald Sun, and co-founded and later edited The Sunday Age. He has been a reporter and writer in Australia and the United States, a medical reporter for The Herald, Melbourne, and is a regular commentator and broadcaster on 774ABC. Mr Guthrie has also worked in senior positions in the magazine industry here and abroad. His publications have won



prestigious PANPA Newspaper of the Year and MPA Magazine of the Year awards. Educated at La Trobe University and RMIT, he is married with two teenage children and lives in the Melbourne suburb of Hawthorn.

Mr Jim Hatzimoisis

From September '09 Mr Hatzimoisis commenced work as a Licensed Estate Agent in 1986, becoming a partner with E J Doherty Real Estate in 1992. The company merged with The Barry Plant Real Estate Group in 1999. He is actively involved as joint Director and Shareholder of eight Offices within the group, seven of which are in Melbourne and one on the Gold Coast. Outside of work, his interests include conducting many Charity Auction events annually; he has been actively involved with the Bluey Day Foundation, Convoy For Kids, the MS Society and most schools in Melbourne's Western suburbs and is a foundation Shareholder of the Melbourne Victory Football Club.

Ms Suzan Morlacci

From July '09 Ms Morlacci has spent the better part of her life involved in her family business, a major supplier to the construction industry. She has put her hand and mind to all aspects of the business from

Concrete Batching to Shipping. She currently manages the Credit and Personnel departments in the business. She has managed to find time to not only attain a diploma as a Spa Therapist and a degree in the Arts Legal Studies, but is also involved in event management, fundraising activities and during 2008, prior to becoming a board member of SVI Foundation, was a committee member of YSVI. She has experienced first hand the miracles that the specialists and doctors of St Vincent's hospital can achieve.

Mrs Claire O'Callaghan

Chair, SVI Support Group A St Vincent's trainee, Mrs O'Callaghan returned to part-time nursing once her five children were in full-time education. She has chaired a number of fundraising and educational organisations including the original Noah's Ark Toy Library for Handicapped Children and is currently Chair of the SVI Support Group.

Mrs Karen Plant

Co-Vice Chair, SVI Foundation Board Mrs Plant is a qualified interior decorator. With her husband Barry, she helped establish Barry Plant Real Estate, which has over 70 offices throughout Victoria and Southern Queensland. They

also ran their own construction company Birchbank Homes. Her foray into charity work was the refurbishing of the cancer ward at The Royal Children's Hospital. Karen is a board member of The Deakin Foundation, for Deakin University, as well as a member of the REIV Charity Foundation Board. She enjoys family life with her husband Barry and children Nicholas and Ayleisha.

Dame Janet Spooner D.S.J.

From July '09 For over 40 years Dame Janet has supported a number of charities and her dedication was acknowledged in 2004 when she as made a Dame of the Order of St John of Jerusalem (International order award). She has been involved with the following organisations in various roles, Royal Women's Hospital - (made Life Governor), SIDS, Queen Elizabeth Hospital, for mothers and babies, Lady Mayoress' Committee, (made Honourary Life Member) Cabrini special events committee, Bone Marrow Donor Institute and Women at the Alfred (for prostate cancer).

Mrs Christine Tarascio

Co-Vice Chair and Chair of the SVI \$10,000 Discovery Fund Mrs Tarascio's family company is Salta Properties Ltd. She has been a very active fundraiser

over a long period of time for various causes, including the Lady Mayoress' Charitable Fund, the Queen Elizabeth Centre, Women at the Alfred (raising funds for prostate cancer research), and Pampering Patients. Mrs Tarascio is currently assisting her family company with the redevelopment of the former Mercy Hospital.

Mr Sam Tarascio

Mr Tarascio has more than 10 years formal hands on experience in the property industry. Following a brief stint at corporate advisory firm Coopers & Lybrand, he started his career in property at Jones Lang LaSalle, gaining experience in their property management and then sales and leasing divisions. He joined the family company, Salta, in 1999 first in the group's asset management business before moving on to take an active role in the company's largest development at the time, the Victoria Gardens mixed use residential, commercial, and retail precinct. Mr Tarascio is now Managing Director of Salta Properties.

Fellowships, prizes and grants

Bone Cell Biology and Disease

Fellowships and Prizes

- Julie Quach, Jonathan Gooi, Hasnawati Saleh, Elizabeth Allan, Narelle McGregor and Emma Walker received Travel Grants from the International Bone and Mineral Society
- Julie Quach was awarded a Harold Mitchell Travelling Fellowship

Grants

- N Sims. Towards the purchase of an in vivo microCT. University of Melbourne, Faculty of Medicine, Dentistry and Health Sciences Major Equipment Grant Scheme
- N Walsh, E Romas, N Sims. The Role of Wnt Signaling in Experimental Osteoarthritis. Arthritis Australia Project Grant
- N Walsh, E Romas, N Sims. The Role of Wnt Signaling in Osteoarthritis. St. Vincent's Hospital Research Endowment Fund Grant-in-Aid

Immunology and Diabetes

Fellowships and Prizes

- Balasubramanian Krishnamurthy was awarded a Juvenile Diabetes Research Foundation Career Development Award
- Kate Graham was awarded a Juvenile Diabetes Research Foundation Islet Transplantation Program Postdoctoral Award
- Kate Graham was awarded a Skip Martin Australian Diabetes Society Early Career Fellowship
- Kate Graham was awarded a Harold Mitchell Foundation Travel Fellowship
- Zia Mollah was awarded a Juvenile Diabetes Research Foundation Islet Transplantation Program Postdoctoral Award
- Thomas Brodnicki received the Mary Jane Kugel Award for scientific service to the Juvenile Diabetes Research Foundation International
- Michelle Ashton was awarded the IgV Oral Presentation Prize at the 17th Immunology Group of Victoria Annual Meeting
- Stuart Mannering was awarded a JDRF Advanced Postdoctoral Fellowship, Transition Award

Grants

- S Mannering, A Purcell. A T-cell based approach to identifying islet antigens in human type 1 diabetes. NHMRC Project Grant
- S Mannering, D Goodman. Development of T-cell assays to monitor islet transplants in patients with type 1 diabetes. SVH Research Endowment Fund
- S Mannering & members of the Immunology of Diabetes Society T-cell workshop. Tetramer directed epitope validation initiative (TDEVI) for major autoantigens and HLA alleles in T1D. Juvenile Diabetes Research Foundation

- S Mannering, D Goodman. Human T-cell responses to islet – and allo-antigens after islet transplantation. NHMRC and Juvenile Diabetes Research Foundation
- S Mannering. A preclinical model for human insulin specific CD4+ T-cell responses. Juvenile Diabetes Research Foundation
- T Brodnicki, M O'Keeffe. Genomic and functional analyses of a novel gene implicated in type 1 diabetes. NHMRC Project Grant
- T Brodnicki, O Wijburg, R Strugnell, G Belz. How does bacterial infection affect susceptibility to type 1 diabetes? Juvenile Diabetes Research Foundation Project Grant
- T Brodnicki, T Kay, K Shortman. Identification and characterization of mouse diabetes susceptibility genes. NIH-NIDDK R01 Project Grant
- M Murphy, T Brodnicki, A Lawrence. Genetics of stress response. NHMRC Project Grant
- T Brodnicki. Discovery of genetic and environmental factors that cause or prevent type 1 diabetes. Perpetual H&L Hecht Trust
- T Brodnicki. Gene discovery for type 1 diabetes. The Marian & E.H. Flack Trust

Molecular Cardiology

Grants

- DJ Campbell, DL Prior, D Liew, RC Wolfe, H Krum, S Stewart, C Reid. NT-proBNP and the identification and treatment of structural heart disease and heart failure in high risk individuals. NHMRC Project Grant
- DJ Campbell, DL Prior, DJ Kelly, MJ Black, M Yui, JF Kenny. Effect of type 2 diabetes on the heart. National Heart Foundation

Molecular Genetics

Fellowships and Prizes

- Xianning Lai was awarded a Melbourne International Fee Remission and Research Scholarship

Grants

- J Heierhorst. Functions of ASCIZ in the repair of accidental and programmed DNA base damage. NHMRC Project Grant

Pharmacogenomics

Fellowships and Prizes

- Walter Pfister. SVI Foundation Postgraduate Student Award
- Shie Foong Kok. SVI Foundation Honours Student Award

Grants

- M Waltham. Evaluation of a novel antiosteolytic agent: Potential in breast-to-bone metastasis and mechanism of action. NHMRC Project Grant
- M Waltham. The Molecular Basis of Rapid Growth Vestibular Schwannoma. St. Vincent's Research Endowment Fund

Protein Chemistry and Metabolism

Grants

- GR Steinberg, BE Kemp, SB Jørgensen. The Role of the AMPK-ACC2 Signaling Axis in Metabolic Control During Exercise and Obesity. NHMRC Project Grant
- MJ Watt, BE Kemp. Regulation of lipolysis: new players, new paradigms. ARC Discovery Grant

Stem Cell Regulation

Fellowships and Prizes

- Carl Walkey was awarded an NHMRC CDA (Level 1)
- Sofie Singbrant Soderberg was awarded a post-doctoral fellowship from the Swedish Research Council

Grants

- C Walkley. Identifying new approaches to understanding and treating osteosarcoma. Victorian Cancer Agency Early Career Seed Grant
- L Purton, C Walkley. Equipment Grant for the Stem Cell Regulation Centre. Ian Potter Foundation
- C Walkley. Baker Foundation Grant
- C Walkley. Cell cycle regulation, haemopoietic stem cells and myeloproliferation. NHMRC Project Grant
- C Walkley. Characterisation of a new model of osteosarcoma. NHMRC Project Grant
- C Walkley. The Role of Cell Cycle Control in Haemopoietic Stem Cell Fate Decisions. NHMRC Career Development Award Level 1
- L Purton, M Askmyr. Understanding the role of the bone marrow microenvironment in blood cancer formation. Leukaemia Foundation Grant-in-Aid
- L Purton. Cutting edge technology for the imaging of blood and bone cancer progression in animal models of disease. Equity Trustees Ltd

Structural Biology

Grants

- MW Parker, TR Hercus. A novel mode of cytokine receptor assembly and activation: functional and structural characterisation. NHMRC Project Grant
- P Batterham, MW Parker. Functional and regulatory analysis of nicotinic acetylcholine receptors, key targets of insecticides. ARC Discovery Grant
- MW Parker. Designing new strategies to fight Alzheimer's disease. L.E.W. Carty Charitable Fund Research Grant
- MW Parker. Swine influenza: Molecular basis of potential resistance to neuraminidase inhibitors. NHMRC Project Grant
- MW Parker. New Strategies to

Fight Alzheimer's Disease: structural studies of the interactions of gamma-secretase modulators with amyloid beta peptides. Mason Foundation

Victorian Breast Cancer Research Consortium Invasion and Metastasis Unit

Fellowships and Prizes

- Honor Hugo was awarded a Postdoctoral Training Fellowship from the National Breast Cancer Foundation

Grants

- EW Thompson, P Choong, P Hill, M Henderson, K Pantel. Exploring epithelial-mesenchymal interconversions in the breast cancer metastatic cascade. Cancer Council Victoria Project Grant
- EW Thompson, I Haviv, M Waltham. A functional genomic screen for tumorigenicity relative to epithelial-mesenchymal transition, breast cancer stem cell biology and therapeutic efficacy. US-DOD IDEA grant
- EW Thompson, P Hill, J Cawson, WA Morrison, H Lilja, S Lin. Molecular profiling and epidemiological refinement of mammary gland density as a predictor of breast cancer risk. St. Vincent's Hospital Research Endowment Fund
- M Southey, EW Thompson, I Haviv, P Hill, J Cawson, I Campbell. Molecular determinants of mammographic density. Victorian Breast Cancer Research Consortium
- WA Morrison, A O'Connor, AJ Penington, EW Thompson. Tissue distraction: a novel approach to enhance tissue growth for soft tissue engineering purpose. Australian Research Council Discovery Grant
- EW Thompson, M Waltham. Developing novel cancer treatments to stop metastatic spread. Angior Family Foundation
- H Hugo. Contribution of EMT to oestrogen-independent growth in human breast cancer. Victorian Cancer Agency Early Career Seed Grant

Service to the scientific community

Service on Scientific Advisory Boards and Committees

David Ascher

- Vice-President, Royal Australian Chemical Institute, Victorian Branch

Ora Bernard

- Member, Postgraduate Research Committee, Department of Medicine, St. Vincent's Hospital
- Member, PhD Confirmation Committee, Department of Medicine, St. Vincent's Hospital

Thomas Brodnicki

- Stage 1 Expert Reviewer, NIH-USA Challenge Grants
- Member, Medical and Scientific Advisory Committee, Juvenile Diabetes Research Foundation International
- Member, Professional Advisory Panel, Juvenile Diabetes Research Foundation Australia
- Member, Equipment Committee, SVI

Duncan Campbell

- Member, Scientific Advisory Boards of the International Academy of Cardiology and of the World Congress on Heart Disease

Roderick Chappel

- Elected Member Representative on the NATA Council
- Member of the NATA Proficiency Testing Providers Accreditation Advisory Committee
- President of the International Leptospirosis Society

Elizabeth Dax

- Chair, Australian Society of Microbiology, Research Trust Committee
- Immediate Past President, Australasian Society of HIV Medicine
- Vice President, AIDS Society of Asia and the Pacific
- Associate Member, Medical Devices Evaluation
- Member, AHMAC Blood Safety and Quality Working Group
- Member, NCCTG In Vitro Diagnostics Working Group
- Member, Eye Research Foundation Fundraising Group

Wayne Dimech

- National Examination Council Member, Australian Institute of Medical Scientists
- State Convener/ National Secretary, Clinical Serology and Molecular Special Interest Group, Australian Society for Microbiology

Kate Graham

- Member, Undergraduate Research Opportunity Program (UROP) Committee

Jörg Heierhorst

- Member, Cancer Council Victoria Medical & Scientific Committee
- Member, SVI Senior Scientist Committee
- Member, SVI Executive

Committee

- Member, SVI/Department of Medicine Seminar Committee
- Member, SVI Mass Spectrometry Committee
- Member, SVI Student Committee

Thomas Kay

- Member, SVI Board of Directors
- Member, SVI Foundation Board
- Member, Commercialisation & Intellectual Property Committee
- Member, Audit & Finance Committee
- Chair, SVI Faculty Executive Committee
- Chair, SVI Faculty
- Chair, St. Vincent's Hospital BioResources Oversight Committee
- Member, St. Vincent's Hospital Executive Committee Research Council
- Member, St. Vincent's Hospital BioResources Centre Users Group

- Member, St. Vincent's Hospital Aikenhead Centre for Medical Discovery Steering Committee
- Member, University of Melbourne/St. Vincent's Hospital Cluster Executive Committee

- Member, St. Vincent's Hospital Medical Executive Committee,
- Member, University of Melbourne Diabetes Centre of Clinical Research Excellence (CCRE) Governance Group

- Member, Bio21 Scientific Advisory Committee
- Member, Victoria Breast Cancer Research Consortium (VBCRC) Scientific Committee

- Member, Medical and Scientific Advisory Committee, Juvenile Diabetes Research Foundation

Bruce Kemp

- Member, Scientific Advisory Board, Mercury Therapeutics, Boston

Tom Loudovaris

- Member, Occupational Health and Safety Committee, SVI

Stuart Mannering

- Chair, Melbourne Human Immunology Group
- Visiting Scientist at St. Peter's Primary School, Epping, as part of the Scientists in Schools program
- Co-chair, Young Guns of Immunology Seminar series

Jack Martin

- Member Scientific Advisory Board, Botnar Research Centre, Nuffield Orthopaedic Centre, University of Oxford, UK
- Member, Human Genetics Advisory Committee (NHMRC)
- Vice-Chairman, International Cancer and Bone Society
- Member, NHMRC Human Genetic Advisory Committee
- Chairman, Medical Research Advisory Committee, Australian Cancer Research Foundation

Dale McPhee

- Member, Academic Advisory Committee, School of Biological and Chemical Sciences, Deakin University
- Member, National Centre in HIV Epidemiology and Clinical Research Working Group, Sydney
- Member, Executive Committee, Immunovirology Research Network

Michael Parker

- Member, Oversight Committee of the Bio21 C3 Facility
- OzReader, Australian Research Council Grants
- Chair, SVI Equipment Committee
- Member, SVI Commercialisation Committee
- Member, Australian Synchrotron Protein Crystallography Proposal Allocation Committee
- Member, Bio21 Institute Management Committee
- Member, Cooperative Research Centre for Cancer Therapeutics, CTx Operational Group
- Member, Cooperative Research Centre for Cancer Therapeutics, Project Management Group

Louise Purton

- Member, NHMRC Training Fellowships Grant Review Committee
- Grant Review Committee, Leukaemia Foundation
- External grant reviewer, NHMRC Project Grants

Boris Sarcevic

- NHMRC grant review panel deputy-chair
- Chair, SVI/Department of Medicine Seminar Committee
- Chair, SVI Mass Spectrometry Committee

Natalie Sims

- Council Member, Australian and New Zealand Bone and Mineral Society
- Chair, St Vincent's Cluster Research Technology Committee
- Member, Education Committee, American Society for Bone and Mineral Research

Helen Thomas

- Member, SVI Postgraduate Research Scholarships Committee

Erik Thompson

- President Elect, Metastasis Research Society (International)
- Chair, Paget-Ewing Award Guidelines Subcommittee, MRS
- Treasurer, The EMT International Association (TEMTIA)
- Board Member, Metastasis Research Society International
- Committee Member, Australasian Microarray & Associated Technologies Association (AMATA)
- Member, Research Advisory Committee, National Breast Cancer Foundation, Australia

- Member, Review Panel for Westmead Millennium Institute Breast Cancer Tissue Bank
- Member, Cancer Australia Review Panel (National Breast Cancer Foundation Representative)
- Member, National Breast Cancer Foundation Review Panels for Pilot and Concept Grants, Scholarships, Fellowships and Career Awards
- ARC INT-Reviewer
- Member, NSW Cancer Institute Review Panel
- Member, O'Brien Institute Scientific Oversight Committee
- Member, Tissue Resource Management Committee, Shared St. Vincent's Hospital / Peter MacCallum Cancer Centre
- Member, University of Melbourne Working Group for the St. Vincent's International Research Centre
- Member, St. Vincent's Hospital Bioresource Centre Users Committee
- Member, Victorian Functional Genomics Centre Steering Committee, Peter MacCallum Cancer Centre (AMATA Representative)
- Member, St. Vincent's Hospital Research Training Committee

Anne Thorburn

- Member, SVI Building Space Committee

Carl Walkley

- Abstract Reviewer, International Society of Stem Cell Research (ISSCR) Annual Meeting

Mark Waltham

- Federal Government 2020 Forum, Keynote Speaker, Tasmania, 2009

Service to the scientific community

Service on Boards and Editorial Boards

Emma Baker

- Associate Faculty Member, Faculty of 1000, non-haematopoietic stem cell section

Duncan Campbell

- Member, Editorial Board, Integrated Blood Pressure Control

Jörg Heierhorst

- Member of Council, Cancer Council Victoria

Thomas Kay

- Regional Editor, Autoimmunity

Bruce Kemp

- Editorial Board, Cellular Signalling
- Editorial Board, Journal of Molecular and Genetic Medicine
- Editorial Advisory Board, The Open Enzyme Inhibition Journal

Jack Martin

- Board Member, Victorian Breast Cancer Research Consortium
- Associate Editor and Reviews Editor, Bone
- Associate Editor, Endocrinology
- Editorial Board, Journal of Clinical Investigation
- Editorial Board, Arthritis Research and Treatment
- Editorial Board, Trends in Endocrinology and Metabolism
- Editorial Board, BoneKey

Dale McPhee

- Editorial Board, Advisory Board, Journal of Biomedical Science

Louise Purton

- Faculty Member, Faculty of 1000, non-haematopoietic stem cell section

Natalie Sims

- Editorial Board, Bone
- Board Member, International Society for Bone Morphometry

Erik Thompson

- Associate Editor, Cells Tissues Organs
- Associate Editor, Clinical and Experimental Metastasis
- Associate Editor, The Breast Journal

Anne Thorburn

- Editor, Obesity Reviews

Mark Waltham

- Editorial Board, Journal of Cancer Therapy

Service on Conference Organising Committees

Jörg Heierhorst

- Advisory Committee, Yeast Products and Discovery 2009, Adelaide
- Organising Committee, Lorne Genome Conference 2010, Lorne

Bruce Kemp

- Organising Committee, Lorne Protein Conference 2010

Sally Land

- Co-organizer and invited speaker, TAOAS Workshop, Bangkok, Thailand

Jack Martin

- Co-organiser, Advances in Molecular Pharmacology and Therapeutics of Bone Disease and International Symposium on Paget's Disease, St Catherine's College, Oxford.

Michael Parker

- President, Organising Committee, Lorne Conference on Protein Structure and Function 2010
- Vice-President, Organising Committee, Lorne Conference on Protein Structure and Function 2009
- Chair, Program Subcommittee, Lorne Conference on Protein Structure and Function 2009
- Member, Organising Committee for Complement, Perforins and Bacterial Cholesterol Dependent Cytolysins: The Hole Family, Prato, Italy
- Member, Scientific Programme Advisory Committee and Theme Leader for the OzBio2010 (12th IUBMB Conference, 21st FAOBMB Conference, Annual Conference of the Australian Society for Biochemistry and Molecular Biology)

Helen Thomas

- Organiser, 2nd Annual Australian Islet Study Group 2009, Melbourne

Erik Thompson

- Member, Local Organizing Committee, 5th Pacific Rim Breast and Prostate Cancer Conference 2010
- Member, Local Organizing Committee, Cancer and Bone Society Meeting 2009, Sydney
- Member, Program Committee, 4th International Conference on EMT (TEMPTIA) 2009, Tuscon, AZ, USA

Collaborations

Bone Cell Biology & Disease

- Dr D Curtis, Royal Melbourne Hospital. Patched and osteoblasts
- Prof P Ebeling, and Dr Claudia Gagnon, Western Hospital, Melbourne. Hypophosphatasia
- A/Prof M Ernst, Ludwig Institute for Cancer Research. Wnt signalling in gut and bone
- Dr A Evdokiou, The Hanson Institute, TRAIL and bone metabolism
- Prof M Forwood, Griffith University, Analysis of genetically altered mouse bone
- A/Prof A Fosang, Murdoch Children's Research Institute. Aggrecan effects upon the growth plate
- A/Prof E Gardiner, Diamantina Institute. NPY actions on bone
- Prof. E Gravallesse, University of Massachusetts Medical School, Worcester, MA, USA. Regulation of bone formation in rheumatoid arthritis
- Dr M Henderson, Peter MacCallum Cancer Institute. Breast cancer metastasis
- Dr I Kalazjic, University of Connecticut. Osteocyte models
- Dr MA Karsdal, Nordic Biosciences. Bone anti-resorptives
- Dr N Kulkarni, Eli Lilly and Company. PTH anabolic actions
- Dr JP Levesque, Biotherapy Program, Mater Medical Research Institute, University of Queensland. Effect of stem cell mobilization on bone formation
- Dr K Matsuo, Keio University, Japan. Eph and Ephrin interactions in bone
- Dr N Morrison, Griffith University. PTH and MCP1 interactions
- Dr G Nicholson, The University of Melbourne, Barwon Health. Oncostatin M effect in human osteoblasts
- Dr J Onyia, Eli Lilly and Company. PTH anabolic actions
- Dr P Pivonka, The University of Western Australia. Mathematical modelling of bone turnover.
- A/Prof J Price, Department of Biochemistry, Monash University. Stress proteins and anti-oxidant effects in breast cancer bone metastasis
- Dr S Richardson, LaTrobe University. Bone phenotype of transthyretin knockout mice
- Prof M Rogers, University of Aberdeen. GPR55 and bone metabolism
- Dr D Smith, The University of Melbourne. Mathematical modelling of bone turnover
- Dr D Thomas, Peter MacCallum Cancer Institute. Wnt Inhibitory Factor 1 in bone metabolism
- Dr T Tiganis, Monash University. T-cell PTP in bone metabolism.
- Prof J Wark, Royal Melbourne Hospital. Anti-Epileptic Drug induced bone disease

- Dr I Winkler, Biotherapy Program, Mater Medical Research Institute. Effect of stem cell mobilization on bone formation

Cytoskeleton and Cancer

- Prof J Bamberg, Colorado State University. The role of LIMK1 in the regulation of microtubule disassembly
- Dr R Anderson, Peter MacCallum Cancer Centre. The role of LIMK1 in cancer metastasis
- Dr I Street, Walter and Eliza Hall Institute. The search for LIMK1 inhibitors
- Prof Pekka Lappalainen, Institute of Biotechnology, University of Helsinki, Helsinki, Finland. Twinfilin, a new LIMK2 substrate
- Dr Matt Watt, Monash University. The role of LIMK2 in controlling obesity
- Dr Maria Kavallaris, Children's Cancer Institute, NSW. LIMK2 and drug resistance

Cell Cycle and Cancer

- Dr H Richardson, Peter MacCallum Cancer Institute. Regulation of cell cycle progression by CDK-mediated phosphorylation of the Brahma SWI/SNF chromatin-remodeling complex
- Dr Ora Bernard, SVI. Regulation of LIMK activity and microtubule dynamics by phosphorylation
- Dr Jörg Heierhorst. Control of ubiquitin-conjugating enzymes

Haematology and Leukaemia

- A/Prof R Starr, SVI. The role of SOCS proteins in early T-cell development
- Dr L Robb, The Walter and Eliza Hall Institute. A mouse model of myeloid leukaemia
- Dr R Johnstone, The Peter MacCallum Cancer Centre. Genes involved in T-cell leukaemia
- Dr S Russell, The Peter MacCallum Cancer Institute. Cell polarity in T-cells
- Prof H Nandurkar, St. Vincent's Hospital. A mouse model of B cell lymphoma
- Dr A Wei, Alfred Hospital. Modelling human leukaemia in mice

Immunology and Diabetes

- Dr T Brodnicki, The Walter and Eliza Hall Institute. Identification of Mouse Diabetes Susceptibility Genes
- Prof P Cowan, St Vincent's Hospital, Melbourne. Over-expression of antioxidant proteins in pancreatic beta cells
- Dr S Grey, Garvan Institute. The mechanism by which A20 promotes allograft survival
- Prof L Harrison, The Walter and Eliza Hall Institute. Prevention and cure of type 1 diabetes: CD8+ T cells in diabetes pathogenesis

- A/Prof A Lew, The Walter and Eliza Hall Institute. Cell death pathways in pancreatic beta cells
- Dr R Sutherland, The Walter and Eliza Hall Institute. Pancreatic islet transplantation
- Dr Brad Marsh, Institute of Molecular Bioscience, Brisbane. Characterisation and modulation of beta cell-macrophage interactions
- Dr C Parish and Dr C Simeonovic, Australian National University. The role of heparanase and heparin sulphate in islet destruction
- A/Prof P O'Connell, Westmead Millennium Institute. Clinical islet transplantation
- Dr P Santamaria, The University of Calgary. Mechanisms of pancreatic beta cell death in TCR transgenic mouse models of type 1 diabetes
- Prof A Strasser, The Walter and Eliza Hall Institute. T-cell mechanisms of beta cell destruction
- Prof R Thomas, The University of Queensland. Clinical trial of Anakinra in type 1 diabetes mellitus
- Prof J Trapani, Peter MacCallum Cancer Institute. T-cell mechanisms of beta cell destruction

Molecular Cardiology

- A/Prof D Kelly and Prof R Gilbert, The University of Melbourne, Department of Medicine, St. Vincent's Hospital. The effect of renin inhibition in the diabetic TGR(Ren-2) rat
- Mr M Yui, Mr J Kenny and Mr Andrew Newcomb, Cardiothoracic surgery, St. Vincent's Hospital. Establishment of SVHM Cardiac Tissue Bank
- Dr D Prior, Cardiology, St. Vincent's Hospital. Investigation of the pathogenesis of diastolic dysfunction
- Dr B Dixon and A/Prof J Santamaria, Intensive Care Unit, St. Vincent's Hospital, Melbourne. Investigation of the systemic inflammatory response to cardiopulmonary bypass
- Dr MJ Black, Department of Anatomy, Monash University. Investigation of the pathogenesis of diastolic dysfunction
- Prof H Krum and A/Prof C Reid, Department of Epidemiology and Preventive Medicine, Monash University. Strategies for the detection of heart failure in the community
- Prof K Bernstein, Emory University and Pierre Corvol, INSERM U36. Study of genetic models of ACE gene expression
- Prof F Alhenc-Gelas and Dr M Azizi, INSERM U367. Study of the effects of kallikrein gene mutation on urinary kallidin levels in humans

- A/Prof J Wilkinson-Berka, Department of Immunology, Monash University. Study of the role of prorenin in retinopathy

Molecular Genetics

- Prof Ming-Daw Tsai, Ohio State University. Structural analyses of FHA domain functions
- Prof S Takeda, Kyoto University. Analyses of novel DNA repair pathways
- Prof B Andrews, University of Toronto. Robotic synthetic genetic array analysis of the yeast MDT1 gene
- Dr M Basrai, NIH. Robotic genetic analyses of the yeast ESL genes.
- A/Prof T Preiss, Dr T Beilharz, Victor Chang Institute. Transcriptome analyses of ESL genes
- A/Prof P Most, Jefferson University, Philadelphia. S100A1 functions in the heart

NRL

- Dr G Vercauteren, Department of Essential Health Technologies, WHO, Geneva. HIV Testing Strategies
- Dr G Dore, NCHECR. Detailed investigation of the humoral immune response to HCV to identify diagnostic and prognostic serological markers
- A/Prof A Kelleher, Dr L Gelgor, NCHECR. Characterising antibody responses for HIV Long Term Non-progressors
- Dr P Gorry and Dr M Roelsgaard, Burnet Institute. Pathogenesis of HIV Long Term Non-progressors
- A/Prof D Purcell, Dr R Center, Department of Microbiology and Immunology, University of Melbourne
- Dr W Dyer, ARCBS. Pathogenesis of HIV Long Term Non-progressors
- Prof S Crowe, Burnet Institute. Unusual HIV Infections

Pharmacogenomics

- A/Prof T Brown, Monash University. Role of hyluronan synthase in breast cancer progression
- Dr A Stevenson, CSIRO. Phase-contrast X-ray radiography in biomedical research
- A/Prof EW Thompson, SVI. MMP inhibition studies in breast cancer systems and gene array analysis of epithelial-mesenchymal transition
- Dr T Rowe, Arana Therapeutics. New anticancer agents
- Dr R Anderson, Peter MacCallum Cancer Centre. Mouse models of cancer metastasis
- Dr J Kennedy, ENT Department, St Vincent's Hospital. Gene expression analysis of acoustic neuromas

Collaborations

Protein Chemistry and Metabolism

- Dr L Macaulay, CSIRO Molecular Health Technologies. Lipid metabolism, obesity
- Dr L Witters, Darnmouth Medical College. AMPK structure and function
- Dr D Power, Austin Research Institute. AMPK and kidney function
- Dr G McConell, Department of Physiology, University of Melbourne. AMPK and exercise
- Dr D Allen, Department of Physiology, University of Sydney. AMPK and ion transport
- Dr A Means, Duke University Medical Centre. CaMKK β structure and function
- Dr J Hawley, RMIT University. AMPK in exercise and type 2 diabetes
- Dr J Camakaris, Department of Genetics, University of Melbourne. Regulation of copper transport
- Dr M Birnbaum, Howard Hughes Medical Institute. Skeletal muscle AMPK physiological functions
- Dr M Ernst, Ludwig Institute of Cancer Research. gp130 signalling and metabolism
- Dr B Kingwell, Baker Heart Research Institute. Lipoprotein regulation of AMPK
- Prof M Hargreaves, Department of Physiology, University of Melbourne. AMPK and skeletal muscle during exercise
- Dr G Lynch, Department of Physiology, University of Melbourne. Regulation of AMPK by muscle contraction

Stem Cell Regulation

- Prof S Orkin, Dana-Farber Cancer Institute. Osteosarcoma, erythroid differentiation
- Dr V Sankaran, Dana-Farber Cancer Institute. Erythroid differentiation
- Dr J Danks, RMIT Bundoora. Osteosarcoma
- Dr M Dray, Middlemore Hospital Auckland. Osteosarcoma
- A/Prof JP Levesque, Mater Medical Research Institute. Haemopoietic stem cell studies
- Prof P Gill, University of Southern California. Osteosarcoma
- A/Prof G MacArthur, Peter MacCallum Cancer Centre. Leukaemia studies

Structural Biology

- Dr D Rhodes, Avexa, Victoria. HIV
- Dr S Tucker, Biota, Victoria. Viral respiratory diseases
- Dr O Bernard, SVI. LIM kinase
- Prof P Board, John Curtin School of Medical Research, Australian National University. Glutathione transferases
- Prof D Bowtell, Peter MacCallum Cancer Institute. Proteins involved in ubiquitination
- Prof A Frauman, Department of Medicine, Austin Health, The University of Melbourne. Prostate cancer proteins
- Prof B Kemp, SVI. Protein kinase regulation
- Prof A Lopez, Hanson Centre for Cancer Research. Cytokine receptor
- Prof J Martin, SVI. Phosphodiesterases
- Prof E Simpson, Prince Henry's Institute of Medical Research. Steroid receptors
- Dr D Stapleton, Bio21 Institute. Protein kinase regulation
- Prof M Vadas, Centenary Institute for Cancer Research. Protein kinases
- Dr M Waters, IMB, University of Queensland. Growth hormone receptor
- Dr A Albiston, Howard Florey Institute. IRAP
- Dr R Cappai, Department of Pathology, The University of Melbourne. Proteins implicated in Alzheimer's disease
- Dr K Barnham, Department of Pathology, The University of Melbourne. Proteins implicated in Alzheimer's disease
- Dr S Y Chai, Howard Florey Institute. IRAP
- Prof C Masters, Department of Pathology, The University of Melbourne. Proteins implicated in Alzheimer's disease
- Dr F Mendelsohn, Howard Florey Institute. IRAP
- Dr S Petrou, Department of Physiology, University of Melbourne. Ion channels
- Dr S Bottomley, Department of Biochemistry and Molecular Biology, Monash University. Serpins
- Dr J Gamble, Centenary Institute for Cancer Research. Protein kinases
- Dr R Pace, Department of Chemistry, Australian National University. Photosystem II
- Dr P Thompson, Department of Medicinal Chemistry, Victorian College of Pharmacy. Phosphodiesterase inhibitors
- Dr R Tweten, Department of Microbiology and Immunology, University of Oklahoma. Pore-forming toxins and receptors
- Dr G van der Goot, Department of Biochemistry, University of Geneva. Aerolysin
- Prof P Dyson, Ecole

- Polytechnique Federale de Lausanne. Cisplatin drugs
- Prof M Lo Bello, Department of Biology, University of Rome "Tor Vergata". Glutathione transferases
- Dr L Garcia-Fuentes, University of Almeria. Glutathione transferases
- Dr G Stenberg, Department of Biochemistry, Uppsala University. Glutathione transferases
- Dr M Scanlon, Department of Medicinal Chemistry, Victorian College of Pharmacy. HIV integrase
- Dr S Pitson, Hanson Institute. Sphingosine Kinase
- Dr M Perugini, Bio21 Institute, Melbourne University. Bacterial virulence factors
- Prof P Batterham, Bio21 Institute, Melbourne University. Insecticide targets
- Dr T Bryan, Children's Medical Research Institute, Sydney, Telomerase
- Dr S Cohen, Children's Medical Research Institute, Sydney, Telomerase
- Prof P Robinson, Children's Medical Research Institute, Sydney. Brain proteins
- Dr Adam Ratner, Columbia University, New York. Toxins
- Dr G Nie, Prince Henry's Institute of Medical Research. PC6
- Dr C Harrison, Prince Henry's Institute of Medical Research. PC6
- Prof E Reynolds, Department of Dentistry, Melbourne University. Gum disease
- Dr E Dimitriadis, Prince Henry's Institute of Medical Research. LIF
- Prof G Marshall, Centre for Children's Cancer and Blood Disorders, Sydney Children's Hospital. NMyC
- Prof K Kirk, Research School of Biology, Australian National University. Malaria
- Prof M McConville, Bio21 Institute, Melbourne University. Tropical diseases
- A/Prof P Ekert, Murdoch Children's Research Institute. Cytokine signalling
- Prof S McColl, Department of Biochemistry, University of Adelaide. Cytokine signalling
- Dr S Ralph, Bio21 Institute, Melbourne University. Malaria
- Dr T Mulhern, Bio21 Institute, Melbourne University. SAXS

VBCRC Invasion and Metastasis

- A/Prof P Hill, St. Vincent's Hospital. Analysis of epithelial - mesenchymal transition markers in archival breast cancer specimens, mammographic density
- Dr R Anderson, Peter MacCallum Cancer Centre. MMPs in mouse mammary metastasis model; breast cancer growth and metastasis in MMP-deficient mice
- A/Prof I Campbell, Peter MacCallum Cancer Centre. Genotyping breast cancer cell variants
- A/Prof M Henderson, Department Of Surgery, University of Melbourne. Studies in clinical breast cancer specimens
- Dr D Newgreen, Murdoch Children's Research Institute. Epithelio-Mesenchymal Transition (EMT) in breast cancer
- A/Prof L Ackland, Deakin University. Epithelio-Mesenchymal Transition (EMT) in breast cancer
- Dr J Price, Monash University, Department of Biochemistry. Epithelio-Mesenchymal Transition (EMT) in breast cancer. Molecular determinants of bone metastasis
- Dr M Waltham, SVI. MMP inhibition studies in breast cancer systems and gene array analysis of epithelial-mesenchymal transition
- Dr E Williams, Monash Institute for Medical Research. Studies on bladder and prostate cancer progression and metastasis to bone
- Dr N Ahmed, Department Obstetrics and Gynecology, University of Melbourne. EMT in ovarian cancer spheroids
- Dr L Soon, Australian Key Centre for Microscopy and Microanalysis, NANO-MNRF, Sydney. Breast cancer cell migration in 3-D
- Prof R Henry, Monash University. SAXS analysis for mammographic density
- Dr I Haviv, Peter MacCallum Cancer Centre. Species-specific gene array for tumour stromal interactions
- Prof J Hopper, Centre for MEGA Epidemiology, University of Melbourne. Molecular / cellular analysis of mammographic density
- Dr M Southey, University of Melbourne, Department of Pathology. Molecular / cellular analysis of mammographic density
- Prof K Stanley, University of New South Wales & Corbett Research. Multiplex tandem PCR (MT-PCR) for paraffin-embedded archival material and EMT
- Dr A Swarbrick, The Garvan Institute, PyMT syngeneic

Collaborations

- model of mouse mammary cancer in FVB/n mice
- Dr E Marcusson, ISIS Pharmaceuticals, Carlsbad, CA, USA. Antisense oligonucleotides in breast cancer
 - Dr R Fridman, Department of Pathology, Wayne State University, Detroit, USA. MMP-integrin interactions
 - Prof Avhram Raz, Karmanos Cancer Center, Detroit, USA. Role of galectin-3 in breast cancer progression
 - Prof Hiroshi Sato, Kanazawa Medical School, Japan. MT-MMP regulation and epithelio-mesenchymal transition
 - Prof Motoharu Seiki, Department of Cancer Cell Research, Institute of Medical Science, University of Tokyo, Japan. Collagen regulation of MT1-MMP function
 - Prof Z Werb, Department of Anatomy, University of California, San Francisco, USA. MMP-13 involvement in breast cancer progression
 - Dr T Sasaki, Max Planck Institute, Germany. SPARC / osteonectin / BM40 effects on MMP-2-activation in breast cancer cells

Presentations

Elizabeth Allan

- Sydney, International Bone and Mineral Society / Australia and New Zealand Bone and Mineral Society Joint Meeting, Speaker

Janette Allison

- Diabetes CCRE Seminar Series, Melbourne, Invited speaker

Michelle Ashton

- 2009 Immunology Group of Victoria Meeting, Yarra Valley, Speaker

Maria Askmyr

- Pennington Biomedical Research Center, Baton Rouge, USA, Invited seminar speaker
- American Society of Hematology 51st Annual Meeting, New Orleans, USA, Poster presentation

Emma Baker

- SVI/Department of Medicine weekly seminar series, Invited speaker

Ora Bernard

- Gordon Conference on Phosphorylation and G-Proteins mediate signalling networks, University of New-England, Speaker
- ComBio, Canberra, Session chair and invited speaker
- The Wiermann Institute of Science, Invited speaker

Sue Best

- Australasian Tissue and Biotherapeutics Forum, Perth, Australia, Invited speaker

Thomas Brodnicki

- 7th Gene Mappers Conference, Katoomba, NSW, Speaker
- Centre for Animal Biotechnology/Department of Veterinary Science, The University of Melbourne, Seminar speaker
- Centre of Clinical Research Excellence in Clinical Sciences in Diabetes, Melbourne, Seminar speaker
- SVI/Department of Medicine weekly seminar series, Invited speaker

Liza Cabuang

- 26th NRL Workshop on Serology, Christchurch, New Zealand, Invited speaker

Duncan Campbell

- The RAS Club: An Expanding System, Monash University, Clayton, Invited speaker
- High Blood Pressure Research Council of Australia, Sydney, Speaker

Jonathan Gooi

- Sydney, International Bone and Mineral Society / Australia and New Zealand Bone and Mineral Society Joint Meeting, Speaker

Kate Graham

- 10th International Congress of the Immunology of Diabetes Society, Malmo, Sweden, Poster presentation
- Australian Diabetes Society Annual Scientific Meeting, Adelaide, Speaker

- 2nd Annual Australian Islet Study Group Meeting, Melbourne, Speaker

- 19th Annual Meeting of the Australasian Society for Immunology, Gold Coast, Speaker

Jörg Heierhorst

- IMCB Symposium on Cell Cycle Regulation and Tumorigenesis, Singapore, Invited speaker
- Keystone Symposium Telomere Biology and DNA Repair, Ashmore, QLD, Speaker
- Hanson Institute, Adelaide, Seminar speaker
- Bio21 Institute, Melbourne, Seminar speaker

Jean Hendy

- American Society of Hematology 51st Annual Meeting, New Orleans, USA, Poster presentation

Nicolas Hoch

- Yeast Products and Discovery Conference, Adelaide, Speaker

David Izon

- CSIRO National Flagship Health, Werribee, Invited speaker

Bruce Kemp

- 8th Australian Peptide Meeting, Couran Cove, Invited speaker
- ASBMB Mundaring Weir Symposium, Freemantle WA, Invited speaker
- University of Melbourne Obesity Consortium Launch, Invited speaker
- American Diabetes Association Meeting, New Orleans, Invited speaker

Balasubramanian Krishnamurthy

- Australian Diabetes Society, Special Interest Group (Immunology of Diabetes), Adelaide, Invited speaker

Xianning Lai

- Yeast Products and Discovery Conference, Adelaide, Speaker

Stuart Mannering

- 10th International Congress of the Immunology of Diabetes Society, Malmo, Sweden, Speaker
- Australasian Diabetes Association (ADS), Adelaide, Speaker
- Australasian Society for Immunology Annual Meeting 2009, Gold Coast, Invited speaker

Jack Martin

- International Bone and Mineral Society / Australia and New Zealand Bone and Mineral Society Joint Meeting, Sydney, Opening Plenary Lecturer
- 4th International Workshop on Advances in the Molecular Pharmacology and Therapeutics of Bone Disease, Oxford, UK, Invited speaker
- Gordon Conference on Chemistry and Physiology of bones and teeth, Maine, USA, Invited speaker

- Bone Biology Program, Vanderbilt University, Nashville, USA, Invited lecturer,

- Armen Tashjian MD Symposium Day, Lilly Research Laboratories, Indianapolis, USA, Invited speaker

- Yale University School of Medicine Seminar Program, New Haven Connecticut, USA, Invited speaker

- Officially opened Mellanby Centre for Bone Disease, and Invited Plenary Lecturer, Sheffield, UK, Mellanby Symposium

- 36th European Symposium on Calcified Tissues, Vienna, Austria, Invited lecturer

- Endocrine Society of Australia, Adelaide, Australia, Invited Symposium Lecturer

- University of Washington, Seattle, USA, Invited Seminar

- ANZBMS, Sydney, Australia, Invited Symposium Lecturer

- AMGEN Bone Academy, Melbourne, Australia, Invited lecturer

- University of Melbourne and International Osteoporosis Foundation Workshop on Pathophysiology of Osteoporosis and Bone Diseases, Invited speaker

- Korean Endocrine Society Annual Scientific Meeting, Busan, South Korea, Invited Plenary Lecturer

Mark McKenzie

- Australian Diabetes Society, Adelaide, Speaker
- SVI/Department of Medicine weekly seminar series, Invited speaker

Narelle McGregor

- Sydney, International Bone and Mineral Society / Australia and New Zealand Bone and Mineral Society Joint Meeting, Speaker

Dale McPhee

- 5th Annual workshop – Australian Centre for HIV and Hepatitis Virology Research, Terrigal, Australia, Invited speaker
- 5th Australian Virology Group Meeting, Lorne, Australia, Invited speaker

Michael Parker

- Second Australia-China Biomedical Research Conference, Tianjin, China, Invited speaker
- Complement, perforins and bacterial CDC's: the hole family, Prato, Italy, Invited speaker
- US Protein Society, Boston, USA, Invited speaker
- Joint Conference of the Asian Crystallographic Association and Chinese Crystallography Society, Beijing, China, Invited speaker
- Tucker Symposium, Hamburg, Germany, Invited speaker
- ComBio 2009 Conference, Christchurch, New Zealand, Invited speaker

- Fourth Barossa Meeting Science amongst the Vines: "Cell signaling in cancer and development", Barossa Valley, South Australia, Invited speaker

- Australian Society for Biochemistry and Molecular Biology Annual Conference (ComBio2009), Christchurch, New Zealand, Invited speaker

- Symposium on "Drug Discovery for Diseases of the Brain", Brain and Mind Research Institute, University of Sydney, Sydney, Invited speaker

- Department of Biology, University of Rome "Tor Vergata", Rome, Italy, Seminar speaker

- New York Structural Biology Center, New York, USA, Seminar speaker

- Weill Medical College of Cornell University, New York, USA, Seminar speaker

- Department of Genetics, Melbourne University, Melbourne, Seminar speaker

- Department of Surgery/Ludwig Institute for Cancer Research, Melbourne, Seminar speaker

- Biosciences and Infection and Immunity Domains Research Forum, University of Melbourne Medical Faculty Symposium, Invited speaker

- Bio21 Cluster Symposium on Computational Biology and Informatics: What are the possibilities", Melbourne, Invited speaker

- Children's Cancer Institute Australia for Medical Research, Seminar speaker

Louise Purton

- VIII International Meeting on Cancer-Induced Bone Disease 2009, Sydney, Invited speaker
- RMIT University, Melbourne, Invited seminar speaker
- SVI/Department of Medicine weekly seminar series, Invited speaker
- Fred Hutchinson Cancer Research Center, Seattle, USA, Invited seminar speaker
- Vanderbilt University, Nashville, USA, Invited seminar speaker
- Cancer Connect Training Seminar, Melbourne, Invited speaker

Julie Quach

- Sydney, International Bone and Mineral Society / Australia and New Zealand Bone and Mineral Society Joint Meeting, Speaker

Nirupa Sachithanandan

- Australian Diabetes Society, Adelaide, Speaker

Hasnawati Saleh

- Sydney, International Bone and Mineral Society / Australia and New Zealand Bone and Mineral Society Joint Meeting, Speaker

Natalie Sims

- SVI/Department of Medicine weekly seminar series, Invited speaker

Presentations

- Prince Henry's Institute Seminar Program, Seminar speaker
 - Bone Health and Epilepsy Symposium, Melbourne, Invited speaker
 - Seoul National University Bone Metabolism Research Center International Symposium, Seoul, Korea, Invited speaker
 - American Society for Bone and Mineral Research Annual Meeting, Denver, USA, Speaker
 - European Calcified Tissue Society PhD Education Programme, Oxford, UK, Invited speaker
 - 4th International Workshop on Advances in the Molecular Pharmacology and Therapeutics of Bone Disease, Oxford, UK, Invited speaker
 - International Bone and Mineral Society / Australia and New Zealand Bone and Mineral Society Joint Meeting, Sydney, Invited speaker
- Gregory Steinberg**
- Chair's Grand Rounds, McMaster University, Hamilton, ON, Canada, Invited speaker
 - The Joslin Diabetes Center, Harvard Medical School, Boston, MA, USA, Invited speaker
 - International Biochemistry of Exercise, Guelph, ON, Canada, Invited speaker
- Helen Thomas**
- Department of Biochemistry, La Trobe University, Invited speaker
 - Larry Hillblom Islet Research Center, University of California, Los Angeles, USA, Invited speaker
 - NIDDK Workshop "Mutual Interaction of Innate and Adaptive Immunity in Type 1 and Type 2 Diabetes", Washington DC, USA, Invited speaker
- Erik Thompson**
- Lorne Cancer Conference, Lorne, Speaker
 - 4th International Meeting on Epithelial-Mesenchymal Cell Transition, Tucson, Arizona, USA, Invited speaker
 - 8th Chinese National Conference on Tumor Metastasis, Tianjin, China, Keynote speaker and conference co-chair
 - 1st Frontier Research Initiative Symposium "Tissue Remodeling in Development and Disease", Tokyo, Japan, Invited speaker
 - Yokosuka International Conference on Cancer Microenvironments in the Yokosuka Science Festa 2009 / 8th Pan-Pacific Connective Tissue Societies Symposium, Yokosuka, Japan, Invited speaker
 - Cancer-Induced Bone Disorder Minisymposium, Tokushima, Japan, Invited speaker
- Emma Walker**
- Sydney, International Bone and Mineral Society / Australia and New Zealand Bone and Mineral Society Joint Meeting, Speaker
- Carl Walkley**
- International Society of Experimental Hematology (ISEH) 2009 Meeting, Athens, Greece, Invited Plenary Session
 - Mon-Man 3 Symposium, Monash University, Invited speaker
 - NHMRC Career Development Symposium, Canberra, Invited speaker
 - RMIT University, Melbourne, Seminar speaker
- Nicole Walsh**
- Melbourne, Australia, Australian Rheumatology Association, Victorian Branch Annual Meeting, Speaker
 - Melbourne, Australia, St. Vincent's Hospital Osteoarthritis Workshop, Invited speaker
- Nancy Wang**
- 19th Annual Meeting of the Australasian Society for Immunology, Gold Coast, Speaker
- Kim Wilson**
- 5th IAS conference on HIV pathogenesis, treatment and prevention, Cape Town, South Africa, Panel Member

Publications

- Allan, E. H., Pompolo, S., Ho, P. W. M., Sims, N. A., & Martin, T. J. (2009). Ephrin B2-EphB4 effects on osteoblast differentiation: Role of RhoA signaling. *Bone*, 44, 041.
- Ang, W. H., Parker, L. J., De Luca, A., Juillerat-Jeanneret, L., Morton, C. J., Lo Bello, M., et al. (2009). Rational Design of an Organometallic Glutathione Transferase Inhibitor. *Angewandte Chemie-International Edition*, 48(21), 3854-3857.
- Angstetra, E., Graham, K. L., Emmett, S., Dudek, N. L., Darwiche, R., Ayala-Perez, R., et al. (2009). In vivo effects of cytokines on pancreatic beta-cells in models of type I diabetes dependent on CD4(+) T lymphocytes. *Immunology and Cell Biology*, 87(2), 178-185.
- Askmyr, M., Sims, N. A., Martin, T. J., & Purton, L. E. (2009). What is the true nature of the osteoblastic hematopoietic stem cell niche? Trends in *Endocrinology and Metabolism*, 20(6), 303-309.
- Atkinson, S. C., Dobson, R. C. J., Newman, J. M., Gorman, M. A., Dogovski, C., Parker, M. W., et al. (2009). Crystallization and preliminary X-ray analysis of dihydrodipicolinate synthase from *Clostridium botulinum* in the presence of its substrate pyruvate. *Acta Crystallographica Section F-Structural Biology and Crystallization Communications*, 65, 253-255.
- Bendayan, M., Londono, I., Kemp, B. E., Hardie, G. D., Ruderman, N., & Prentki, M. (2009). Association of AMP-activated Protein Kinase Subunits With Glycogen Particles as Revealed In Situ by Immunoelectron Microscopy. *Journal of Histochemistry & Cytochemistry*, 57(10), 963-971.
- Bilezikian, J. P., Matsumoto, T., Bellido, T., Khosla, S., Martin, J., Recker, R. R., et al. (2009). Targeting Bone Remodeling for the Treatment of Osteoporosis: Summary of the Proceedings of an ASBMR Workshop. *Journal of Bone and Mineral Research*, 24(3), 373-385.
- Brady, J. L., Mannering, S. I., Kireta, S., Coates, P. T., Prioetto, A. I., Cowan, P. J., et al. (2009). Monoclonal antibodies generated by DNA immunization recognize CD2 from a broad range of primates. *Immunology and Cell Biology*, 87(5), 413-418.
- Brown, K. A., McInnes, K. J., Hunger, N. I., Oakhill, J. S., Steinberg, G. R., & Simpson, E. R. (2009). Subcellular Localization of Cyclic AMP-Responsive Element Binding Protein-Regulated Transcription Coactivator 2 Provides a Link between Obesity and Breast Cancer in Postmenopausal Women. *Cancer Research*, 69(13), 5392-5399.
- Bruce, C. R., Hoy, A. J., Turner, N., Watt, M. J., Allen, T. L., Carpenter, K., et al. (2009). Overexpression of Carnitine Palmitoyltransferase-1 in Skeletal Muscle Is Sufficient to Enhance Fatty Acid Oxidation and Improve High-Fat Diet-Induced Insulin Resistance. *Diabetes*, 58(3), 550-558.
- Campbell, D. (2009). Angiotensin vaccination: What is the prospect of success? *Current Hypertension Reports*, 11(1), 63-68.
- Campbell, D. J. (2009a). Aliskiren Therapy Will Have Minimal Effect on Intracellular Renin of Renin-Producing Cells. *Hypertension*, 53(2), E17-E17.
- Campbell, D. J. (2009b). Method of Blood Collection May Explain the Suppression of Plasma Renin Concentration in Prorenin Transgenic Mice. *Hypertension*, 54(1), E12-E12.
- Campbell, D. J., Karam, H., Menard, J., Bruneval, P., & Mullins, J. J. (2009). Prorenin Contributes to Angiotensin Peptide Formation in Transgenic Rats With Rat Prorenin Expression Targeted to the Liver. *Hypertension*, 54(6), 1248-1253.
- Campbell, D. J., Nussberger, J., Stowasser, M., Danser, A. H. J., Morganti, A., Frandsen, E., et al. (2009). Activity Assays and Immunoassays for Plasma Renin and Prorenin: Information Provided and Precautions Necessary for Accurate Measurement. *Clinical Chemistry*, 55(5), 867-877.
- Campbell, D. J., Xiao, H. D., Fuchs, S., & Bernstein, K. E. (2009). Genetic models provide unique insight into angiotensin and bradykinin peptides in the extravascular compartment of the heart in vivo. *Clinical and Experimental Pharmacology and Physiology*, 36(5-6), 547-553.
- Carrington, E. M., McKenzie, M. D., Jansen, E., Myers, M., Fynch, S., Kos, C., et al. (2009). Islet beta-Cells Deficient in Bcl-xL Develop but Are Abnormally Sensitive to Apoptotic Stimuli. *Diabetes*, 58(10), 2316-2323.
- Chen, X. B., Cromer, B., Webb, T. I., Yang, Z., Hantke, J., Harvey, R. J., et al. (2009). Dihydropyridine inhibition of the glycine receptor: Subunit selectivity and a molecular determinant of inhibition. *Neuropharmacology*, 56(1), 318-327.
- Choy, S., Fraser, S., Cook, N., Van Denderen, B., Gleich, K., Katerdos, M., et al. (2009). Regulation of renal metabolism by the AMP-activated protein kinase (AMPK). *Nephrology*, 14, 003.
- Cook, N., Fraser, S. A., Katerelos, M., Katsis, F., Gleich, K., Mount, P. F., et al. (2009). Low salt concentrations activate AMP-activated protein kinase in mouse macula densa cells. *American Journal of Physiology-Renal Physiology*, 296(4), F801-F809.
- Crimeen-Irwin, B., Quinn, J. M. W., Allan, E. H., Ho, P. W. M., Gillespie, M. T., Sims, N. A., et al. (2009). Eph-B4 forward signalling in osteoblasts is triggered by soluble clustered ephrin-B2 and blocked by specific peptide antagonists. *Bone*, 44, 376.
- Crowe, S., Wu, L. E., Economou, C., Turpin, S. M., Matzaris, M., Hoehn, K. L., et al. (2009). Pigment Epithelium-Derived Factor Contributes to Insulin Resistance in Obesity. *Cell Metabolism*, 10(1), 40-47.
- Day, D., Pham, K., Ludford-Menting, M. J., Oliaro, J., Izon, D., Russell, S. M., et al. (2009). A method for prolonged imaging of motile lymphocytes. *Immunology and Cell Biology*, 87(2), 154-158.
- Drew, B. G., Duffy, S. J., Forbes, J. M., Chin-Dusting, J., Kaye, D. M., Kemp, B. E., et al. (2009). High Density Lipoprotein Modulates Glucose Metabolism by Multiple Mechanisms. *Circulation*, 120(18), S468-S469.
- Drew, B. G., Duffy, S. J., Formosa, M. F., Natoli, A. K., Henstridge, D. C., Penfold, S. A., et al. (2009). High-Density Lipoprotein Modulates Glucose Metabolism in Patients With Type 2 Diabetes Mellitus. *Circulation*, 119(15), 2103-U2134.
- Dzambo, N. L., & Steinberg, G. R. (2009). AMPK-dependent hormonal regulation of whole-body energy metabolism. *Acta Physiologica*, 196(1), 115-127.
- Feil, S. C., Tang, J. L., Hansen, G., Gorman, M. A., Wiktelius, E., Stenberg, G., et al. (2009). Crystallization and preliminary X-ray analysis of glutathione transferases from cyanobacteria. *Acta Crystallographica Section F-Structural Biology and Crystallization Communications*, 65, 475-477.
- Fukamoto, S., & Martin, T. J. (2009). Bone as an endocrine organ. *Trends in Endocrinology and Metabolism*, 20(5), 230-236.
- Gooi, J. H., Pompolo, S., Karsdal, M., Kulkarni, N. H., McAhren, S. H., Han, B., et al. (2009). Calcitonin attenuates the anabolic effect of PTH in young rats by rapid upregulation of sclerostin expression. *Bone*, 44, 040.
- Hercus, T. R., Thomas, D., Guthridge, M. A., Ekert, P. G., King-Scott, J., Parker, M. W., et al. (2009). The granulocyte-macrophage colony-stimulating factor receptor: linking its structure to cell signaling and its role in disease. *Blood*, 114(7), 1289-1298.
- Ho, P. W. M., Onan, D., Crimeen-Irwin, B., Simms, N. A., & Martin, T. J. (2009). Persistent activation of signaling and gene expression in osteoblasts by full length PTHrP. *Bone*, 44, 209.
- Hugo, H. J., Newgreen, D. F., Drabsch, Y., Ramsay, R. G., Tom, G. J., & Thompson, E. W. (2009). Snail2 transcriptionally represses MYB in EMT induced by hypoxia in breast cancer cell lines. *Clinical & Experimental Metastasis*, 26(7), 864-864.
- Hugo, H. J., Wafai, R., Blick, T., Thompson, E. W., & Newgreen, D. F. (2009). Staurosporine augments EGF-mediated EMT in PMC42-LA cells through actin depolymerisation, focal contact size reduction and Snail1 induction - A model for cross-modulation. *Bmc Cancer*, 9.
- Hurt, A. C., Holien, J. K., & Barr, I. G. (2009). In Vitro Generation of Neuraminidase Inhibitor Resistance in A(H5N1) Influenza Viruses. *Antimicrobial Agents and Chemotherapy*, 53(10), 4433-4440.
- Hurt, A. C., Holien, J. K., Parker, M., Kelso, A., & Barr, I. G. (2009). Zanamivir-Resistant Influenza Viruses with a Novel Neuraminidase Mutation. *Journal of Virology*, 83(20), 10366-10373.
- Hurt, A. C., Holien, J. K., Parker, M. W., & Barr, I. G. (2009). Oseltamivir Resistance and the H274Y Neuraminidase Mutation in Seasonal, Pandemic and Highly Pathogenic Influenza Viruses. *Drugs*, 69(18), 2523-2531.
- Brady, J., Mannering, S., Kireta, S., Coates, P., Prioetto, A., Cowan, P., et al. (2009). Monoclonal antibodies generated by DNA immunization recognize CD2 from a broad range of primates. *Immunology and Cell Biology*, 87(6), A8-A8.
- Jorgensen, S. B., Honeyman, J., Oakhill, J. S., Fazakerley, D., Stockli, J., Kemp, B. E., et al. (2009). Oligomeric resistin impairs insulin and AICAR-stimulated glucose uptake in mouse skeletal muscle by inhibiting GLUT4 translocation. *American Journal of Physiology-Endocrinology and Metabolism*, 297(1), E57-E66.
- Jorgensen, S. B., O'Neill, H. M., Hewitt, K., Kemp, B. E., & Steinberg, G. R. (2009). Reduced AMP-activated protein kinase activity in mouse skeletal muscle does not exacerbate the development of insulin resistance with obesity. *Diabetologia*, 52(11), 2395-2404.
- Jost, P. J., Grabow, S., Gray, D., McKenzie, M. D., Nachbur, U., Huang, D. C. S., et al. (2009). XIAP discriminates between type I and type II FAS-induced apoptosis. *Nature*, 460(7258), 1035-U1128.
- Kartsogiannis, V., Sims, N. A., Quinn, J. M. W., Ly, C., Cipetic, M., Poulton, I. J., et al. (2009). Osteoclast Inhibitory Lectin (OCLL), an immune cell product that is required for normal bone physiology in vivo. *Bone*, 44, 379.
- Kay, T. W. H., Krishnamurthy, B., Brodnicki, T. C., & Mannering, S. I. (2009). Insulin teaches a new lesson in tolerance. *Embo Journal*, 28(18), 2687-2688.

Publications

- Khatri, A., Potts, J., Martin, T. J., & Gardella, T. (2009). CHEMICAL SYNTHESIS OF FULL-LENGTH PARATHYROID HORMONE-RELATED PROTEIN-(1-141). *Biopolymers*, 92(4), 370-370.
- Kim, K. H., Sleat, D. E., Bernard, O., & Lobel, P. (2009). Genetic modulation of apoptotic pathways fails to alter disease course in tripeptidyl-peptidase 1 deficient mice. *Neuroscience Letters*, 453(1), 27-30.
- Kok, W. M., Scanlon, D. B., Karas, J. A., Miles, L. A., Tew, D. J., Parker, M. W., et al. (2009). Solid-phase synthesis of homodimeric peptides: preparation of covalently-linked dimers of amyloid beta peptide. *Chemical Communications*(41), 6228-6230.
- Labrinidis, A., Diamond, P., Martin, S., Hay, S., Liapis, V., Zinonos, I., et al. (2009). Apo2L/TRAIL Inhibits Tumor Growth and Bone Destruction in a Murine Model of Multiple Myeloma. *Clinical Cancer Research*, 15(6), 1998-2009.
- Lessard, S. J., Rivas, D. A., Chen, Z. P., van Denderen, B. J., Watt, M. J., Koch, L. G., et al. (2009). Impaired Skeletal Muscle beta-Adrenergic Activation and Lipolysis Are Associated with Whole-Body Insulin Resistance in Rats Bred for Low Intrinsic Exercise Capacity. *Endocrinology*, 150(11), 4883-4891.
- Levesque, J. P., Raggatt, L. J., Pettit, A. R., Sims, N. A., Bendall, L. J., Helwani, F., et al. (2009). Endosteal macrophages maintain the hematopoietic stem cell (hsc) niche and participate in hsc mobilization induced by g-csf or chemotherapy. *Experimental Hematology*, 37(9), S31-S31.
- Little, C. B., Barai, A., Burkhardt, D., Smith, S. M., Fosang, A. J., Werb, Z., et al. (2009). Matrix Metalloproteinase 13-Deficient Mice Are Resistant to Osteoarthritic Cartilage Erosion but Not Chondrocyte Hypertrophy or Osteophyte Development. *Arthritis and Rheumatism*, 60(12), 3723-3733.
- Loudovaris, T., Mariana, L., Jhala, G., Sanders, N., & Kay, T. W. H. (2009). Pre-implantation of cell encapsulation devices allows for greater survival of transplanted cells. *Xenotransplantation*, 16(5), 407-407.
- Loudovaris, T., Mariana, L., Williams, L., Patel, A., Gunton, J., Thomas, H., et al. (2009). Comparison of Human islet isolations with or without the use of Desferrioxamine (DFO). *Xenotransplantation*, 16(5), 419-419.
- Mannering, S. I., Pang, S. H., Williamson, N. A., Naselli, G., Reynolds, E. C., O'Brien-Simpson, N. M., et al. (2009). The A-chain of insulin is a hot-spot for CD4(+) T cell epitopes in human type 1 diabetes. *Clinical and Experimental Immunology*, 156(2), 226-231.
- Mariana, L., Loudovaris, T., Jhala, G., Krishnamurthy, B., Sanders, N., Campbell, P., et al. (2009). Comparison of Australian donor, pancreas and preparation characteristics of transplanted and non-transplanted human islet preparations. *Xenotransplantation*, 16(5), 418-419.
- Martin, T. (2009). Uncoupling anabolism from bone resorption. *Bone*, 44(2), S203-S203.
- Martin, T. J., Gooi, J. H., & Sims, N. A. (2009). Molecular Mechanisms in Coupling of Bone Formation to Resorption. *Critical Reviews in Eukaryotic Gene Expression*, 19(1), 73-88.
- Martin, T. J., Potts, J., Raisz, L., & Zaidi, M. (2009). Iain MacIntyre 1924-2008 IN MEMORIAM. *Journal of Bone and Mineral Research*, 24(1), 1-2.
- Martin, T. J., & Raisz, L. G. (2009). How basic science informed the Delmas clinical approach. *Osteoporosis International*, 20, 245-246.
- Martin, T. J. O. (2009). Advances in understanding the molecular basis of bone remodelling: Past, present and future. *Bone*, 44, 001.
- McGregor, N. E., Walker, E. C., Pompolo, S., Poulton, I. J., Martin, T. J., & Sims, N. A. (2009). CNTF regulates mineralisation and plays critical sex-specific roles in bone formation. *Bone*, 44, 029.
- McKinstry, W. J., Polekhina, G., Diefenbach-Jagger, H., Ho, P. W. M., Sato, K., Onuma, E., et al. (2009). Structural Basis for Antibody Discrimination between Two Hormones That Recognize the Parathyroid Hormone Receptor. *Journal of Biological Chemistry*, 284(23), 15557-15563.
- McKinstry, W. J., Polekhina, G., Diefenbach-Jagger, H., Sato, K., Onuma, E., Gillespie, M. T., et al. (2009). Crystallization of the receptor-binding domain of parathyroid hormone-related protein in complex with a neutralizing monoclonal antibody Fab fragment. *Acta Crystallographica Section F-Structural Biology and Crystallization Communications*, 65, 336-338.
- Mielke, L. A., Elkins, K. L., Wei, L., Starr, R., Tschlis, P. N., O'Shea, J. J., et al. (2009). Tumor Progression Locus 2 (Map3k8) Is Critical for Host Defense against *Listeria monocytogenes* and IL-1 beta Production. *Journal of Immunology*, 183(12), 7984-7993.
- Milat, F., & Ng, K. W. (2009). Is Wnt signalling the final common pathway leading to bone formation? *Molecular and Cellular Endocrinology*, 310(1-2), 52-62.
- Mollica, J. P., Oakhill, J. S., Lamb, G. D., & Murphy, R. M. (2009). Are genuine changes in protein expression being overlooked? Reassessing Western blotting. *Analytical Biochemistry*, 386(2), 270-275.
- Ng, K. W., & Martin, T. J. (2009). New functions for old hormones: Bone as an endocrine organ. *Molecular and Cellular Endocrinology*, 310(1-2), 1-2.
- Oakhill, J. S., Scott, J. W., & Kemp, B. E. (2009). Structure and function of AMP-activated protein kinase. *Acta Physiologica*, 196(1), 3-14.
- Onan, D., Allan, E. H., Quinn, J. M. W., Gooi, J. H., Pompolo, S., Sims, N. A., et al. (2009). The Chemokine Cxcl1 Is a Novel Target Gene of Parathyroid Hormone (PTH)/PTH-Related Protein in Committed Osteoblasts. *Endocrinology*, 150(5), 2244-2253.
- Pettit, A. R., Sims, N. A., Winkler, I. G., Alexander, K. A., Helwani, F., Raggatt, L. J., et al. (2009). OsteoMacs maintain the endosteal hematopoietic stem cell niche and participate in mobilization. *Bone*, 44, 044.
- Peut, V., Campbell, S., Gaeguta, A., Center, R. J., Wilson, K., Alcantara, S., et al. (2009). Balancing Reversion of Cytotoxic T-Lymphocyte and Neutralizing Antibody Escape Mutations within Human Immunodeficiency Virus Type 1 Env upon Transmission. *Journal of Virology*, 83(17), 8986-8992.
- Pivonka, P., Jan, Z., Smith, D. W., Gardiner, B. S., Dunstan, C. R., Sims, N. A., et al. (2009). New insights into therapeutic drug interventions for catabolic bone diseases using an in-silico modeling approach. *Bone*, 44, 384.
- Potts, J. T., Wimalawansa, S., & Martin, T. J. (2009). Iain MacIntyre FRS (1924-2008) In Memoriam. *Bone*, 44(4), 520-521.
- Quach, J. M., Allan, E. H., Hausler, K. D., Gillespie, M. T., & Martin, T. J. (2009). Regulation of adipogenesis by Zfp467, a novel zinc-finger protein. *Bone*, 44, 039.
- Quesada-Soriano, I., Parker, L. J., Primavera, A., Casas-Solvas, J. M., Vargas-Berenguel, A., Baron, C., et al. (2009). Influence of the H-site residue 108 on human glutathione transferase P1-1 ligand binding: Structure-thermodynamic relationships and thermal stability. *Protein Science*, 18(12), 2454-2470.
- Quinn, J. M. W., & Saleh, H. (2009). Modulation of osteoclast function in bone by the immune system. *Molecular and Cellular Endocrinology*, 310(1-2), 40-51.
- Quinn, J. M. W., Tam, S., Sims, N. A., Saleh, H., McGregor, N. E., Poulton, I. J., et al. (2009). Mice lacking AMP-activated kinase (AMPK) subunits beta 1 or beta 2 have low bone mass, while AICAR acts AMPK-independently to increase osteoclast formation. *Bone*, 44, 385.
- Robb, L., Glaser, S., Hu, Y., Smyth, G. K., & Izon, D. (2009). Leukaemic transformation in murine aml induced by overexpression of the MIXL1 homeobox gene. *Experimental Hematology*, 37(9), S16-S16.
- Romas, E. (2009). Clinical applications of RANK-ligand inhibition. *Internal Medicine Journal*, 39(2), 110-116.
- Saleh, H., Quinn, J. M. W., Martin, T., & Gillespie, M. T. (2009). Osteoblast IL-33 mRNA expression is regulated by PTH, and IL-33 treatment causes both increased osteoblastic matrix mineralisation and reduced osteoclast formation in vitro. *Bone*, 44, 025.
- Scott, J. W., Oakhill, J. S., & van Denderen, B. J. W. (2009). AMPK/SNF1 structure: a menage a trois of energy-sensing. *Frontiers in Bioscience*, 14, 596-610.
- Sims, N. A. (2009a). Cytokines that signal through gp130 and their roles in bone biology. *Bone*, 44, 016.
- Sims, N. A. (2009b). gp130 signaling in bone cell biology: Multiple roles revealed by analysis of genetically altered mice. *Molecular and Cellular Endocrinology*, 310(1-2), 30-39.
- Sondergaard, B., Madsen, S. H., Bay-Jensen, A., Christensen, T., Christiansen, C., Schultz, N., et al. (2009). Parathyroid hormone exposure to human articular osteoarthritic chondrocytes results in collagen and proteoglycan synthesis: May parathyroid hormone be a possible anabolic treatment opportunity for osteoarthritis? *Bone*, 44(2), S254-S254.
- Starr, R., Fuchsberger, M., Lau, L. S., Uldrich, A. P., Goradia, A., Willson, T. A., et al. (2009). SOCS-1 Binding to Tyrosine 441 of IFN-gamma Receptor Subunit 1 Contributes to the Attenuation of IFN-gamma Signaling In Vivo. *Journal of Immunology*, 183(7), 4537-4544.
- Steinberg, G. R. (2009). Role of the AMP-activated protein kinase in regulating fatty acid metabolism during exercise. *Applied Physiology Nutrition and Metabolism-Physiologie Appliquee Nutrition Et Metabolisme*, 34(3), 315-322.
- Steinberg, G. R., & Kemp, B. E. (2009). AMPK in Health and Disease. *Physiological Reviews*, 89(3), 1025-1078.
- Steinberg, G. R., Watt, M. J., Ernst, M., Birnbaum, M. J., Kemp, B. E., & Jorgensen, S. B. (2009). Ciliary Neurotrophic Factor Stimulates Muscle Glucose Uptake by a PI3-Kinase-Dependent Pathway That Is Impaired With Obesity. *Diabetes*, 58(4), 829-839.
- Steinberg, G. R., Watt, M. J., & Febbraio, M. A. (2009). Cytokine regulation of AMPK signalling. *Frontiers in Bioscience*, 14, 1902-1916.

Publications

- Thomas, H. E., & Biden, T. J. (2009). Bad News for beta-Cell Apoptosis. *Diabetes*, 58(8), 1725-1727.
- Thomas, H. E., Graham, K. L., Angstetra, E., McKenzie, M. D., Dudek, N. L., & Kay, T. W. (2009). Interferon signalling in pancreatic beta cells. *Frontiers in Bioscience*, 14, 644-656.
- Thomas, H. E., McKenzie, M. D., Angstetra, E., Campbell, P. D., & Kay, T. W. (2009). Beta cell apoptosis in diabetes. *Apoptosis*, 14(12), 1389-1404.
- Tomaskovic-Crook, E., Thompson, E. W., & Thiery, J. P. (2009). Epithelial to mesenchymal transition and breast cancer. *Breast Cancer Research*, 11(6).
- Traven, A., Beilharz, T. H., Lo, T. L., Lueder, F., Preiss, T., & Heierhorst, J. (2009). The Ccr4-Pop2-NOT mRNA Deadenylation Contributes to Septin Organization in *Saccharomyces cerevisiae*. *Genetics*, 182(4), 955-966.
- Turpin, S. M., Ryall, J. G., Southgate, R., Darby, I., Hevener, A. L., Febbraio, M. A., et al. (2009). Examination of 'lipotoxicity' in skeletal muscle of high-fat fed and ob/ob mice. *Journal of Physiology-London*, 587(7), 1593-1605.
- Van Sinderen, M. L., Chow, J., Steinberg, G., Jorgensen, S. B., Honeyman, J., Simpson, E. R., et al. (2009). Role of sex hormones in insulin resistance – a lesson from the Aromatase Knockout (ArKO) mouse. *Diabetologia*, 52, 615.
- Veldhuis, N. A., Valova, V. A., Gaeth, A. P., Palstra, N., Hannan, K. M., Michell, B. J., et al. (2009). Phosphorylation regulates copper-responsive trafficking of the Menkes copper transporting P-type ATPase. *International Journal of Biochemistry & Cell Biology*, 41(12), 2403-2412.
- Verhagen, A. M., Wallace, M. E., Goradia, A., Jones, S. A., Croom, H. A., Metcalf, D., et al. (2009). A Kinase-Dead Allele of Lyn Attenuates Autoimmune Disease Normally Associated with Lyn Deficiency. *Journal of Immunology*, 182(4), 2020-2029.
- Voss, J. E., Scally, S. W., Taylor, N. L., Dogovski, C., Alderton, M. R., Hutton, C. A., et al. (2009). Expression, purification, crystallization and preliminary X-ray diffraction analysis of dihydrodipicolinate synthase from *Bacillus anthracis* in the presence of pyruvate. *Acta Crystallographica Section F-Structural Biology and Crystallization Communications*, 65, 188-191.
- Walker, E. C., McGregor, N. E., Poulton, I. J., Solano, M., Zhang, J., Nicola, N. A., et al. (2009). Murine Oncostatin M (mOSM) regulates osteoblastic genes through a novel receptor. *Bone*, 44, 043.
- Walsh, N. C., Reinwald, S., Manning, C. A., Condon, K. W., Iwata, K., Burr, D. B., et al. (2009). Osteoblast Function Is Compromised at Sites of Focal Bone Erosion in Inflammatory Arthritis. *Journal of Bone and Mineral Research*, 24(9), 1572-1585.
- Whyte, L., Ryberg, E., Sims, N. A., Ridge, S., Mackie, K., Greasley, P., et al. (2009). GPR55: A novel cannabinoid receptor involved in the regulation of osteoclast function and bone mass. *Bone*, 44, 391.
- Whyte, L. S., Ryberg, E., Sims, N. A., Ridge, S. A., Mackie, K., Greasley, P. J., et al. (2009). The putative cannabinoid receptor GPR55 affects osteoclast function in vitro and bone mass in vivo. *Proceedings of the National Academy of Sciences of the United States of America*, 106(38), 16511-16516.
- Wilkinson-Berka, J. L., & Campbell, D. J. (2009). (Pro)renin Receptor: A Treatment Target for Diabetic Retinopathy? *Diabetes*, 58(7), 1485-1487.
- Zhan, Y. F., Davey, G. M., Graham, K. L., Kiu, H., Dudek, N. L., Kay, T. W. H., et al. (2009). SOCS1 negatively regulates the production of Foxp3(+) CD4(+) T-cells in the thymus. *Immunology and Cell Biology*, 87(6), 473-480.

SVI Seminar Program

Mark McKenzie

SVI, Final PhD Seminar
"The molecular pathways of pancreatic beta cell apoptosis"

Dr John Silke

Department of Biochemistry, La Trobe University
"RINGing in the changes, new insights into the regulation of TNF α – R1 signaling"

A/Prof Patrick Tan

Genome Institute of Singapore
"Genomic approaches to dissecting cancer progression"

Dr Kaylene Simpson

Peter MacCallum Cancer Institute
"siRNA and shRNA high throughput screening approaches to functional genomic studies"

Dr Rong Li

SVI, Cytoskeleton and Cancer Unit
"Inhibition of cancer cell invasion by LIMK inhibitors"

Prof Warren Alexander

WEHI
"Genetic dissection of haematopoiesis"

Dr Christa Maes

Katholieke Universiteit, Leuven, Belgium
"Quantity matters: Altering VEGF levels in mice profoundly impacts on bone health"

Prof Christina Mitchell

Head, School of Biomedical Sciences, Faculty of Medicine, Monash University
"Role of FHL1 in human myopathy"

Dr Andrew Deans

Cancer Research UK, London Research Institute Mill Hill
"FANCM links multiple DNA-repair defective cancer syndromes"

A/Prof. Ygal Haupt

Peter MacCallum Cancer Centre
"Regulation of the p53-PML tumour suppression circuit"

Prof Olaf Georg Issinger

Syddansk University, Institute for Biochemistry & Molecular Biology, Odense, Denmark
"Protein kinase CK2 as a druggable target"

Alicia Arnott

NRL, Final PhD Seminar
"Control of HIV-1 replication after early aggressive antiretroviral therapy"

Razan Wafai

Department of Surgery, St. Vincent's Hospital, Final PhD Seminar
"The Integrin/ILK axis in breast cancer EMT"

A/Prof Ricky Johnstone

Cancer Immunology Program, Peter MacCallum Cancer Institute
"Pre-clinical development of novel anti-cancer therapies using tractable mouse models"

Sarah Turpin

Department of Physiology, Monash

University, Final PhD Seminar
"Metabolic perturbations due to lipid oversupply in non-adipose tissues"

Dr Emma Baker

SVI, Stem Cell Regulation Unit
"Epigenetics: From diabetes and multidrug resistance to osteoblasts and osteosarcoma"

Dr Ian Smyth

Cutaneous Developmental Biology Lab, Departments of Biochemistry & Molecular Biology & Anatomy Developmental Biology, Monash University

"The skin you're in: using mouse genetics to understand epidermal development"

Dr Mike Cahill

School of Biomedical Sciences, Charles Sturt University
"Towards the role/s of the putative membrane steroid receptor PGRMC1 in breast cancer"

Nirupa Sachithanandan

SVI, Immunology and Diabetes Unit, Final PhD Seminar
"Inflammation, SOCS proteins and insulin resistance"

Dr Tom Brodnicki

SVI, Immunology and Diabetes Unit
"Dissecting genetic susceptibility to infection and autoimmunity"

Dr Geraldine O'Neill

Oncology Research Unit, The Children's Hospital, Westmead
"The machinery of cell migration in invasion and metastasis"

Prof John Bateman

Skeletal Biology & Disease, Murdoch Children's Research Institute
"ER stress and musculoskeletal disease: a new molecular mechanism with therapeutic possibilities"

Dr Natalie Sims

SVI, Bone Cell Biology & Disease Unit
"Oncostatin M: new pathways to improve bone health"

A/Prof Marie Bogoyevitch

Department of Biochemistry & Molecular Biology, University of Melbourne
"c-Jun N-terminal Kinases (JNKs) – Critical regulators of stress-activated and cytokine signalling events"

Prof Paul Dieppe

University of Oxford
"The crucial role of bone in the pathogenesis of both osteoarthritis and of joint pain"

Dr Louise Purton

SVI, Stem Cell Regulation Unit
"Blood cell Production: Why your Daily Dose of Vitamin A is important for you"

Dr Stuart Pitson

Division of Human Immunology, Institute of Medical & Veterinary Science, Adelaide
"Sphingosine kinase and cancer:

multiple pathways to regulate a multi-potent kinase"

Prof Roger Daly

Cancer Research Program, Garvan Institute of Medical Research
"Tyrosine kinase signalling networks in human cancer"

Iris Tan

SVI, Immunology and Diabetes Unit, Final PhD Seminar
"Characterization of Iddll: a mouse diabetes susceptibility locus"

Prof Michael Cowley

Department of Physiology, Monash Obesity & Diabetes Institute, Monash University
"Nutrient sensing in the brain: The root of obesity and diabetes?"

A/Prof Suresh Alahari

Department of Biochemistry & Molecular Biology, Stanley S. Scott Cancer Center, LLSU Health Science Center, New Orleans, USA

"Nischarin suppresses breast cancer progression and metastasis by affecting alpha5 integrin-Rac-Cyclin D1 signalling cascade"

Dr Nicole Walsh

SVI, Bone Cell Biology & Disease Unit
"Regulation of Bone Remodelling in Arthritis"

Dr Margaret Hibbs

Signal Transduction Laboratory, Ludwig Institute for Cancer Research
"Inhibitory signalling pathways in antibody-mediated autoimmune disease"

Prof Bostjan Kobe

School of Chemistry & Molecular Biosciences, University of Queensland
"Bridging structure and proteomics: proteomics and electron microscopy survey of assemblies in macrophage cytoplasm"

Organisational Chart



SVI is an independent medical research institute conducting medical research into the cause, prevention and treatment of diseases that are common and have serious effects on health.

Diseases studied at SVI:

- Type 1 and 2 diabetes
- Obesity and heart disease
- Bone diseases such as arthritis and osteoporosis
- Cancer and the spread of cancer
- Infectious diseases such as Hepatitis and AIDS
- Alzheimer's and other neurological disorders

SVI is affiliated with St. Vincent's Health and the University of Melbourne and is a member institution of St Vincent's Health, Australia.

SVI hosts the National Serology Reference Laboratory and is a member of Bio 21; the Victorian Breast Cancer Research Consortium; St. Vincent's Diabetes Centre of Excellence; the Association of Australian Medical Research Institutes; and is accredited by the NHMRC. Through these links SVI provides a valuable service to clinical medicine, graduate education and community welfare.

SVI staff and students

Patron

Sir Gustav JV Nossal, AC CBE
MBBS BSc(Med) Syd PhD Melb
HonLLD Mon HonLLD Melb
HonMD Mainz HonMD Ncl
HonMD Leeds HonMD UWA
HonDSc Syd HonDSc Old HonDSc
ANU HonDSc UNSW HonDSc LaT
HonDSc McMaster HonDSc Oxon
FRCP FRACP FRCPA FRACOG
(Hon) FRCPATH FRACGP FRSE
FTSE FAA FRS

St Vincent's Institute Staff

Director

Thomas WH Kay, BMedSci MBBS
PhD Melb FRACP FRCPA;
Professor (Medicine), The
University of Melbourne

Associate Director

Michael W Parker, BSc(Hons) ANU
DPhil Oxon; ARC Federation
Fellow; NHMRC Honorary Fellow;
Professorial Fellow (Biochemistry
and Molecular Biology and Bio21
Institute), The University of
Melbourne

John Holt Fellow

T John Martin, AO MD DSc Melb
Hon MD Sheffield FRACP FRCPA
FAA FRS; Emeritus Professor
(Medicine), The University of
Melbourne

Pehr Edman Fellow

Bruce E Kemp, BAgSci(Hons) Adel
PhD Flinders FAA, FAAA, FRS;
NHMRC Research Fellow;
Professor (Medicine), The
University of Melbourne

Research Faculty

Janette Allison, BSc(Hons) PhD
London

Ora Bernard, MSc TelAviv; PhD
McGill; MPS Mon; Associate
Professor (Medicine), The
University of Melbourne

Tom Brodnicki, BSc Minnesota
USA, PhD Illinois USA (from 7/09)

Duncan Campbell, BMedSci
MBBS; PhD Grad Dip Epid Biostat
Melb; FRACP FCSANZ; Associate
Professor (Medicine), The
University of Melbourne

Jörg Heierhorst, MD Hamburg;
NHMRC Senior Research Fellow;
Associate Professor (Medicine),
The University of Melbourne

David Izon, PhD Mon; Senior
Fellow (Medicine), The University
of Melbourne

Stuart Mannering, BSc Canterbury
NZ; DipGrad MSc PhD Dunedin
NZ

Galina Polekhina, MSc(Hons)

Moscow State PhD Aarhus;

NHMRC RD Wright Fellow, Senior
Fellow (Medicine), The University
of Melbourne (to 11/09)

Louise Purton, B.Sc(Hons), PhD
Melb; NHMRC CDA2 Fellow,
Senior Fellow (Medicine), The
University of Melbourne

Boris Sarcevic, BSc(Hons) LaT
PhD Melb; Senior Fellow
(Medicine), The University of
Melbourne

Natalie Sims, BSc(Hons) PhD Adel;
NHMRC Senior Research Fellow;
Senior Fellow (Medicine), The

University of Melbourne

Robyn Starr, BSc(Hons) Adel PhD
Maryland; Viertel Senior Medical
Research Fellow; Honorary
NHMRC Research Fellow;
Associate Professor (Medicine),
The University of Melbourne (to
3/09)

Gregory Steinberg, BSc PhD Uni
Guelph; NHMRC Senior Research
Fellow; Senior Fellow (Medicine),
The University of Melbourne (to
7/09)

Helen Thomas, BSc(Hons) UWA
PhD Melb; NHMRC RD Wright
Fellow; Senior Fellow (Medicine),
The University of Melbourne

Erik Thompson, BSc(Hons) PhD
Griffith; Associate Professor
(Surgery), The University of
Melbourne

Carl Walkley, BPharm(Hons)
UniSA, PhD Melb; Leukaemia and
Lymphoma Society Special Fellow;
Fellow (Medicine), The University
of Melbourne

Mark Waltham, BSc(Hons) PhD
Old; Senior Fellow (Surgery), The
University of Melbourne

Research Scientists

Elizabeth Allan, BSc Otago PhD
Melb; Fellow (Medicine), The
University of Melbourne

Juliana Antonipillai, BSc(Hons)
LaT, PhD LaT

Maria Askmyr, BBiomedSc(Hons),
PhD Sweden

Emma Baker BSc (Hons) Flinders
SA, PhD Melb

Brett Bennetts, BSc(Hons) PhD
Adel

Zhiping Chen, BSc Shanghai PhD
ULP France

Matthew Chung, MSc(Hons) PhD
Auckland

Lindus Conlan, BSc(Hons) PhD
Melb (from 4/09)

Blessing Crimeen-Irwin,
BSc(Hons) Melb

Andrew Deans, BSc(Hons) PhD
Melb NHMRC CJ Martin Fellow
(to 9/09)

Alessandro Fazio, MSc Turin Italy,
PhD Denmark (from 10/09)

Susanne Feil, BSc MSc Stockholm
PhD Melb; NHMRC Industry
Fellow; Honorary Senior Fellow
(Bio21 Molecular Science and
Biotechnology Institute)

Sandra Galic, BSc (Hons)
Eberhard-Karls Uni PhD Mon
Jonathan Gooi, PhD Melb (from
5/09)

Michael Gorman, BSc(Hons)
Liverpool PhD London

Kate Graham, BSc(Hons) PhD
Melb; JDRF Postdoctoral Fellow

Andrew Hammet, BSc(Hons) PhD
Melb; NHMRC CJ Martin Fellow
(to 10/09)

Jessica Holien, BSc (Hons) PhD
Melb; Grad Cert Comm Research
Mon (from 3/09)

Honor Hugo, BSc(Hons) PhD Melb:
NBCF Fellow

Mugdha Joglekar, MSc PhD
Hyderabad India (from 07/09)

Max Joffe, BSc(Agric) Pretoria,
MSc & PhD Sth African Inst Tech

& Uni of the Witswatersrand SA
(from 9/09)

Frosa Katsis, BAppSc IIC PIT
Jack King-Scott, BSc(Hons)
Queensland PhD Dundee (to 9/09)
Balasubramanian Krishnamurthy,
MBBS Bangalore MD Agra DM
Lucknow

Benoit Le Goff, MBBS Paris,
France; M Biology, Biotech &
Therapeutic Research, Nantes
France; Fellow Rheumatology,
Nantes France (from 10/09)

Rong Li, PhD Xian Medical
Naomi Ling, BSc, MSc Uni
Canterbury UK, PhD Melb (from
6/09)

Dean Littler, Bsc(Hons); PhD Uni
NSW (from 11/09)

Thomas Loudovaris, BSc(Hons)
PhD Melb

Mark McKenzie, PhD Melb (from
6/09)

Caroline McNeese, BSc (Hons) PhD
Melb; NHMRC CJ Martin Fellow
Belinda Michell, BSc(Hons) MBA
Mon PhD Melb; Senior Fellow
(Medicine), The University of
Melbourne

Luke Miles, BSc(Hons) PhD LaT;
Honorary Senior Fellow (Bio21
Molecular Science and
Biotechnology Institute)

Zia Mollah, MBBS Bangladesh
PhD Japan (from 11/08)

Tracy Nero, BSc(Hons) PhD Melb
(from 11/09)

Jonathon Oakhill, BSc PhD King's
College London

Sueli Pompolo, PhD Sao Paulo
Nirupa Sachithanandan, PhD
Melb; MBBS Mon FRACP (from
10/09)

Martin Sadowski, Diploma
Giessen PhD Basel (to 10/09)

John Scott, BSc Glasgow PhD
Dundee

Manisha Shah, MSc PhD India;
Komen Fellow

Sofie Singbrant-Soderberg, MA
Biomed Chem; PhD Lund Sweden
(from 7/09)

Monique Smeets, PhD Vrije
Universiteit Amsterdam

Rohan Steel, BSc(Hon) PhD Melb

Jenny Trinh, BSc(Hons) Mon, PhD
Melb

Manisha Shah, MSc PhD India
Anne Verhagen, BSc(Hons) Mon
PhD Melb (to 3/09)

Bryce van Denderen, BSc(Hons)
PhD Melb; Senior Fellow
(Medicine), The University of
Melbourne

Nicole Walsh, Bsc(Hons) PhD
Brisbane Qu (from 2/09)

Peter Walsh, BSc(Hons) LaT PhD
Melb (to 1/09)

Jerome Wielens, BAppSci (Hons)
Swinburne; PhD Mon (from 9/09)

Sheena Wee, BSc(Hons) PhD Melb
(to 5/09)

Yuxing Zhao, BSc Beijing; PhD
Duke Uni USA (from 5/09)

Jiong Zhou, BSc(Hons) Swinburne,
PhD Mon (from 5/09)

Visiting Scientists

Olaf-Geog Issinger, Professor
Biomedical Research Group,
Syddansk University, Denmark
(2/09 to 7/09)

Research Assistants

David Ascher, BSc(Hons) Old
Rochelle Ayala-Perez, BSc Melb
Tony Blick, BSc(Hons) Mon
Meryn Chalmers, BSc(Hons) Melb
Rochna Chand, BSc (hons) Melb
(from 10/09)
Jonathan Chee, BBiomedSc(Hons)
Melb

Sheng Chen, B Med China,
BSc(Hons) Melb

Gabriela Crespi, Dip Biol Nat Univ
Cordoba

Caroline Dobrzalak, BA/BSc Melb
(to 6/09)

Lorraine Elkerbout, Dip Animal
Tech, Canberra (from 4/09)

Sarah Emmett, BSc(Hons) Mon

Ankita Goradia, BSc MSc Mumbai

Nancy Hancock, BA California
State Fresno MA San Francisco
State

Jean Hendy, BAppl Sc RMIT (from
3/09)

Kimberley Hewitt, BSc ANU

Nicolas Hoch, Dip Pharm Rio
Grande do Sul (to 3/09)

Jane Honeyman, BBiomedSci BSc
(Hons) Melb

Dexing Huang, BSc Nanjing China

Sean Ivory, BSc(Hons) Melb (from
11/09)

Gaurang Jhala, BSc MSc Pune

Tanja Jovic, BSc(Hons) Melb (from
5/09)

Sabine Jurado MSc Nice (to 3/09)

Pece Kocovski BSc(Hons) Melb
(from 11/09)

Cameron Kos, BSc Mon

Xianning Lai BSc (Hons) Melb (to
3/09)

Sara Lawrence, BSc Bath PhD
London

Charlie MacKenzie-Kludas,
BSc(Hons) Mon (from 7/09)

Leanne Mackin, BSc Mon (from
7/09)

Lina Mariana, BSc(Hons) Melb

Narelle McGregor,
AssocDipAppSci VUT, BSc LaT

Hayley Moon, BSc(Hons) Deakin

Hooi-Ling Ng, BSc(Hons) Melb (to
1/09)

Lorien Parker, BSc(Hons) Melb (to
3/09)

Ingrid Poulton, DipHealthMLS
RMIT, BMed&Appl Biotech

Charles Sturt Uni

Megan Russell, BSc (Hons) Melb

Natalie Sanders, BSc(Hons) Melb

Annabel Southey, BSc Melb

Kher Shing Tan, BAppSci RMIT (to
9/09)

Julian Tang, Dip Biotech Temasek
Polytechnic BSc(Hons) Melb

Nora Tennis, BSc Mon

GradDipMedLabSc Uni SA

Sarah Vickery (to 5/09)

Emma Walker, BSc(Hons) Deakin

SVI staff and students

Cardiac Technologist

Aileen Lim, Dip Cardiac Tech Singapore; Dip Nursing Singapore

Chief Technical Officers

Virginia Leopold, BSc(Hons) LaT
Patricia Ho, BSc Mon

Laboratory Co-Ordinators

Stacey Fynch, DipAppSci Animal Tech NMIT

Kirby White, BSc(Hons) Deakin

Laboratory Assistants

Alex Avery (from 11/09)
Duncan Campbell (from 10/09)
Francoise Campbell (from 6/09)
Sally Emimi
Olga Luft (from 8/09)
Emma Thorburn
Michael Jovanovic (to 10/09)

Clinical Research Fellow

David Prior, BMedSc(Hons)
MBBS(Hons) PhD FRACP DDU
FCSANZ; Cardiologist, St
Vincent's Health; Senior Lecturer,
University of Melbourne; Clinical
Research Fellow, SVI

Senior Principal Research Associates

Peter Choong, MBBS MD Melb
FRACS FAORTHA; Professor of
Orthopaedics, St Vincent's
Hospital and The University of
Melbourne

Anthony d'Apice, MBBS MD Syd
MRACP FRACP FRCPA; Professor/
Director of Clinical Immunology
and the Immunology Research
Centre, St Vincent's Hospital and
The University of Melbourne
Kong Wah Ng, MBBS (Hons) Mon
MD Melb FRACP FRCP Edin;
Associate Professor (Medicine),
The University of Melbourne

Principal Research Associates

Michael Henderson, MBBS
FRACS, Associate Professor
(Surgery), St. Vincent's Hospital
and The University of Melbourne
John Slavin, MBBS FRACPA;
Department of Pathology, St.
Vincent's Hospital
Darren Kelly, PhD, Department of
Medicine, St. Vincent's Hospital
and The University of Melbourne
Craig Morton, BSc(Hons) PhD
Melb; Principal Research Scientist,
Biota Holdings Limited; Senior
Lecturer (Biochemistry and
Molecular Biology), Mon
Gregory Steinberg, BSc PhD Uni
Guelph; Snr Fellow (Medicine),
The University of Melbourne, Snr
Fellow, McMaster Canada

Senior Associates

Lance Macaulay BSc(Hons) PhD
Mon, Princ Research Scientist
CSIRO, Snr Fellow (Medicine) St.
Vincent's Hospital and The
University of Melbourne
Harshal Nandurkar, MBBS
Bombay PhD Melb FRACP FRCPA;
Staff Haematologist, St. Vincent's
Hospital
Evange Romas, MBBS PhD Melb
Senior Lecturer (Medicine), The
University of Melbourne
Matthew Watt, BAppSci(Hons)
PhD Deakin, Mon University

Associates

Julian Adams, BSc MSc Cantab
PhD Massey
Renwick Dobson, BSc Chem &
Biochem, PhD Canterbury UK ; CR
Roper Snr Research Fellow, Melb
Sue Rogers, BSc(Hons) PhD Lond;
Department of Medicine, The
University of Melbourne

Chief Executive Officer, SVI Foundation

Robin Berry, BAg Sci Melb MEC
UNE

Commercialisation Development Manager

Anthony Mason, PhD ANU

Business Manager and Company Secretary

David Rees, BBus RMIT CPA ACIS
Grad Dip CSP

Laboratory And Technical Services Manager

David Murfitt, HNC AppBiol
Cambridge CAT

Research And Administration Manager

Anne Thorburn, BSc(Hons) PhD
Syd

Grants Manager

Anne Johnston, BSc(Hons) PhD
Melb

Grants Officer

Rachel Mudge, BSc(Hons) PhD
Melb

Development Manager

Clare Lacey

Communications Manager

Jo Crowston, BA(Hons) Sussex (to
2/09)
Anne Johnston, BSc(Hons) PhD
Melb (from 3/09)

Human Resources Manager

Helen Ritchie, BA SA Dip Bus
Melb

OH&S Coordinator

Virginia Leopold, BSc(Hons) LaT

Payroll Administrator

Bonnie LaVelle
Lisna Wirrawan Liauw (from
10/09)

Accounting Staff

Jing Zhang, AdvDipAccRMIT

Administrative Officers

Steven Boz
Beth Castles
Julie Malyon
Kathryn O'Connell
Dimitra Samaras

IT Manager

Peter Tonoli, A/Dip IT Swinburne

IT Support Officers

James Mugg, BA LaT
Christopher Ryan, BSc/BIS Melb
Jon Rhoades, BSc (Hons) BioChem
York UK; Microsoft Certified-
MCSE, MCSA, MCTS, MCITP Apple
Certified ACSF, ACSA (from 7/09)
Alex Benavides, Dip Marketing
Ecuador Brazil, Cert IV Sml Bus
Melb (until 10/09)
Irene Esquival

National Serology Reference Laboratory, Australia

Director

Elizabeth M Dax, AM MB BS Melb
PhD Mon MD Melb; ARCPA
Associate Professor (Microbiology
and Immunology), The University
of Melbourne (until 9/09)

Acting Director

Susan Best, MAppSc RMIT MBA
Melb (from 9/09)

General Manager

Susan Best, MAppSc RMIT MBA
Melb (until 9/09)

Research Coordinator

Dale McPhee, BSc(Hons) PhD
Mon; Associate Professor
(Microbiology and Immunology),
The University of Melbourne

Quality Manager

Roderick Chappel, BAgSci PhD
Melb MASM

Marketing Manager

Wayne Dimech, BAppSc RMIT
FAIMS MBA LaT

Scientists

Alicia Arnott, BSc(Hons) Deakin
(to 6/09)

Thein Thein Aye, MBBS PhD
Nihon University

Penny Buxton, BSc(Hons) Mon
Chris Chiu, BSc(Hons) Adelaide
Stirling Dick, BSc Tasmania

Cathryn Dunkley, BSc LaT
Barbara Francis, BSc Melb Grad
Dip App Sci (Health Statistics)
SUT PhD SUT

Marina Karakaltsas, BSc LaT
Sally Land, BSc (Hons) Dip Ed
Melb

Mark Lanigan, BSc Swinburne
(Hons) PhD Melb
Nilukshi Malawa Arachchi, BSc
RMIT, Dip Lab Tech Vic

Tamara McDonald, BSc LaT
Lena Panagiotopoulos, BSc LaT
Thu-Anh Pham, BAppSc, MAppSc
RMIT

Kim Richards, BSc (Hons) VU
Derya Sahin, Vet Sc Turkey, PhD
Ankara Turkey

Kathy Smeh, BSc (Hons) DipEd,
BEd MEd Melb

Robert Vinoya, BSc VU
Sandy Walker, BSc (Hons) LaT
Kim Wilson, BAppSc QIT PhD
Melb

Data Management And Website Officer

Rosanna Fahmy

Laboratory Assistant

Frank Torzillo
Kate Learmonth (fom 3/09 to
31/09)
Caterina Pizzati (from 4/09 to 6/09
& 8/09 to 11/09)

Executive Assistant

Alison Natoli

Computer Systems Manager

John Tomasov, BSc(Hons) PhD
LaT Grad Dip Comp Sc Mon

Office Manager

Louie Opasinov, BSc Dip Ed Melb

Training Coordinator / Records Administrator

Helen Hasler

Students

Postgraduate Scholars
Doctor of Philosophy
Alicia Arnott, BSc(Hons) Deakin
(to 4/09)
Michelle Ashton, BSc(Hons) Melb
(from 7/09)

Peter Campbell, BSc(Hons) LaT
Ling Yeong Chia BSc(Hons)
Murdoch, WA (from 10/09)

Jonathan Gooi, BBiomedSci(Hons)
Melb (to 5/09)

Devika Gunasinghe, BDS(Hons)
MPhil U Peradeniya

Nicholas Hoch, Dip Pharm Rio
Grande do Sul (from 3/09)

Louis Italiano, BSc(Hons) Melb
(3/09 to 10/09)

Sabine Jurado, MSc Nice (from
3/09)

Xianning Lai, BSc (Hons) Melb
(from 3/09)

Mark McKenzie, BSc(Hons) Melb
(to 6/09)

Kevin Mittelstaedt, MSc Berlin
Hayley O'Neill, BSc(Hons) Deakin
Lorien Parker, BSc(Hons) Melb (to
3/09)

Walter Pfister, BSc(Hons) Melb
Julie Quach, BAppSc(Hons) RMIT
Nirupa Sachithanandan, MBBS
Mon FRACP (to 10/09)

Alice Schofield, BAppSc(Hons)
Melb

Randy Suryadinata, BSc(Hons)
Melb

Anthony Tachtsidis, B
BiomedSc(Hons) Mon
Shanna Tam, BSc(Hons) Melb
Miralireza (Farzin) Takyar, MBBS
Iran

Sarah Turpin, B App Sci
Razan Wafai, BSc(Hons) Vic
Nancy Wang, BSc(Hons) Melb
(from 7/09)

Undergraduate Scholars

Bachelor of Science (Honours)
Daniel Andrews

Sean Ivory (from 7/09)

Pece Kocovski

Celeste Nota

Margaret Tiong

Cletus Pinto

Undergraduate Research Opportunity Program (Urop)

Eleanor Angley

Holly Brennan

Joseph Ciantar

Edward Chu (from 12/09)

Allison Irvin (from 12/09)

Ee Von Moo (from 7/09)

Lisa Sampurno

Undergraduate Students

Bachelor of Science (Third year
research placements)

Gabrielle Farries

Hilda Lau

Jake Lees

Thomas Ngor

Board Committees

SVI Audit and Finance Committee

The purpose of the Audit and Finance Committee is to assist the Board in fulfilling its responsibilities in relation to the identification of areas of significant financial risks and the monitoring of:

- adherence to the Company's Statement of Corporate Governance Principles
- maintenance of an effective and efficient internal and external audit
- management and external reporting
- effective management of financials
- compliance with laws and regulations
- business dealings, in particular related party transactions

The Committee also undertakes the role of an audit committee and provides recommendations to the Board on the appointment of the external auditors, direction of audit (without impacting on the auditor's independence) and the level of audit fees.

2009 Committee members (independent):

Ruth O'Shannassy (Chair), Anthony Burgess, Paul Holyoake, Janene Krongold and Michael McGinniss

2009 Committee members (management):

Thomas Kay

SVI Commercialisation and Intellectual Property Committee

The purpose of the Commercialisation and Intellectual Property Committee (CIP) is to ensure processes are in place for protection and commercialisation of the intellectual property assets of SVI.

In 2009, the CIP Committee oversaw SVI's participation in the Cooperative Research Centre for Cancer Therapeutics (CRC-CT). The CRC-CT, which involves many other significant Australian research institutions, was set up to commercialise basic cancer research. SVI is the core Structural Biology Group of the CRC-CT. The committee also oversaw SVI's IP out-licensing activities with various companies and reviewed SVI's Collaboration Research Agreements with academic partners.

SVI would like to thank John Sime for his guidance as Chair of SVI CIP Committee. John had held this position from the inaugural meeting in April 2006 until September 2009. Even though he has decided to stand down from the role of Chair, John continues to be a valuable member of the Committee.

2009 Committee members (external):

John Sime (Chair) until September 2009, Greg Robinson (Chair) from September 2009, Andrew Baker, Michelle Baker, Paula de Bruyn, Stephen Livesey (joined Dec 2009), and Michael McGinniss

2009 Committee members (internal):

Thomas Kay, Michael Parker, Bruce Kemp (joined Dec 09), and Tony Mason (Convenor)

Internal Committees

SVI Occupational Health and Safety Committee

The Occupational Health and Safety Committee (OH&S) meets on a fortnightly basis to deal with various health and safety operational issues at the Institute and devise policy in line with legislative and regulatory requirements.

In 2009, the Committee focussed on developing network links with OH&S committees from the other independent research institutes and using this network to benchmark our activities; this has led to closer links with other independent institutes on the SVHM campus.

Closer links with the SVHM OHS team has led to the development of a campus-wide approach to Laboratory safety now instituted in the form of the STV Laboratory Safety Committee, involving The University of Melbourne, SVI, OBI, The Bionic Ear Institute, and the hospital's laboratory departments.

2009 Committee members:

Ginny Leopold (Chair), David Murfitt, Helen Ritchie, Frosa Katsis, Thomas Loudovaris, Narelle McGregor, Kevin Mittelstaedt

SVI Equipment Committee

The SVI Equipment Committee meets monthly to coordinate equipment requirements throughout the Institute and to provide strategic advice to the Director.

The Committee aims to make effective use of scientific equipment and technologies by encouraging researchers to share resources. It administers the annual NHMRC Equipment Grant and also accepts specific, communal and non-communal equipment proposals for consideration according to guidelines. The Committee made a total of 11 applications to various philanthropic trusts and obtained funds to the value of \$166,535 from five successful applications. Orders placed in 2009 included the following purchases: Roche LightCycler 480 Thermocycler, a high throughput sampler for the BD LSRFortessa FACS machine and a G storm thermocycler.

2009 Committee members:

Michael Parker (Chair), Anne Johnston (from 06/09), David Murfitt, David Rees (to 05/09), Natalie Sims, Rohan Steel (from 07/09), Martin Sadowski (from 07/09 to 10/09), Greg Steinberg (to 06/09)





Directors' Report

Your directors present their report on the company for the financial year ended 31 December 2009.

1. Directors

The names of Directors in office at any time during or since the end of the year are:

| | |
|-----------------------|----------------------|
| Ms Susan M Alberti | Mr Jeffrey N Clifton |
| Mr Paul Holyoake | Prof Thomas WH Kay |
| Prof Jim McCluskey | Mr John MacFarlane |
| Mr Michael McGinniss | Ms Patricia O'Rourke |
| Ms Ruth A O'Shannassy | Mr G John Pizzey |
| Mr Gregory J Robinson | Ms Brenda M Shanahan |
| Mr Douglas A Wright | |

Directors listed above have been in office since the start of the financial year to the date of this report unless otherwise stated.

Mr Jeffrey N Clifton resigned from the board on 20 July 2009.

2. Company Secretary

The following person held the position of company secretary at the end of the financial year:

Mr David R Rees – Bachelor of Business, Graduate Diploma Company Secretarial Practice, Certified Practising Accountant, Chartered Secretary. Mr Rees has worked for St Vincent's Institute of Medical Research for 11 years, performing management roles. Mr Rees was appointed company secretary on 1 January 2004.

3. Principal Activity

The principal activity of the company during the financial year was medical research. There was no significant change in the nature of the company's principal activity during the financial year.

4. Operating Results

The operating surplus of the company amounted to \$1,871,286. The surplus is reinvested in the company.

5. Dividends

In accordance with the company's constitution no dividends are paid.

6. Review of Operations

St Vincent's Institute (SVI) undertakes biomedical research into common diseases of the community, including diabetes (type 1 and type 2), obesity, cardiovascular disease, bone diseases including arthritis, cancer, leukemia, and osteoporosis, Alzheimer's disease and virology.

The 2009 surplus of \$1,871,286 is well above the 2008 surplus of \$794,083. However 2008 includes an unrealised loss of \$381,880 and 2009 includes a surplus of the same value. If the unrealised loss and gain in both years is excluded from the surpluses our comparison would show a surplus of \$1,175,963 for 2008 and \$1,489,406 for 2009. Based on this adjustment, the percentage increase in the surplus from 2008 to 2009 is 26% (\$313,443), which is more reflective of what has actually occurred during 2009 (rather than a 135% increase applicable to a surplus inclusive of changes to market value of share investments).

The improvement in the Institute's surplus is due to operating income increasing by 8% and operating expenditure falling by 7%, with most of this movement occurring in research activities and donations. The Institute's and SVI Foundation's fund raising efforts were very successful this year and enabled the Institute to commit more funds to cancer research and cardiovascular clinical research. Legacies, bequests and donations increased by \$330,991.

During 2009 the market value of the institute's investment share portfolio, now \$1,978,492, recovered in value by \$463,163 (30%), which mirrors the general recovery in the share market during 2009 (ASX200 index increasing by 31%). The share portfolio represents only 12% of the Institutes total funds available for investment. The remaining 88% of funds are in cash deposits and short-term interest bearing investments. SVI has no borrowings.

Research grant income (net of fund transfers to our collaborators) grew by 11%, mainly through a collaborative partnership

Directors' Report

in a government sponsored Co-operative Research Centre and additional overseas peer reviewed research awards. Research related income represents 79% of total revenue of which 66% is competitive grants that cover government, non-government and overseas funding sources and 13% is infrastructure support. The grants received from industry are 2.5% of total income.

Expenditure in research and non-research activities (excluding depreciation and external transfer of funds) have both grown by 9% in 2009. The similar increase in expenditure is not surprising as administration and facilities services attempt to keep pace with the activities and associated requirements of the research groups.

SVI allocated \$1,231,741 to purchase new equipment in 2009, well up on last year's figure of \$489,601 and this increase was in part due to the \$500,000 received from the Potter Foundation. The Institute is heavily reliant on funding from philanthropic foundations and other donations for equipment purchases. The SVI Foundation plays a major role in fundraising through organising events and developing relationships and networks with industry, philanthropic foundations and individuals.

The Victorian and Commonwealth Governments provided \$2,763,513 in infrastructure funding, which covered 53% of our infrastructure costs, the balance being funded from non-research activities eg. interest and dividends. The government's infrastructure support contributions are calculated by applying formulae to the institute's competitive grant income, thereby linking funding allocations to grant success rates. The funds are used in accordance with the government's guidelines and include such indirect costs as administration, laboratory services, building operations, commercial development and intellectual property protection.

Any decrease in government infrastructure support would have a significant impact on the Institute's financial position because it is very difficult to raise money to cover non-research costs. Philanthropic sources really only provide funds for direct research project support and research equipment, so it means that the institute is always searching for other sources of income.

In 2009 the number of staff and students was 160 (2008 - 146). In addition SVI is the host institute for the National Serology Reference Laboratory (NSRL), providing administration and research support to the 34 NSRL staff.

7. Significant changes in state of affairs

No significant changes in the state of affairs of the company occurred during the financial year.

8. After balance date events

No matters or circumstances have arisen since the end of the financial year which significantly affected or may significantly affect the operations of the company, the results of those operations, or the state of affairs of the company in future financial years.

9. Future developments, prospects and business strategies

The Institute is aiming, with St Vincent's Health Melbourne and other campus research institutes, to establish The Aikenhead Centre for Medical Discovery using a model of integrated medical research and clinical care. The Centre will bring together tissue engineering, bionic technology and material sciences in a clinical environment to focus on regenerative and restorative medicine. The Institute and its partners are looking to redevelop the St Vincent's site at the corner of Victoria Pde and Nicholson St Fitzroy, Melbourne and is currently making representations to government. The timing for this project is 2014/15.

10. Environmental issues

The company operates predominantly within the medical research sector and is committed to conducting its business activities with respect for the environment while continuing to meet expectations of members, employees, customers and suppliers. During the period from 1 January 2009 to the date of this report, this company has complied with the requirements of the Environmental Protection Act.

11. Options

No options over issued shares or interests in the company were granted during or since the end of the financial year and there were no options outstanding at the date of this report.

Directors' Report

12. Meetings of directors

During the financial year, 15 meetings of directors (including committees) were held. Attendees were:

| | Directors' Meetings | | Committee Meetings | | | |
|-----------------|---------------------------|-----------------|---------------------------|-----------------|---------------------------|-----------------|
| | Number eligible to attend | Number attended | Commercialisation | | Audit & Finance | |
| | Number eligible to attend | Number attended | Number eligible to attend | Number attended | Number eligible to attend | Number attended |
| Alberti, SM | 5 | 1 | - | - | - | - |
| Clifton, JN | 2 | 1 | - | - | - | - |
| Holyoake, P | 5 | 5 | - | - | 6 | 6 |
| Kay, TWH | 5 | 5 | 4 | 4 | 6 | 4 |
| McCluskey, J | 5 | 3 | - | - | - | - |
| MacFarlane, JT | 5 | 5 | - | - | - | - |
| McGinniss, M | 5 | 4 | 4 | 4 | 6 | 4 |
| O'Rourke, P | 5 | 3 | - | - | - | - |
| O'Shannassy, RA | 5 | 5 | - | - | 6 | 6 |
| Pizzey, GJ | 5 | 4 | - | - | - | - |
| Robinson, GJ | 5 | 3 | 4 | 4 | - | - |
| Shanahan, BM | 5 | 4 | - | - | - | - |
| Wright, DA | 5 | 4 | - | - | - | - |

13. Directors' and auditors' indemnification

The company has not, during or since the financial year, in respect of any person who is or has been an officer or auditor of the company or a related body corporate:

- indemnified or made any relevant agreement for indemnifying against a liability incurred as an officer, including costs and expenses in successfully defending legal proceedings;
- paid or agreed to pay a premium in respect of a contract insuring against a liability incurred as an officer for the costs or expenses to defend legal proceedings; with the exception of the following matters.

During or since the financial year the company has paid premiums to insure each of the directors against liabilities for costs and expenses incurred by them in defending any legal proceedings arising out of their conduct while acting in the capacity of director of the company, other than conduct involving a wilful breach of duty in relation to the company.

14. Proceedings on Behalf of Company

No person has applied for leave of Court to bring proceedings on behalf of the company or intervene in any proceedings to which the company is a party for the purpose of taking responsibility on behalf of the company for all or any part of these proceedings.

Directors' Report

15. Auditor's Independence Declaration

The lead auditor's independence declaration for the year ended 31 December 2009 has been received and can be found on page 73 of the financial statements.

Signed in accordance with a resolution of the Board of Directors.



Director
BM Shanahan



Director
RA O'Shannassy


Dated this 15th day of March 2010, Melbourne, Australia

**AUDITOR'S INDEPENDENCE DECLARATION
UNDER SECTION 307C OF THE CORPORATIONS ACT 2001
TO THE DIRECTORS OF ST VINCENT'S INSTITUTE OF MEDICAL RESEARCH**

I declare that, to the best of my knowledge and belief, during the year ended 31 December 2009 there have been:

- (i) no contraventions of the auditor independence requirements as set out in the Corporations Act 2001 in relation to the audit; and
- (ii) no contraventions of any applicable code of professional conduct in relation to the audit.

**WILLIAM BUCK AUDIT
(VIC) PTY LTD**
A.B.N. 59 116 151 136



AP MARKS
Director

Dated: Melbourne: 15th March 2010

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Discussion and analysis of the Financial Statements

Information on St. Vincent's Institute of Medical Research Concise Financial Report

The financial statements and disclosures in the concise financial report have been derived from the 2009 Financial Report of St. Vincent's Institute of Medical Research. A copy of the full financial report and auditors report will be sent to any member, free of charge, upon request.

The discussion and analysis is provided to assist members in understanding the concise financial report. The discussion and analysis is based on the company's financial statements and the information contained in the concise financial report has been derived from the full 2009 Financial Report of St. Vincent's Institute of Medical Research.

Income Statement

The 2009 surplus was \$1,871,286, an increase of \$1,077,203 on 2008. This surplus was derived from revenue of \$20,972,138 less expenditure of \$19,100,852.

In 2009 operating revenue through grants and donations increased by \$1,531,563 and the balance came from the unrealised gain in market value of share investments of \$381,880.

During the year the key sources of revenue were 53% from government grants, of which 40% was competitive grant funding and 13% infrastructure support. Other research grants were 26%, Legacies, bequests and donations 11%, interest and dividends 3%, other income (including contracts and royalty) 5% and unrealised gain in shares 2% of total income.

During the financial year there was an increase in research activity with a number of new groups joining the institute and as a result general research and consumable expenditure increased by \$612,858 and employee salaries and benefits increased by \$664,079. The total expenditure of \$19,100,852 included direct research expenses of 69%, laboratory and building support services (including depreciation) 12%, administration 11%, SVI Foundation 2%, commercialisation support 2%, external transfers to collaborators 4%.

The unrealised income from share investments for the year was \$381,880 and the gains on available-for-sale investments of \$81,283 reflects the increase in market value of SVI's share portfolio over the financial year.

Balance Sheet

In 2009 the total Net Assets increased by \$1,952,569, to \$21,861,331 representing an increase of 10% on 2008. The increase is reflected in

- Current assets growing by \$2,449,445 due to the additional surplus funds being invested in short term deposits
- Current liabilities increasing by \$236,871 and this was spread evenly across the main liability classifications, while Non-current liabilities remained stable with a decrease of \$4,558 to \$120,876.
- The net value of the Property, plant and equipment decreasing by \$565,458 in 2009, due to the annual depreciation and amortisation of \$1,797,200 being much higher than in 2008. In 2009 asset purchases were \$1,231,741, an increase of \$690,774 on last year.
- Financial assets represent shares listed on the stock exchange and the value increased in 2009 by a net \$300,895.

In 2009 the Equity increased by \$1,952,569 (10%), which was the net result of a surplus from operating activities of \$1,871,286 and an increase in the Financial asset reserve of \$81,283.

Cash Flow Statement

In 2009 the net cash position increased by \$2,456,357, down relative to last year, which was \$3,409,549. In 2009 the institute increased equipment expenditure and general payments to suppliers, but this was offset mainly by additional income from donations, legacies and bequests and other revenue.

Statement Of Comprehensive Income For The Year Ended 31 December 2009

| | Note | 2009 (\$) | 2008 (\$) |
|--|------|------------------|----------------|
| Revenue | 2 | 20,590,258 | 19,058,695 |
| Other income | 2 | 381,880 | - |
| Total revenue | | 20,972,138 | 19,058,695 |
| Consumables and general research expenses | | (4,652,257) | (4,039,399) |
| Employee benefits expense | | (10,406,321) | (9,742,242) |
| Depreciation and amortisation | | (1,797,200) | (1,911,848) |
| Administration expenses | | (1,250,484) | (1,157,400) |
| Transfers to collaborators | | (786,454) | (809,081) |
| Other expenses | | (208,136) | (604,642) |
| Total expenses | | 19,100,852 | 18,264,612 |
| Surplus for the year | | 1,871,286 | 794,083 |
| Gains and losses remeasuring available-for-sale financial assets | | | |
| - Equity investments | | 81,283 | - |
| Total Comprehensive Income | | 1,952,569 | 794,083 |

The accompanying notes form part of these financial statements.

Statement Of Financial Position As At 31 December 2009

| | 2009 (\$) | 2008 (\$) |
|--|-------------------|-------------------|
| ASSETS | | |
| Current Assets | | |
| Cash and cash equivalents | 13,669,181 | 11,212,824 |
| Trade and other receivables | 1,172,315 | 1,185,149 |
| Other assets | 36,673 | 30,751 |
| Total Current Assets | 14,878,169 | 12,428,724 |
| Non-current Assets | | |
| Trade and other receivables | 250,000 | 250,000 |
| Financial assets | 1,978,492 | 1,677,597 |
| Property, plant & equipment | 8,994,599 | 9,560,057 |
| Total Non-current Assets | 11,223,091 | 11,487,654 |
| Total Assets | 26,101,260 | 23,916,378 |
| Current Liabilities | | |
| Trade and other payables | 889,622 | 813,421 |
| Short-term provisions | 1,195,915 | 1,110,747 |
| Funds held in trust for NSRL accrued leave | 138,280 | 138,280 |
| Other current liabilities | 1,895,236 | 1,819,734 |
| Total Current Liabilities | 4,119,053 | 3,882,182 |
| Non-current Liabilities | | |
| Long-term provisions | 120,876 | 125,434 |
| Total Non-current Liabilities | 120,876 | 125,434 |
| Total Liabilities | 4,239,929 | 4,007,616 |
| NET ASSETS | 21,861,331 | 19,908,762 |
| EQUITY | | |
| Retained surplus | 21,780,048 | 19,908,762 |
| Financial asset reserve | 81,283 | - |
| TOTAL EQUITY | 21,861,331 | 19,908,762 |

The accompanying notes form part of these financial statements.

Statement Of Changes In Equity For Year Ended 31 December 2009

| | Retained Surplus \$ | Financial Asset Reserve \$ | Total \$ |
|--|------------------------|-------------------------------|-------------------|
| Balance at beginning of Financial year 2008 | 19,114,679 | 230,066 | 19,344,745 |
| Revaluation decrement | - | (230,066) | (230,066) |
| Surplus for the year | 794,083 | - | 794,083 |
| Balance at end of financial year 2008 | 19,908,762 | - | 19,908,762 |

| | Retained Surplus \$ | Financial Asset Reserve \$ | Total \$ |
|--|------------------------|-------------------------------|-------------------|
| Balance at beginning of Financial year 2009 | 19,908,762 | - | 19,908,762 |
| Revaluation decrement | - | 81,283 | 82,283 |
| Surplus for the year 2009 | 1,871,286 | - | 1,871,286 |
| Balance at end of financial year 2009 | 21,780,048 | 81,283 | 21,861,331 |

The accompanying notes form part of these financial statements.

Statement Of Cash Flows For The Year Ended 31 December 2009

| | 2009 Inflows (Outflows) \$ | 2008 Inflows (Outflows) \$ |
|--|---|---|
| Cash flow from operating activities | | |
| Grants received | 16,670,411 | 16,595,059 |
| Payments to suppliers and employees | (16,944,627) | (15,862,107) |
| Donations, legacies and bequests | 2,288,996 | 1,958,005 |
| Other revenue | 1,084,453 | 818,487 |
| Interest received | 575,379 | 756,487 |
| Dividends received | 59,354 | 106,536 |
| Net cash provided by operating activities | 3,733,966 | 4,372,467 |
| Cash flow from investing activities | | |
| Purchase of plant and equipment | (1,231,741) | (489,601) |
| Purchase of Motor vehicle | - | (51,366) |
| Leasehold improvements | - | - |
| Payments for investments | (45,868) | (421,951) |
| Net cash (used in) investing activities | (1,277,609) | (962,918) |
| Net increase/(decrease) in cash held | 2,456,357 | 3,409,549 |
| Cash at the beginning of the year | 11,212,824 | 7,803,275 |
| Cash at the end of the year | 13,669,181 | 11,212,824 |

The accompanying notes form part of these financial statements.

Notes To The Concise Financial Report For The Year Ended 31 December 2009

Note 1: Basis of Preparation of the Concise Financial Report

The Concise Financial Report is an extract from the full financial report for the year ended 31 December 2009. The concise financial report has been prepared in accordance with Accounting Standard AASB 1039: Concise Financial Reports and the Corporations Act 2001.

The financial statements, specific disclosures and other information included in the Concise Financial Report are derived from, and are consistent with, the full financial report of St Vincent's Institute of Medical Research. The concise financial report cannot be expected to provide as detailed an understanding of the financial performance, financial position and financing and investing activities of St Vincent's Institute of Medical Research as the full financial report. A copy of the full financial report and auditors's report will be sent to any member, free of charge, upon request.

The financial report of St Vincent's Institute of Medical Research complies with all Australian equivalents to International Financial Reporting Standards (AIFRS) in their entirety. The presentation currency used in this concise financial report is Australian dollars.

Notes To The Concise Financial Report For The Year Ended 31 December 2009

| | Note | 2009 (\$) | 2008 (\$) |
|--|------|-------------------|-------------------|
| Note 2: Revenue | | | |
| Income from research activities: | | | |
| - government grants for direct research | 3-4 | 8,377,437 | 8,226,550 |
| - other research grants | | 5,441,126 | 4,309,992 |
| - government grants for operational support | 3-4 | 2,763,513 | 2,882,638 |
| | | 16,582,076 | 15,419,180 |
| Income from non-research activities: | | | |
| - legacies, bequests, donations | | 2,288,997 | 1,958,005 |
| - dividends from other corporations | | 59,353 | 106,536 |
| - interest from other corporations | | 575,379 | 756,487 |
| - contract services | | 526,760 | 384,146 |
| - royalty | | 35,103 | 205,312 |
| - other | | 522,590 | 229,029 |
| | | 4,008,182 | 3,639,515 |
| Total revenue | | 20,590,258 | 19,058,695 |
| Other income | | | |
| - unrealised gain on disposal of shares | | 381,880 | - |
| Total other income/(loss) | | 381,880 | - |
| Note 3: Grants – Commonwealth Government | | | |
| National Health and Medical Research Council | | | |
| - Infrastructure support scheme | | 1,321,587 | 1,492,348 |
| - Research grants | | 6,876,459 | 6,825,500 |
| Australian Research Council | | | |
| | | 986,255 | 882,023 |
| Department of Innovation, Industry, Science and Research | | | |
| | | 272,679 | 319,027 |
| | | 9,456,980 | 9,518,898 |

Notes To The Financial Statements For The Year Ended 31 December 2009

| | 2009 (\$) | 2008 (\$) |
|--|------------------|------------------|
| Note 4: Grants – Victorian State Government | | |
| Department of Innovation, Industry & Regional Development | | |
| - Operational infrastructure Support | 1,441,926 | 1,390,290 |
| - Other Direct research grants | 242,044 | 200,000 |
| | 1,683,970 | 1,590,290 |

Note 5: Segment Reporting

The company operates in the medical research sector where it undertakes basic and clinical research in Australia.

Notes To The Financial Statements For The Year Ended 31 December 2009

DIRECTORS' DECLARATION

The directors of St Vincent's Institute of Medical Research declare that the concise financial report of St Vincent's Institute of Medical Research for the financial year ended 31 December 2009, as set out in pages 69 to 84.

- a) complies with Accounting Standard AASB 1039: Concise Financial Reports; and
- b) is an extract from the full financial report for the year ended 31 December 2009 and has been derived from and is consistent with the full financial report of St Vincent's Institute of Medical Research

This declaration is made in accordance with a resolution of the Board of Directors



Director
BM Shanahan

Director
RA O'Shannassy

Dated this 15th day of March 2010, Melbourne, Australia

**INDEPENDENT AUDIT REPORT TO THE MEMBERS OF
ST VINCENT'S INSTITUTE OF MEDICAL RESEARCH**

Report on the Concise Financial Report

The accompanying concise financial report of St Vincent's Institute of Medical Research comprises the statement of financial position as at 31 December 2009, the statement of comprehensive income, statement of changes in equity and the statement of cash flows for the year then ended and related notes, derived from the audited financial report of St Vincent's Institute of Medical Research for the year ended 31 December 2009, and the discussion and analysis. The concise financial report does not contain all the disclosures required by Australian Accounting Standards.

Directors' Responsibility for the Financial Report

The directors of the company are responsible for the preparation and presentation of the concise financial report in accordance with Accounting Standard AASB 1039: Concise Financial Reports (including the Australian Accounting Interpretations), statutory and other requirements. This responsibility includes establishing and maintaining internal control relevant to the preparation of the concise financial report, selecting and applying appropriate accounting policies; and making accounting estimates that are reasonable in the circumstances.

Auditor's Responsibility

Our responsibility is to express an opinion on the concise financial report based on our audit procedures. We conducted an independent audit, of the financial report of St Vincent's Institute of Medical Research for the year ended 31 December 2009. Our audit report on the financial report for the year was signed on 15 March 2010 and was not subject to any modification. The Australian Auditing Standards require that we comply with relevant ethical requirements relating to audit engagements and plan and perform the audit to obtain reasonable assurance whether the financial report for the year is free from material misstatement.

Our procedures in respect of the concise financial report included testing that the information in the concise financial report is derived from, and is consistent with, the financial report for the year, and the examination on a test basis, of evidence supporting the amounts, discussion and analysis, and other disclosures which were not directly derived from the financial report for the year. These procedures have been undertaken to form an opinion whether, in all material respects, the concise financial report complies with Accounting Standard AASB 1039: Concise Financial Reports and whether the discussion and analysis complies with the requirements laid down in AASB 1039: Concise Financial Reports.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

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Independence

In conducting our audit, we have complied with the independence requirements of the Corporations Act 2001. We confirm that the independence declaration required by the Corporations Act 2001, provided to the directors of St Vincent's Institute of Medical Research on 15 March 2010, would be in the same terms if provided to the directors as at the date of this auditor's report.

Auditor's Opinion

In our opinion, the concise financial report including the discussion and analysis of St Vincent's Institute of Medical Research for the year ended 31 December 2009 complies with Accounting Standard AASB 1039: Concise Financial Reports.

**WILLIAM BUCK AUDIT
(VIC) PTY LTD**
A.B.N 59 116 151 136



AP MARKS
Director

Dated: Melbourne 15th March 2010.

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\$100,001 plus

Alberti AO HonLLD, S
Brenda Shanahan Charitable Foundation
The Baker Foundation
The Ian Potter Foundation

\$50,001 - \$100,000

H & L Hecht Trust administered by Perpetual Trustees Australia
The Leslie Family (The Bill Heath Fellowship donated in memory of Stuart Leslie)

\$25,001 - \$50,000

ANZ Trustees
EJ Whitten Foundation
Equity Trustees Limited
North, C
The Clive & Vera Ramaciotti Foundation administered by Perpetual Limited
The Helen & Bori Liberman Family
The Marian & EH Flack Trust

\$10,001 - \$25,000

Burgess, A
DBR Corporation Pty Ltd
Eldon & Anne Foote Trust administered by the Lord Mayor's Charitable Foundation
George Castan Family Charitable Trust
Gold Age
Holyoake, P & M
Janko Inge Foundation
L.E.W. Carty Charitable Fund
Plant, B & K
Reece Australia Limited
The Michael & Andrew Buxton Foundation
The Rebecca L Cooper Medical Research Foundation
Yencken, T & M

\$5,001 - \$10,000

Bell Charitable Fund administered by Aitken Walker & Strachan
Ceravolo, E
Costa OAM, F
Gannon, M
Generation Investments Pty Ltd
Gourlay OAM, L
Harold Mitchell Foundation
Joe Arcaro & Associates Pty Ltd
Macquarie Bank Limited
McDonald, H
Myers AO QC, A
O'Shannassy, M & R
Portsea Hotel
Salta Properties Pty Ltd
Schiavello Group Pty Ltd
The Angior Family Foundation administered by the National Australia Trustees Ltd
The Bird Family Bequest
Vermont Cancer Research Fundraising Group
Zagame Corporation

\$2,001 - \$5,000

ANZ Banking Group Limited
Best, W
Gorman Commercial Real Estate Pty Ltd

Hart Charities
Iseli, A & C
Lowe, R & D
Otto, H
Pizzey, J & B
Power, T & D
Ralph AC, J
Riley, C
Smith, JFM
Spooner, R & J
Spry-Bailey, P & P
Webb, B & M

\$901 - \$2,000

All Souls' Opportunity Shop
Arcaro, J & G
Aroni, B
Australian Securities Limited
Barro, R
Berkowitz, D
Bowen, J & M
Bowness, B
Buckle, R & C
Burridge, R & B
Carson, I
Clarke, B
Clement, J
Commins, H
Cowen, A
Cox, L
Cox, P
Davis, D
Demediuk, N & F
Edgar, R
Edgewise Insurance Brokers
Elliott, R
Foti, T
Gelber, N
Gray, M & S
Gray, N
Griss, C & A
Grogan, D & J
Hale, G
Harries, HR & EM
Hatzimosis, G
Holloway, G & A
Jackson, B
Jackson, D
Johnston, C
Johnstone, A
Kay, C
Kempner, L & I
Kidd, J
Knowles, J
Lade, S & G
Leahy, P
Mahemoff, M
Mayo Consulting Pty Ltd
McCarthy, N
McCorkell, P
McGinniss, M
McNulty, M
McPhail, B
Meltzer, F & W
Merritt, J
Naphtali Family Foundation
Nicoll, G
Nunan, T & G
O'Brien, N & C
Orion Corporate Advisory Services
O'Rourke, J
Palace Cinemas Nominees Pty Ltd

Palmer, M & S
Pellicano, N & A
Penington AC, D
Ralph, J
Reid, I
Riley, P
Riveria Properties Limited
Robinson, G & C
Rowsthorn, M
RPM Real Estate Group
Russell, J
Sallmann AO, A
Sevior, E
Smith, C & S
Tarascio, C
Thomas, C & C
Walters OAM, E
Whiting, J
Wilkie, R & E
Wilson, P & G
Xipell, T

\$301 - \$900

Barker, R
Bennett AM, R
Brown, J & R
Bugalski, I & M
Burgoyne, T & L
Chappell, J
D'Arcy, J
Fell, G & J
Gainsmith, W
Gehrig, R & H
Gorman, P
Gorr, L & J
Gray, M
Grodski, R & P
Jakobovits, P
Lieberman, L
McKeage, C
Morlacci, S
Oliphant, D
Pitt, I
RC & EM Bennett Trust administered by the Lord Mayor's Charitable Foundation
Renard, R & R
Rozner, D & K
Santamaria, J
Stock, G & N
Tees, L
Turnbull, J
Weir, R & R
Wu, J

\$101 - \$300

Barnes, S
Bartfeld, J
Bialek, M & S
Bloch, F & S
Bloom, B & L
Bongiorno, J & E
Candy, B
Chanen, W
Chrapot, A & V
Davis, B
Davis, I & Y
Daynes, N & D
de Gruchy, D
D'Souza, R
Dubbs, J & M
Foti, M
Frid, G & M
Gees, P

Gibson, M
Golvan, A
Grossbard, GD & JM
Hackett, J
Hatzimosis, J
Heath, A
Hodges, G & A
Hutchinson, A, V & H
Hutchinson, D & L
Jacobs, R & N
Kalman, H
Lasnitzki, M & B
Lazarus, M
Le Guier, V
MacKay, M
Macquarie Group
Mayer, H
McGowan, M
National Bank Australia
O'Bryan AC, N
O'Day, J & S
Pollock, H
Reeve, F
Rogers, G & L
Rose, M & E
Rosenberg, B & S
Rozenes, M & B
Sakell, T
Scholl, M & F
Schwarz, H & S
Shalit, J
Shanahan, B
Shepherd, R
Sirianni, P
Smith, M & K
Smorgon OAM, D
Smorgon, B & S
Smorgon, G & A
Smorgon, R & A
Tashi, R & S
White, A & L
Wilson HTM Services Pty Ltd

Less than \$100

Arthur, A & J
Arthur, M
Babazadeh, S
Barker, P
Bergin, J
Bittner, I
Bloom, R
Bowker, T
Buckley, D
Chisholm, D & M
Ciantar, J
Clarke, D
Cocks, D
Collet, C
Connors, T & E-N
Copolov, D
Coutts, J
Curtis, B & J
Deering, R
Di Mattina, A
Dinh, A
Donovan, P
Doucas, M
Dubravica, S & DJ
Dubs, M & L
Edelman, E
Farrell, B
Farrow, B & E
Foender, L

Donors and bequests

Geyer, D
Globerman, K
Gough, N
Griffin, J
Herlihy, T
Hildebrand, G
Hurley, J
Hurley, L
Irvin, A
Jacobs, B
Jolson, H & C
Judd, D
Kappler, J
Katsis, F
Keane, M
Kempson, P
Kinchela, M
King, J
Kostopoulos, D
Lacey, C
Larkins, R & C
Levin, N
Levy, L
Lewis, A
Lovell, J
MacGeorge, M
Mackie, A
Marabel-Whitburn, J
McCarthy, B
McElwee, N
Millen, W
Mitchell, S
Morgan, M
Neeter, R & E
Nihill, E
O'Brien, A
Patterson, A
Plonka, A
Redman, R
Renkin, D
Roach, J
Robertson, J
Rogers, M & R
Rosenzweig, R
Rush, G
Ryan, M & R
Saunders, D
Sheeziel, P & E
Shenker, L
Short, M
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