HEART DISEASE

ARTHRITIS AND OSTEOPOROSIS

CANCER

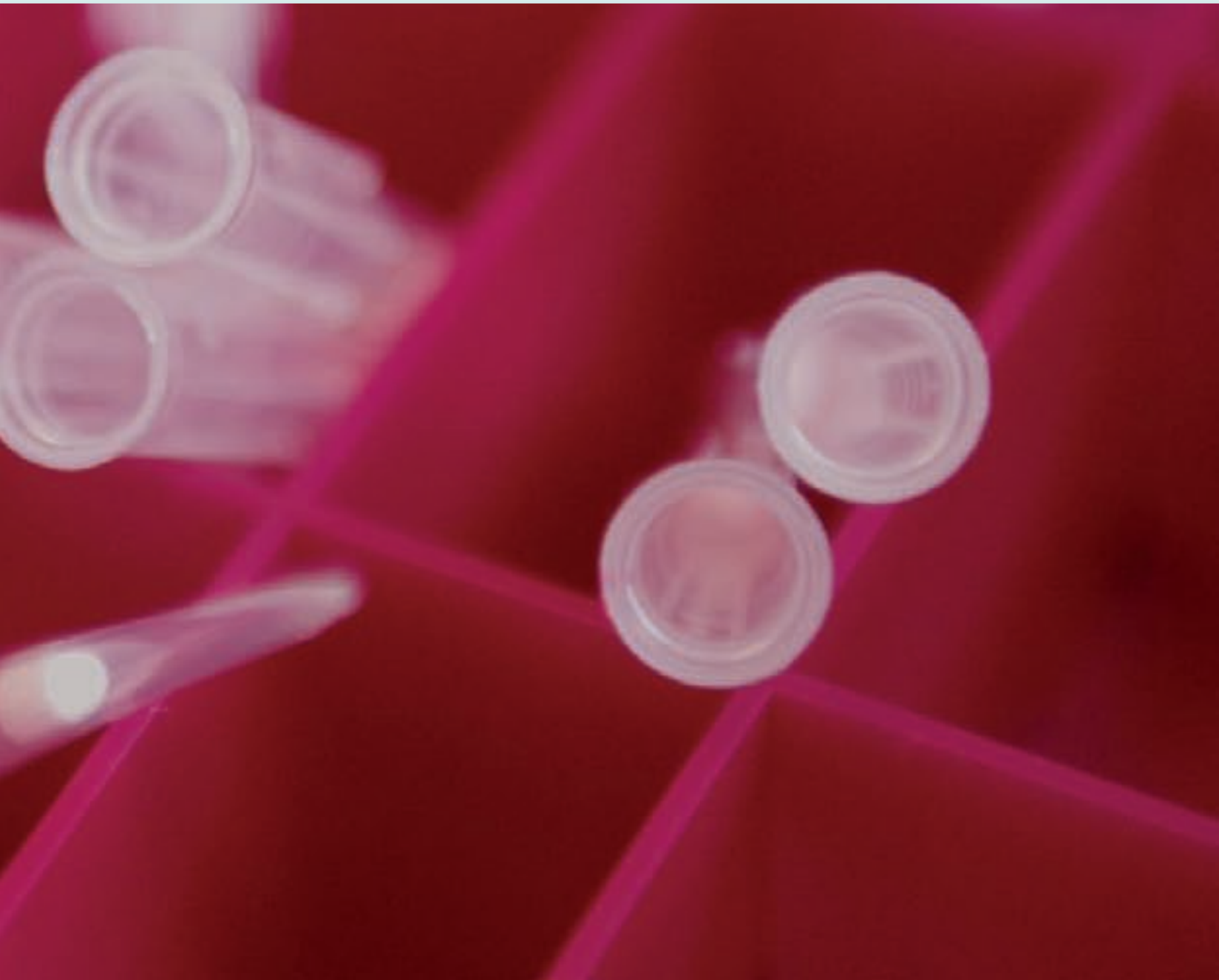
INFECTIOUS DISEASES

ST VINCENT'S INSTITUTE ANNUAL REPORT 2006

SVI

ST VINCENT'S INSTITUTE

~ continuous discovery



CONTINUOUS DISCOVERY

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SVI
ST VINCENT'S INSTITUTE
~ continuous discovery

St Vincent's Institute is focused on exploring both disease cause and prevention, with a commitment to the discovery of practical and far-reaching solutions to high impact diseases affecting people around the world.

SVI is a world centre of excellence for medical research into:

- 3D study of proteins at the atomic level
- Diabetes, obesity and heart disease
- Bone diseases such as arthritis and osteoporosis
- Cancer and the spread of cancer
- Infectious diseases
- Alzheimer's and other neurological disorders

SVI is affiliated with St. Vincent's Hospital and The University of Melbourne and is a member institution of the Sisters of Charity Healthcare Service. SVI is accredited by the NHMRC.

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; and the Association of Australian Medical Research Institutes.

Through these links SVI provides a valuable service to clinical medicine, graduate education and community welfare.

DRUG DISCOVERY

Proteins are the body's essential building blocks. In addition to forming the structure of the body, proteins control all functions in the body by acting as molecular engines.

In order to understand the function of proteins, we need to determine their structure. X-ray crystallography allows us to map the 3-D structure of proteins at the atomic level. Knowledge of protein structure enables the intelligent design of new drugs for the treatment of disease.

At SVI the major areas of crystallography research are on proteins involved in cancer such as breast and prostate cancers; brain diseases such as Alzheimer's disease and epilepsy; and infectious diseases such as HIV and hepatitis.

Biota Structural Biology Unit

ACRF Rational Drug Discovery Facility

Australian Cancer Research Foundation

30

SVI scientists have solved the structures of more than 30 different proteins involved in disease

AUTOIMMUNE DISEASES

The immune system is a complex network of diverse cell types, which need to communicate effectively to signal the presence of a virus or bacteria and eliminate the intruder.

Immune diseases such as Crohn's disease, multiple sclerosis and type 1 diabetes occur when the usually protective immune system attacks body tissue. The only treatments available alleviate the symptoms rather than cure the disease.

Researchers at SVI have identified proteins that control excessive immune responses and aim to find therapeutic drugs to enhance their action.

Signal Transduction Unit

80

Autoimmunity plays a role in over 80 diseases

TYPE 1 DIABETES

People with type 1 diabetes lack insulin, the hormone that regulates the body's use of glucose. Insulin is produced by beta cells in the pancreas, which in type 1 diabetes are mistakenly attacked and destroyed by the immune system.

Researchers at SVI are focused on understanding the action of the molecules involved in immune attack on beta cells with the aim of finding therapies to block or inhibit their action and preserve insulin production.

Immunology and Diabetes Unit

MOST COMMON

Type 1 diabetes is one of the most common chronic diseases in children

TYPE 2 DIABETES AND OBESITY

Obesity is a major contributing factor in type 2 diabetes, cardiovascular disease and arthritis. While regular exercise and healthy eating are effective at preventing weight gain they are rarely sufficient for treating already obese patients. For these patients, new aids to treatment need to be developed.

SVI researchers are studying the action of an enzyme called AMPK, which acts as the body's fuel gauge activating the burning of fats and sugars when cells need energy. Research at SVI is focused on identifying activators for this enzyme to be used as a therapy to burn excess energy stores in the treatment of obesity and potential protection against conditions such as cardiovascular disease and type 2 diabetes.

Protein Chemistry and Metabolism Unit

1 MILLION

1 million Australians have type 2 diabetes and 1 in 5 adults are overweight or obese

HEART DISEASE

Despite major advances in treatment, heart disease kills more Australians than any other disease. Heart disease covers a wide range of conditions including heart failure, arrythmia, heart valve disease and cardiomyopathy.

The aim of research at SVI is to find out more about the causes of heart disease and how to predict and prevent the development of heart conditions through the study of heart tissue and the molecules involved in heart disease.

Molecular Cardiology Unit

1 IN 3

Cardiovascular disease claims the lives of 1 in 3 Australians

ARTHRITIS AND OSTEOPOROSIS

Bone is a surprisingly dynamic tissue, which is constantly being dissolved and rebuilt. Changes in the balance between bone growth and destruction can lead to disabling diseases such as arthritis and osteoporosis and cause extreme pain in bone metastasis.

SVI's researchers aim to fully understand the processes of bone growth in order to develop new therapies which will block excessive bone destruction in diseases such as arthritis or assist the body to grow new bone in diseases such as osteoporosis.

Bone, Joint and Cancer Unit

3 MILLION

Arthritis affects 3 million and 2 million Australians have osteoporosis

CANCER

When cancer develops, cells that are damaged by sun radiation, smoking or unknown causes grow in an uncontrolled way. Cancer cells can break away from the resulting tumour and travel via the bloodstream or lymphatic system to different parts of the body and form a secondary cancer or metastasis. It is usually the spread of cancer to the major organs and bone, rather than the growth of the primary tumour, that leads to treatment failure.

Many factors cause cancer to develop and spread and for this reason SVI has several groups of scientists investigating different aspects, including DNA damage and how it initiates cancer; increased cell multiplication in cancer; various causes of cancer spread; the effects of cancer on bone; and potential therapies. A further group is investigating leukaemia.

Bone, Joint and Cancer Unit

Cell Cycle and Cancer Unit

Molecular Genetics Unit

Cytoskeleton and Cancer Unit

VBCRC Invasion and Metastasis Unit

Pharmacogenomics Unit

Haematology and Leukaemia Unit

Tumour Cell Migration and Metastasis Unit

ACRF Rational Drug Discovery Facility

1 IN 3

1 in 3 men and 1 in 4 women will be affected by cancer by the age of 75

INFECTIOUS DISEASES

To prevent the spread of blood borne diseases and enable early diagnosis and lifesaving treatment, it is necessary for blood testing laboratories to use the best techniques and constantly monitor the accuracy of test results.

The National Serology Reference Laboratory (NRL) regularly provides quality assurance materials to laboratories that test for blood borne diseases in Australia and internationally. These materials, backed by support and guidance from NRL, are used to ensure that test results in each laboratory are correct. Building on this, the NRL conducts research to develop tests that better define the duration of infection in an individual, thus enabling improved treatment decisions and support of vaccine development.

National Serology Reference Laboratory, Australia

40 MILLION

40 million people around the world live with HIV/AIDS

INSTITUTE HIGHLIGHTS

Research awards

Professor Michael Parker awarded prestigious Federation Fellowship

In May 2006 Professor Michael Parker was awarded an Australian Research Council Federation Fellowship worth $1.5 million over five years. This is the most prestigious Fellowship in Australian research and was awarded to Professor Parker for his outstanding contributions in the field of protein crystallography. His achievements include the determination of more than 30 protein crystal structures over the past 10 years. The major aim of his research is to determine the molecular structures of medically important proteins in order to understand their function and to use the information for biotechnological applications such as the design of drugs and biosensors.

The Institute's strength in protein science and its importance to Australian research is reflected by the fact that four Federation Fellows have come from SVI. These are SVI's current Federation Fellows, Bruce Kemp (with CSIRO) and Michael Parker, as well as Jamie Rossjohn and Bostian Kobe who formerly worked at SVI. Four Federation Fellows from one Institute is a very notable statistic.

SVI joins the Australian Islet Transplant Consortium

In March 2006 the Hon. Tony Abbott MP, Minister for Health and Ageing, announced that SVI will be one of three lead organisations to receive Federal funding to establish a national consortium that will offer pancreatic islet transplantation as a new treatment for type 1 diabetes.

This procedure involves transplanting islet cells, which contain critical insulin-producing beta cells, into the liver. SVI will work with Westmead Hospital in Sydney and Queen Elizabeth Hospital in Adelaide to develop strategies to improve the survival of transplanted islets and health outcomes for patients with type 1 diabetes undergoing islet transplantation.

NHMRC grant success for SVI

Income from competitive research grants has increased at SVI over the last five years, due in large part to a doubling in the number of grants received from the government-funded, National Health and Medical Research Council (NHMRC).

The annual results of the highly competitive NHMRC grant scheme were announced in October 2006 and SVI congratulates Professor Tom Kay, A/Professor Robyn Starr, Dr Jörg Heierhorst, Dr Matt Watt, Dr Galina Polekhina, Dr Greg Steinberg and Dr Kim Wilson on the success of their applications. Most notable were the renewal of A/Professor Robyn Starr's five year NHMRC Program Grant held together with her colleagues from the Walter and Eliza Hall Institute; and the award of a prestigious Centre for Clinical Research Excellence (CCRE) in Clinical Science in Diabetes awarded to Professor Tom Kay and colleagues at the University of Melbourne Department of Medicine at St. Vincent's Hospital and the Centre for Eye Research Australia. Both these grants indicate the collaborative nature of much of our research and the important links between laboratory-based research at SVI and clinical research nearby.

1. The Hon. Julie Bishop MP presenting Professor Michael Parker with the Federation Fellowship award
2. Drs Matt Watt and Greg Steinberg, Protein Chemistry and Metabolism Unit
3. Dr Bala Krishnamurthy, Immunology and Diabetes Unit

New senior researchers join SVI

Over the past five years staff numbers at SVI have increased by 60%. At the beginning of 2006, SVI welcomed 26 new staff and students including three new senior researchers: Dr Ora Bernard from the Walter and Eliza Hall Institute; Dr David Izon from Perth's Telethon Institute for Child Health Research; and Dr Jan Allison from the University of Melbourne.

Research highlights

Prevention of obesity in mice

Drs Matt Watt and Greg Steinberg from the Protein Chemistry and Metabolism Unit at SVI and their colleagues have discovered that a protein thought to be involved in brain development mimics the effects of exercise by increasing fat use. The breakthrough gives hope to sufferers of obesity and diabetes. In a paper published in the prestigious journal *Nature Medicine* in May 2006, the team found that treating mice with a protein known as ciliary neurotrophic factor prevents obesity and markers of type 2 diabetes. Dr Watt was awarded the National Association of Research Fellows of NHMRC Post-Doctoral Investigators Award in recognition of this outstanding publication.

How type 1 diabetes begins

The immune system is designed to protect the body from foreign substances like bacteria and viruses. In type 1 diabetes this process goes wrong when proteins (called autoantigens) switch on an immune response that destroys the cells in the pancreas that produce insulin (called beta cells). Patients with diabetes usually have immune responses to several of these autoantigens, rarely just one. Whether diabetes begins when the immune response recognises one particular antigen or many antigens at once has not been clear.

Dr Bala Krishnamurthy and his colleagues in the Immunology and Diabetes Unit have solved this riddle in a mouse that develops diabetes. Their work has shown that diabetes starts with an immune response against insulin and then spreads to recognise other autoantigens. This suggests that people with responses against several autoantigens have a more advanced form of the disease and that preventing a spread in the immune response could prevent diabetes. Targeting the immune response to insulin in people with pre-clinical diabetes is a logical step towards prevention of diabetes and clinical trials are already under way to do this in Australia. Dr Krishnamurthy's work was published in the prestigious *Journal of Clinical Investigation* in December 2006. Due to intense interest, it attracted an opinion piece in this journal. It was also mentioned in "roundups" in other influential journals e.g. in *Nature*, and it was classified as a "must read" by the Faculty of 1000.

1. Professor Bruce Kemp 2. Students from Xavier College and Genazzano FCJ College visit SVI

SVI in the research community

SVI Forum

The 2006 Annual Forum, chaired by SVI Patron Sir Gustav Nossal, focused on the influenza pandemic. Guest speakers included Professor Peter Doherty AC, Nobel Laureate; Dr John Carnie, Director of Disease Control and Research, Department of Human Services; Dr Simon Tucker, Director of Research, Biota Holdings Ltd and Mr Thomas Murphy, Head of Investment Research, Deutsche Bank AG.

SVI hosts cancer workshop

SVI hosted the 9th Annual Australian Cell Cycle Workshop from 23-25 November 2006 and with 80 participants the workshop filled the SVI conference room to capacity. The meeting covered a broad range of topics on the regulation of cell growth and its relationship to the onset of cancer. Organised by Dr Jörg Heierhorst and Dr Boris Sarcevic of SVI and their colleagues Dr Ross Hannan and Dr Patrick Humbert from the Peter MacCallum Cancer Centre, the meeting will move on to Stradbroke Island for its 10th anniversary next year.

The Bruce Kemp Symposium

A symposium on "Phosphorylation, Peptides and Proteins: Molecular Regulation in Health and Disease" was held at SVI on 15 December in honour of Professor Bruce Kemp's contribution to the field of protein chemistry. Ten invited speakers from Queensland, Sydney and Melbourne presented including Dr Ora Bernard and Dr Greg Steinberg from SVI.

The talks were focused on the regulation of molecules in health and disease and ranged from protein structure and protein kinases in cell growth control to the effects of protein kinases on exercise and metabolism; and included the potential for drug therapies.

SVI in the local community

School visit to the Bone, Joint and Cancer Unit

Students from Xavier College and Genazzano FCJ College visited SVI in August to consolidate their biology studies at school. Hosted by Emeritus Professor Jack Martin, 38 students and their teachers visited four areas of research.

Claire Allemand, Head of Biology at Xavier College said, "It was a wonderful and rare opportunity for the students to gain a real understanding of the importance of research and the relevance of the topics they study in the classroom."

SVI Tours

SVI was pleased to welcome the following guests in 2006:

Harold Mitchell and Amanda Mitchell, Mitchell & Partners

Leigh Wallace, General Manager, Greater Melbourne Foundation

Anne Foote, Eldon and Anne Foote Trust

Mr Liang Shugen, Chinese Consul General

Visting scientists from Tsinghua University, China

Kate Abrahams, Deutsche Bank AG

Jan Hirst and Scott Anderson, The Ian Potter Foundation

Megan Smart and Phil Marley, Deptartment of Innovation, Industry and Regional Development

Members of the Real Estate Institute of Victoria

Barry and Karen Plant, Barry Plant Real Estate

Teage Ezard and Tina Stephanou, Ezard at Adelphi

Kirsten Bickendorf, United Way

Robyn Stanton, Lord Mayor's Charitable Fund

Rodney Eade, Western Bulldogs Football Club

Kerry Lodge, Valuable Resources

Kris Greenwood, FM Innovations

George Stamas, GJK Facility Services

Meigan Lefebure, Aged Care Victoria

Ruth Mann, Artways

REPORT FROM THE DIRECTOR AND CHAIR

There is no doubt that the theme for the Institute in 2006 was growth. This was highlighted by an extremely busy start to the year when we welcomed many new staff and students. Surveying our growth over the last 15 years has shown that our research budget has increased about seven-fold over that time and increased by 140% between 2000 and 2005. Our staff numbers have also substantially increased over this time.

The major factor in our growth has been increased competitive research funds through the National Health and Medical Research Council and other granting agencies. Additionally, the ability to fully support those grants due to substantial increases in infrastructure funding from the State Government Operational Infrastructure Scheme and more recently also from the Federal Government has been instrumental. It is impossible to overstate the importance of infrastructure support in providing essential services that cannot be covered by research grant budgets. The SVI Foundation has also played an important role in the expansion of the Institute by raising money from individual donors and events to support new facilities and careers. Projected increases in spending on medical research over the next four years were announced in last year's Federal Budget. This has enabled us to look forward with great confidence to continued growth.

Major grants awarded last year to our scientists emphasise some of the "success factors" in modern science. One of these is the impact of enabling technologies. Professor Michael Parker, the head of our Structural Biology Unit, has solved the three-dimensional structures of many proteins using X-ray crystallography. He was a very worthy recipient of a 2006 Federation Fellowship. This is a very high academic honour from the Australian Research Council, even more impressive because it is one of very few such awards to medical research institutes.

Another success factor is collaboration and the formation of multi-institutional and multi-disciplinary teams. A/Professor Robyn Starr was awarded a continuation of her five-year Program Grant with colleagues from the Walter and Eliza Hall Institute. Further very good news at the end of 2006 was the award of a Cooperative Research Centre (CRC) in Cancer Therapeutics to a team that includes Professor Michael Parker from SVI with colleagues at several major research institutes and biotechnology companies. Our commercialisation development manager, Dr Tony Mason, is playing a key role in the establishment of this CRC and our newly-formed Commercialisation and Intellectual Property Committee, chaired by Dr John Sime, has provided valued oversight.

The theme of collaboration continued with the award of a prestigious Centre for Clinical Research Excellence (CCRE) in Clinical Science in Diabetes from the NHMRC to the Immunology and Diabetes Unit and colleagues at the University of Melbourne including Professors Jim Best and Kerin O'Dea (from St. Vincent's Hospital) and Hugh Taylor (from the Centre for Eye Research Australia). We were also selected to become part of a national consortium to advance pancreatic islet transplantation as a treatment for patients with type 1 diabetes along with colleagues from Westmead Hospital in Sydney and Queen Elizabeth Hospital in Adelaide.

In looking to the future, the greatest challenge for all medical researchers is to plan how to link basic science and the treatment of common diseases. We are determined to see effects on health from our work. Medical researchers need to be experts in the fine detail of their topic but, at the same time, try to stand back and ensure that research is directed to impact on health and disease. Clinical application, often after commercialisation, are the ultimate and very satisfying fruits of medical research. Collaboration with clinical colleagues must be an important part of this effort and SVI is forging closer ties with the Hospital to achieve impact on health problems. Our distinct culture of excellent laboratory-based research developed over nearly 50 years must be fostered but it also must be increasingly connected to the health problems of the community. With your support, we can succeed.

Thank you to all our supporters, especially to those who serve on the SVI Board, the SVI Foundation Board, and our Board committees.

Chair
BM Shanahan

Director
TWH Kay

Mr Barry J Jackson + Professor Thomas WH Kay + Mr Douglas A Wright + Ms Brenda M Shanahan
Professor James D Best + Mr Michael McGinniss

THE SVI BOARD OF DIRECTORS

Ms Brenda M Shanahan
BEc Bcom

Chair, St Vincent's Institute

Ms Shanahan has a research background in finance in Australian and overseas economies and share markets. She is Chair of St. Vincent's Health, and is a Board member of Challenger Financial Services Group, JM Financial Group Ltd, Sisters of Charity Health Service Ltd, Clinuvel Pharmaceuticals Ltd and Loop Ltd. She is a former member of the Australian Stock Exchange and former Executive Director of a stockbroking firm, a fund management company and an actuarial company.

Mr Douglas A Wright
FAICD

Deputy Chair,
St Vincent's Institute

Mr Wright is a founder and Chairman of Wrights, a group of Australian-owned communications, marketing, research and IT consultancies. He is a public affairs strategist, and has worked in the media and business in Australia and Europe. He is a member of the Victorian Government's Small Business Advisory Council and the Australian Bankers' Association Small Business Forum. Mr Wright is an associate fellow of the Australian Marketing Institute and a member of the Public Relations Institute of Australia, 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 and associated companies. She has a strong commitment to fund raising and promotion of juvenile diabetes, and is the National President of the Juvenile Diabetes Research Foundation Australia and International Board member of the Juvenile Diabetes Research Foundation. Dr Alberti is the Foundation Chair of St Vincent's Institute and also a Director of the Western Bulldogs and founding Director of the Western Bulldogs Forever Foundation.

Professor James A Angus
BSc PhD FAA

Professor Angus is Dean, Faculty of Medicine, Dentistry and Health Sciences, The University of Melbourne. Prior to this appointment, he was Professor and Head of the Department of Pharmacology; and Deputy Dean of the Faculty of Medicine, Dentistry and Health Sciences; President of the Academic Board; and Pro Vice-Chancellor, The University of Melbourne. He is a member of the Bio21 Institute Management Committee and First Vice-President of the International Union of Pharmacology. He has extensive research experience in preclinical pharmacology in the areas of cardiovascular and antinociceptive drugs.

Professor James D Best
MBBS MD FRACP FRCPath
FRCP Edin

Professor Best is Professor and Head of The University of Melbourne Department of Medicine, St. Vincent's Hospital, Melbourne. He is a Board member of St. Vincent's Health and Associate Dean (Resources) of the Faculty of Medicine, Dentistry and Health Sciences at The University of Melbourne. As a member of Council for the National Health and Medical Research Council (NHMRC), he chairs the NHMRC Research Committee.

Mr Jeff Clifton
BCE DIPCe

Mr Clifton is currently the 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.

Profressor James A Angus + Mr John Pizzey + Ms Ruth O'Shannassy + Mr Paul Holyoake + Mr Jeff Clifton
Mr Gregory Robinson Not pictured: Dr Susan M Alberti AO+ Sr Mary Fankhauser + Ms Nicole Feely

Sr Mary Fankhauser
RSC BApplSci (Nursing Admin)
GradDipCommunityHealthNursing
ClinPastoralCare Cert

Until April '06
Sister Fankhauser has a background in healthcare, having worked as a nurse in a wide variety of clinical and administrative positions in both the private and public sectors of St. Vincent's Health.

Ms Nicole Feely
BComm LLB

Ms Feely is the Chief Executive Officer, St. Vincent's Health and has a background in business law, politics and administration in both the private and public sectors.

Mr Paul Holyoake
BEngMech (Hons) MEngSci

From 29 May '06

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.

Mr Barry J Jackson
Bcomm (Hons) MAICD

Mr Jackson is a Director of Paperlinx Ltd, Alesco Corporation Ltd, Equity Trustees Ltd and CSR Ltd (retired 03/07). He was formerly Managing Director of Pacifica Group Ltd from 1995 until 2001 and has over 30 years experience in manufacturing and industrial marketing.

Professor Thomas WH Kay
BMedSc MBBS PhD Melb
FRACP FRCPA

Professor Kay is Director of St Vincent's Institute. 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 in type 1 (juvenile) diabetes.

Mr Michael McGinniss
Bcomm (Hons) MEc

Mr McGinniss retired from a senior position as a partner with PricewaterhouseCoopers, Chartered Accountants in 2000. Since then 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.

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.

Mr John Pizzey
BE(Chem) Fell Dip
(Management) 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 International Aluminium Institute Ltd (UK) in 2002 and 2003, and Chairman of the London Metal Exchange Ltd (UK) in 2003. John is currently a Director of Amcor Ltd and Iluka Resources Ltd. He is also a member of the Board of Governors at Ivanhoe Grammar School. He was Director of WMC Resources Ltd from 2003 to 2005, Chairman of Range River Gold Ltd from 2004 to 2006 and ION Ltd (in administration) from 1999 to 2005.

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, Greg was Director of Investment Banking at Merrill Lynch & Co and headed the Asia Pacific Metals and Mining Group.


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FOUNDATION HIGHLIGHTS

Message from SVI Foundation Board Chair

Since the SVI Foundation started four years ago, we have gone from strength to strength and 2006 was no exception. I am very grateful to our dedicated and hard working Board members who have raised vital funds for research into devastating diseases that affect everyone in our community.

Events

Our Events Committee and Support Group have organised some wonderful events this year giving Board members the opportunity to introduce SVI to their friends, colleagues and business partners. We were thrilled to host one of the first functions to take place in the new Eureka Tower. In August, Dancing Like the Stars was an outstanding event and enjoyed by all those who attended.

SVI 1000 Club

The 1000 Club signed up its 300th member in October 2006. I would like to thank everyone who has shown their commitment to medical research by joining the Club.

SVI $10,000 Discovery Fund

2006 saw the announcement of our new initiative, the $10,000 Discovery Fund where individuals or companies pledge to give $10,000 annually for five years. These funds will be invested in a managed fund and provide growing income to SVI for many years to come. We are looking forward to seeing this initiative come to fruition in 2007.

Looking to the future

With the new appointments of Robin Berry to the position of CEO and Jo Crowston in Communications to the SVI Foundation, I am looking forward to the development of our corporate partnerships, Workplace Giving and bequest programs to raise funds in our quest to eradicate many threatening diseases.

As we prepare for the celebration of SVI's 50th anniversary in 2008, I would like to take this opportunity to thank all our supporters for their continued commitment to SVI.

God Bless.

Dr Susan Alberti AO HonLLD

Foundation Board Chair
St Vincent's Institute

7. The Young SVI Committee 8. Rodney Eade, Western Bulldogs Football Club 9. James Baron, Hardy Brothers Jewellers and Sue Alberti AO, SVI 10. Enzo Raimondo, REIV and Tristan Iseli, SVI 11. Sam Tarascio, Salta Properties 12. Don Churchill, John Fairfax Holdings Ltd


7


8


9

1. Professional dancers, Skye Wilson and Jarrad Byrnes 2. Eureka Tower Views 3. Brenda Shanahan, SVI and Clive Smith, Deutsche Bank AG 4. The Hon. Julie Bishop MP 5. Susan Alberti AO with members of the SVI Support Group Committee 6. Sir Peter Morris AC, Fellow of the Royal Society and Brenda Shanahan, SVI

Gala Events

Evening at the Top of the Eureka Tower
29th July 2006

With stunning views of Melbourne from the 84th floor of Eureka Tower, guests were treated to a degustation menu created by Shannon Bennett of Vue de monde and Ray Capaldi of Fenix Restaurant.

Dancing Like the Stars of SVI
26th August 2006
Park Hyatt Hotel

Coached by 'Dancing With The Stars' judge, Mark Wilson and his team of dancers, guests enjoyed a night of dancing in August.

SVI Support Group

Black Tie Dinner
27th October 2006
The Australian Club

YSVI

Pink and Black Ball
21st April 2006
Atlantic South Wharf Function Centre

A Day at the Races
11th November 2006
Spring Racing Carnival, Flemington Racecourse

Director's Dinners

A series of dinners were held at Crown Towers to give SVI supporters the opportunity to hear from high profile guest speakers:

Don Churchill
Managing Director Victoria John Fairfax Holdings Ltd
4th April 2006

The Hon. Julie Bishop MP
Minister for Education, Science and Training
26th April 2006

Rodney Eade
Coach, Western Bulldogs Football Club
21st September 2006

SVI Corporate Partnerships

Hardy Brothers Jewellers

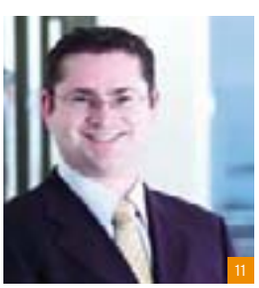
Hosted a Valentine's Day Reception
9th February 2006

REIV Young Agents Group
Cocktail Party with guest speaker, Sam Tarascio
23rd February 2006
Feddish Bar, Melbourne

PricewaterhouseCoopers
Hosted a dinner with guest speaker, Sir Peter Morris AC, Fellow of the Royal Society.
14th March 2006

The Real Estate Institute of Victoria (REIV)
Invited SVI to take part in their conference with a display of SVI's work and as beneficiary of their dinner auction.
6th April, 2006

Leader Community Newspapers
Supported SVI through a four week fundraising campaign featuring stories about people affected by diseases investigated at SVI.
November to December 2006



Ms Brenda Shanahan + Mrs Karen Plant + Professor Thomas Kay + Mr Sam Tarascio + Mr Benni Aroni
Not pictured: Ms Connie McKeage + Ms Danielle de Capele + Ms Marcia Griffin

SVI FOUNDATION BOARD

Dr Susan M Alberti AO HonLLD

Chair, SVI Foundation Board

Dr Alberti is a Board Member of St Vincent's Institute.

Mr Robin Berry

Deputy Chair, SVI Foundation Board

Until December '06 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. He has successfully launched businesses which design and market branded surf apparel, footwear, aqua and fitness products. Mr Berry was appointed CEO to the SVI Foundation Board to commence in 2007.

Mr Benni Aroni

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 since 1998. 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.

Ms Danielle de Capele

Ms de Capele lives in Monaco where she is an organiser of international events and is on the board of various charitable organisations. She travels extensively within Europe and the USA and spends approximately 3 months of the year in Australia.

Ms Marcia Griffin

Ms Griffin was CEO of Pola Cosmetics and a former Victorian Telstra Business Woman of the Year. Current roles include Directorships of PMP Limited and National Pharmacies, as well as a position as a TEC Chair. Marcia is an author of a business biography, "High Heeled Success". She is a motivational speaker and marketing consultant.

Ms Connie McKeage

Ms McKeage is CEO of Pentafin Solutions, one of Australia's fastest growing software solutions companies. Prior to her role at Pentafin, Connie held key executive positions with organisations including Bankers Trust Australia (BT), Rothschild Asset Management and Perpetual Funds Management (Deputy Managing Director). She has also spent considerable time working in Asia, Canada, Europe and the USA, where she held the position of Managing Director Global Operations for NewRiver Communications. In 2003 Connie was awarded a Centenary Medal for her contribution to Australian society in the area of Business Leadership.

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 fund raising and educational organisations including the original Noah's Ark Toy Library for Handicapped Children and is currently Chair of the St Vincent's Institute Support Group.

Mrs Claire O'Callaghan + Dr Susan M Alberti AO+ Mr Robin Berry + Mrs Christine Tarascio
Not pictured: Mr Andrew Wraith + Mr Doug Wright + Mr Martin Ralston + Mr Jonathon Rowe

Mrs Karen Plant

Mrs Plant is a qualified interior decorator. Together with her husband Barry, they established Barry Plant Real Estate which now boasts over 60 offices throughout Melbourne and country Victoria. In conjunction with her business commitments, Karen has been heavily involved in charitable work for many years. Karen is currently a Council member of Camberwell Girls' Grammar School and is a member of the 'Invest in Carey' Foundation at Carey Grammar School. Karen is also a member of the Chancellor's Circle of Deakin University and a Board member of the REIV Charity Foundation.

Professor Thomas WH Kay

Professor Kay is a Board Member of St Vincent's Institute.

Mr Martin Ralston

Mr Ralston graduated in 1968 with a Bachelor of Economics and spent most of his working life involved with information technology. He worked for BHP Computer Accounting Services then Accenture (formerly Andersen Consulting). Martin was a partner with Accenture from 1985 until 2001 when he retired. He is currently Treasurer of the Moonee Valley Racing Club, Non-Executive Chairman of Transol Corporation and Vice-President of Hawthorn Football Club.

Mr Jonathon Rowe

Mr Rowe is a founding member of The Loop Agency, a leading creative marketing company. Prior to this he was a Director of Clemenger BBDO, Managing Partner of Publicis Mojo, and is a specialist in communications strategy and effectiveness. He holds an economics degree, and has studied strategy planning and management in New York and London.

Ms Brenda M Shanahan

Ms Shanahan is Chair of St Vincent's Institute.

Mrs Christine Tarascio

Chair, Events Committee

Mrs Tarascio's family companies are Salta Properties Ltd/Westgate Logistics. Christine 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, PMB (raising funds for prostate cancer research), and Pampering Patients. Christine is currently assisting her family company with the redevelopment of the former Mercy Hospital.

Mr Sam Tarascio

Mr Tarascio gained experience with Coopers & Lybrand, then with Jones Lang Wootton before moving in 1999 to the family company Salta Properties, with responsibility for management of the property investment portfolio. Sam is now Managing Director of Salta Properties and sits on the Executive Management Committee of Westgate Logistics. More recently Sam has become a Director of Pentacle Property Funds Management Ltd.

Mr Andrew Wraith

Until June '06
Mr Wraith is currently Director of Spectrum Energy Pty Ltd. He was previously a senior manager at Shell Australia. He has over 25 years experience in manufacturing, supply and trading, logistics and retail operations, including six years working in South Africa and the Netherlands.

Mr Douglas A Wright

Until December '06
Mr Wright is Deputy Chair of St Vincent's Institute.

SVI 1000 CLUB

A big thank you to the 300 people who have joined the SVI 1000 Club, many renewing for the third time this year. Together we have made a wonderful contribution to medical research and SVI's quest to combat devastating diseases.

If you have not done so already, now is a good time to renew your membership to the Club before the end of the tax year.

To those of you who are yet to join, the SVI 1000 Club not only ensures that you are supporting vital research into diseases such as diabetes, cancer and arthritis but also gives you access to a wide range of events with high profile speakers and the opportunity to network with other members of the Club.

If you would like to join the SVI family and support research into diseases affecting all of us, please complete the form at the back of the report.

We look forward to welcoming you in 2007.

Benni Aroni
Head,
SVI 1000 Club

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Alberti AO, S
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Alpins, N & S
Anderson, D
Arcaro, G
Arcaro, J
Archicentre Ltd
Aroni, B & Kaldor-Aroni, R
Balderstone, Sir James & Lady
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Berry, R
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Bloom, B
Bloom, N
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Commins, N
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Curlewis, D
Dale, G & R
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Demediuk, N
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Shanahan, B
Shanahan, C
Shavin QC, D
Signorino, F
Simpson Family Foundation
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Skala, S
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Slattery, P
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Smith, P & T
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Smorgon, T
Smorgon, V
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Stapleton, M
Steven, J
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Xipell, T
Yencken, T & M
York, G
Young, C
Young, D
Young, D
Young, H
Yu, MK
Zagame Hotels

We also thank those members who wish to remain anonymous.

Structural Biology

Proteins are the body's most 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. The major areas of protein crystallography research in the Structural Biology Unit involve proteins implicated in cancer, brain disease and bacterial and viral infection.

SVI SCIENTISTS HAVE SOLVED THE STRUCTURES OF MORE THAN 30 DIFFERENT PROTEINS INVOLVED IN DISEASE

How Siah recognizes proteins destined for degradation

Protein poly-ubiquitylation functions as a signal for protein degradation. Siah is a RING-containing protein that functions in protein degradation and has recently received a great deal of attention because of its role in certain disease processes. For example, Siah regulates hypoxia-inducible factor-alpha protein levels, itself a central regulator of the cellular response to hypoxia by hypoxia-induced interaction and degradation of PHD prolyl hydroxylases. Siah also interacts with synphilin-1 and αsynuclein and thus may play a role in Parkinson's Lewy body formation.

Previously, a binding motif (degron) has been recognised in many of the Siah degradation targets, suggesting that Siah itself may facilitate substrate recognition. We determined the crystal structure of Siah in complex with a peptide containing the degron motif. The structure revealed that binding occurs within a groove formed in part by the zinc fingers and the first two β-strands of the TRAF-C domain of Siah. We showed that residues in the degron previously described to facilitate binding to Siah interact with the protein and mutagenesis of Siah at sites of interaction abrogated both *in vitro* peptide binding and destabilisation of a known Siah target. Our work on Siah is in collaboration with Prof David Bowtell, Peter MacCallum Cancer Institute.

Glutathione transferases bound to anti-cancer drugs

The clinical efficacy of anti-cancer drugs is often limited by the emergence of drug resistance in cancer cells. The glutathione transferase enzyme, GST P1-1, is believed to be an important factor in such resistance and its overexpression has been reported in a number of different human malignancies. Changes in the levels of GSTs have repeatedly been found to correlate with the resistance of anti-cancer agents, presumably through accelerated detoxification of these drugs but also through covalent or non-productive binding, highlighting the potential of targeting GSTs for inhibitor drug design in order to improve the efficacy of anti-cancer drugs. The commonly used anti-cancer drug, chlorambucil, is the primary treatment for patients with chronic lymphocytic leukaemia. Chlorambucil has been shown to be detoxified, prior to reaching its DNA target, by GST P1-1. We have determined the crystal structures of GST P1-1 in complex with chlorambucil. Chlorambucil is found to bind in a non-productive mode to the substrate binding site (H-site) in the absence of glutathione. This result suggests that under certain stress conditions where glutathione levels are low, GST P1-1 can inactivate the drug by sequestering it from the surrounding medium. However, in the presence of glutathione, chlorambucil binds in the H-site in a productive mode and undergoes a conjugation reaction with glutathione in the crystal.

Cisplatin (*cis*-diamminedichloroplatinum(II)) has been one of the most widely used anti-cancer drugs for the treatment of malignancies. However, cisplatin exhibits significant drug resistance and this remains one of the most serious and challenging problems to be overcome in further exploiting the use of this drug. One of the most important enzymes for cisplatin drug resistance is GST P1-1. The P1-1 isozyme is overexpressed in cisplatin-resistant cell lines and inhibition of the enzyme leads to reversal of drug resistance. GST P1-1 knock out mice are much more sensitive to the cytotoxic effects of cisplatin. We have determined the structure of GST P1-1 complexed to cisplatin. Surprisingly we find that it binds at the dimer interface rather than the active site, thus revealing a new mechanism of resistance whereby the enzyme can sequester the drug from the cellular milieu. Our work on GSTs is in collaboration with Prof Mario Lo Bello, University of Rome 'Tor Vergata", Italy.

Alzheimer's disease amyloid precursor protein and the role of copper

Alzheimer's disease (AD) is the major cause of dementia. Amyloid β peptide (Aβ), generated by proteolytic cleavage of the amyloid precursor protein (APP), is central to AD pathogenesis. APP can function as a metalloprotein and modulate copper (Cu) transport, presumably via its extracellular Cu-binding domain (CuBD). Cu binding to the CuBD reduces Aβ levels, β suggesting a Cu mimetic may have therapeutic potential. We determined the atomic structures of apo and metal-bound forms of CuBD. The structure of Cu^{2+}-bound CuBD revealed that the metal ligands are His147, His151, Tyr168 and two water molecules, which are arranged in a square pyramidal geometry. The site resembles a Type 2 non-blue Cu center and was supported by electron paramagnetic resonance and extended X-ray absorption fine structure studies. The structure of Cu^{+}-bound CuBD was almost identical except for the loss of one water molecule. The geometry of the site is unfavorable for Cu^{+}, thus providing a mechanism by which CuBD could readily transfer Cu ions to other proteins. Our work on APP is in collaboration with Prof Colin Masters, Drs Roberto Cappai and Kevin Barnham, University of Melbourne.

Michael Parker + Julian Adams + Chris Anstey-Gilbert (R) + David Ascher + Gabriela Crespi + Brett Cromer + Susanne Feil
Nancy Hancock + Guido Hansen + Geoffrey Kong + Jenny Leung + Luke Miles + Craig Morton + Hooi-Ling Ng
Lorien Parker (L) + Galina Polekhina + Julian Tang + Peter Walsh +Jerome Wielens + Kwok Soon Wun + Yibin Xu

Signal Transduction

Our immune system protects us against infection by pathogens such as bacteria and viruses. The immune system is a complex network of diverse cell types that need to be able to signal the presence of a pathogen and eliminate the intruder. Both the development and the function of the immune system are tightly controlled processes that incorporate a variety of checks and balances. These controls make the immune system sufficiently robust to combat infection, but not so powerful that the immune cells attack healthy tissue. When this balance is perturbed, chronic inflammation and autoimmune disease may result. In the Signal Transduction Unit, we are interested in understanding how these control mechanisms work. Using a variety of approaches, we aim to identify molecules that are critical for maintaining a balanced immune system, and which may be suitable candidates for the development of drugs to combat autoimmune disease. We are studying a class of molecules called the SOCS proteins, which function as 'stop signals' to limit the strength of an immune response.

AUTOIMMUNITY PLAYS A ROLE IN OVER 80 DISEASES

Regulation of the immune system by SOCS proteins

Cytokines are important messengers that control the survival, growth, differentiation and function of cells of the immune system. Cytokines are produced in response to changes in the environment (such as infection), and act on cells to change their behaviour in response to these environmental changes. Responses to cytokines are typically transient, and unregulated responses to these potent molecules are generally harmful. Examples of cytokines include interferons, interleukins and growth factors.

Several years ago, we identified a family of proteins known as SOCS (suppressor of cytokine signalling). These proteins function as "stop signals" to ensure that cytokine signals are turned off when they are no longer needed. To understand the roles of SOCS proteins, we have made mice that are unable to make SOCS proteins. In the absence of SOCS, mice develop immune and inflammatory disease, showing that SOCS proteins are critical for keeping the immune system in check.

We are focussing on two members of the SOCS family, SOCS1 and SOCS3. Previous work has established that both SOCS1 and SOCS3 play important roles in regulating T lymphocyte function. However, overlapping roles of these proteins may not be evident in mice lacking a single SOCS protein. To address this, we are generating mice that lack both SOCS1 and SOCS3 in T lymphocytes. In particular, we are focussing on the role of SOCS1 and SOCS3 during early T cell development in the thymus, since expression of these proteins is coincident at this stage.

Identification of immune regulators using ENU mutagenesis

We are interested in identifying genes that regulate lymphocyte development and activity. The mutagen, N-ethyl-N-nitrosourea (ENU) is used to induce point mutations throughout the mouse genome, and blood samples from resulting pedigrees of mice are screened for aberrations in lymphocyte development, number and activation state. To date, we are studying several pedigrees in which multiple members exhibit abnormalities in their immune system. We have established that these abnormalities are inherited, and are in the process of identifying the mutated genes. In addition to isolating novel genes, this approach is likely to identify known genes that were not previously known to have a role in immune regulation.

In vivo mutation of the NFκB2 gene using ENU mutagenesis generates an NFκB2 'super repressor'

We have identified a pedigree of mice, termed LYM1, in which affected members lack peripheral lymph nodes and show an expansion in the number of peripheral blood lymphocytes. This phenotype was found to be autosomal dominant and the mutation was mapped to a region on chromosome 19. NFκB2, a candidate gene in this interval, is involved in the "alternative NFκB pathway" which is known to be critical for the genesis of peripheral lymph nodes. The NFκB2 gene encodes a precursor protein, p100, which sequesters RelB in the cytoplasm. Stimulation of receptors for lymphotoxin β, RANKL, BAFF and CD40L triggers a cascade of events that causes p100 to be processed to p52. The p52:RelB complex can then migrate to the nucleus and regulate genes involved in lymph node organogenesis, osteoclastogenesis and B-cell maturation. Sequencing of the NFκB2 gene in LYM1 mice revealed a mutation that introduces a premature stop codon. We have shown that the truncated NFκB2 protein is unable to be processed, and acquires a 'super repressor' function, allowing constitutive inhibition of the alternative NFκB pathway, resulting in defective LN formation, bone homeostasis and B cell maturation.

Perturbed B cell development in MLD4 mice

Affected members of the MLD4 pedigree have reduced numbers of mature B lymphocytes. This mutation appears to affect the function of a negative regulator of B cell receptor (BCR) signalling, since BCR-induced activation of ERK, JNK and Akt, and calcium flux, is excessive in MLD4 B cells. Similar to mice lacking negative regulators such as CD72, MLD4 mice lack mature B cells but paradoxically have an increase in the number of extrafollicular plasma cells in the spleen, leading to increased IgM deposition and mild glomerulonephritis. This phenotype is also consistent with unregulated BCR signal transduction. We are currently investigating the hypothesis that unregulated BCR signalling promotes terminal differentiation of mature B cells, leading to a relative deficit in the number of mature B cells. Excessive BCR signalling may also lead to increased negative selection at the T1-T2 transitional stages of B cell development, again contributing to the deficit of mature B cells. We have mapped the MLD4 mutation to a 4 Mb region on chromosome 4.

Robyn Starr (R) + Gillian Tannahill + Hayley Croom (L) + Lei Shong Lau + Elena Tucker + Sarah Jones

Immunology and Diabetes

People with type 1 diabetes lack insulin, the hormone that regulates the body's use of glucose. Insulin is produced by cells in the pancreas called beta cells, which are contained within small clumps of cells called islets. In type 1 diabetes, beta cells are mistakenly attacked and destroyed by the immune system. Type 1 diabetes affects up to 4.7 million people world-wide and its incidence is increasing. It is a major chronic disease of childhood and also accounts for approximately 10% of the cases of adult-onset diabetes. It imposes great personal strain on affected individuals and their families, as well as significant economic cost.

TYPE 1 DIABETES IS ONE OF THE MOST COMMON CHRONIC DISEASES IN CHILDREN

In the Immunology and Diabetes Unit, we are interested in understanding how the immune system causes beta cell damage. Evidence in mice suggests that "killer" cells of the immune system called cytotoxic T lymphocytes (CTL) play a significant role in killing beta cells. We have studied the molecular mechanisms by which CTL destroy beta cells and we are investigating ways to protect beta cells from the immune system as a potential therapy for treating type 1 diabetes. We are also studying proteins within the beta cell that either promote or reduce cell death. Our work is being applied to humans through transplantation of human islets from organ donors to reverse diabetes.

Responses against islet antigens in non-obese diabetic (NOD) mice are prevented by tolerance to proinsulin but not IGRP

Type 1 diabetes is characterised by immune responses against several proteins (called autoantigens) found in pancreatic β cells. Two of these autoantigens are proinsulin and islet-specific glucose-6-phosphatase catalytic subunit–related protein (IGRP). T cells that recognise these autoantigens can induce type 1 diabetes in mice that are susceptible to diabetes called non-obese diabetic (NOD) mice. However, whether immune responses to multiple autoantigens are caused by spreading from one to another or whether they develop independently of each other is unknown. Using genetically modified mice, we determined that immune responses against proinsulin are necessary for IGRP-specific T cells to develop. On the other hand, loss of IGRP-specific T cells did not protect NOD mice from type 1 diabetes, providing direct evidence that the response against IGRP is downstream of the response to proinsulin. Our results suggest that pathogenic proinsulin-specific immunity in NOD mice subsequently spreads to other antigens such as IGRP. This work has consequences for the design of preventative therapy for type 1 diabetes.

SOCS-1 protects from virally-induced type 1 diabetes

'Killer' T cells (called CTL) can rapidly kill insulin-producing beta cells in the pancreas and therefore contribute to the development of type 1 diabetes. There are a number of ways that CTL can kill beta cells, including by the release of cytokines – molecules that cause inflammation and are toxic to beta cells. One cytokine of particular interest is IFNγ. In collaboration with Prof Matthias von Herrath at La Jolla Institute of Allergy and Immunology, we have studied how CTL use IFNγ-dependent mechanisms to kill beta cells in a virus-induced model of type 1 diabetes. Suppressor of cytokine signaling-1 (SOCS-1) represses the action of several crucial cytokines simultaneously, among them IFNγ. We therefore evaluated the protective capacity of islet cell SOCS-1 expression in diabetes. Clinical disease was prevented in over 90% of the mice. SOCS-1 prevented inflammation around the beta cells, prevented an increase in key molecules associated with type 1 diabetes – class I MHC, Fas and IP10 – and induced a resistance to cytokine induced killing of beta cells. There was also impaired activation of CTL in these mice. Thus, SOCS-1 expression renders beta cells resistant to CTL attack in a mouse model of type 1 diabetes.

The survival protein, Bcl-xL, is required for survival of single islet cells *in vitro*

We are analysing the way in which members of a family of proteins that regulate cell death contribute to the development of type 1 diabetes. Bcl-xL is a survival protein that is expressed at good levels in beta cells and its deletion in a number of other cell types (mammary, neurons, erythroid) has proved its importance in development and function. We removed the Bcl-xL gene specifically from beta cells and found that the development and function of islets and beta cells was unaffected. Although Bcl-xL could be dispensed with during normal islet development, a role for this molecule became apparent under certain experimental situations *in vitro*. When we dispersed whole islets into single cells and cultured them overnight, control islet cells were susceptible to spontaneous death (20%), but islet cells lacking Bcl-xL were even more susceptible (>40%). When cells detach from the extra-cellular matrix (ECM) that holds them together in tissues, they become susceptible to a form of cell death called anoikis as a result of Bcl-xL down-regulation. By artificially removing all Bcl-xL molecules, we made single islet cells that were unable to protect themselves from anoikis. Before transplantation, islets must be isolated from donor pancreata by a process that can often lead to damage of the ECM. Our work has shown that maintenance of the ECM during islet isolation is important for islet viability.

Thomas Kay + Helen Thomas + Janette Allison + Eveline Angstetra (L) + Rochelle Ayala-Perez + Peter Campbell + Emma Carrington
Nadine Dudek + Stacey Fynch + Kylie Gilbert + Kate Graham + Junquan Huang + Gaurang Jhala + Balasubramanian Krishnamurthy (R)
Cze-Yen Lee + Catherine Li + Thomas Loudovaris + Mark McKenzie + Lina Mariana + Melanie Rowe + Nirupa Sachithanandan
Natalie Sanders + Anne Thorburn + Inggrid Wardani + Su Ee Wong + Felix Zheng

Protein Chemistry and Metabolism

The major focus of the Unit is an enzyme known as AMP-activated protein kinase (AMPK). AMPK acts as the body's fuel gauge. It does this at the single cell level by boosting energy metabolism to meet demand. At the whole body level, AMPK controls appetite in response to hormonal signals acting on the brain, which switch AMPK on or off to stimulate or suppress appetite, respectively. Weight loss and insulin-sensitising hormones stimulate AMPK activity in skeletal muscle to burn off fat. AMPK is also required for the insulin sensitising effects of some commonly used type 2 diabetic drugs. As such, AMPK regulates the burning and storage of fats and sugars, and affects the level of sugars, fats and cholesterol in the blood stream, with the potential to offset the effects of obesity, heart disease and diabetes. AMPK can also influence the growth of cancers through control of the energy supply. An enzyme with powerful and far reaching effects, AMPK could play a significant role in treating conditions that cost Australia's health system billions of dollars a year.

1 MILLION AUSTRALIANS HAVE TYPE 2 DIABETES AND 1 IN 5 ADULTS ARE OVERWEIGHT OR OBESE

Cytokine control of AMPK

One of the deleterious consequences of obesity is the loss of the body's capacity to respond to the hormones that control glucose and fat metabolism. Obesity is often accompanied by the development of insulin resistance, which means that more insulin needs to be secreted by the pancreas to control blood glucose, which often leads to type 2 diabetes. Similarly, in normal weight individuals fat tissue produces a hormone called leptin that suppresses appetite and promotes energy expenditure; however, obesity leads to leptin resistance so that leptin's ability to balance food intake and energy expenditure is disturbed. A highlight of the year has been the discovery that another hormone, Ciliary Neurotrophic Factor (CNTF) activates AMPK in skeletal muscle while reducing AMPK activity in the brain. This work resulted from a multi-institutional collaboration, including Mark Febbraio's laboratory at RMIT, David Carling from the Hammersmith Hospital in England, Walter Thomas at the Baker Heart Research Institute, Matthias Ernst at the Ludwig Institute in Melbourne and Joe Proietto's group at the Department of Medicine, Heidelberg. CNTF was originally named because of its role in neuronal survival, but was subsequently found to reduce weight by suppressing appetite and increasing energy expenditure. The new work shows that CNTF can act directly on skeletal muscle, increasing fatty acid oxidation and reducing insulin resistance by activating AMPK. In addition, CNTF regulates appetite by reducing AMPK in the brain. Most importantly, the beneficial effects of CNTF on metabolism and appetite were maintained in the presence of diet-induced obesity, thereby circumventing the problems associated with leptin resistance. These metabolic actions of CNTF are what are required to reverse the effects of obesity, by increasing energy expenditure and fat oxidation, reducing appetite and improving insulin and leptin sensitivity. This discovery has provided further compelling evidence that the activation of AMPK in the peripheral tissues is anti-obesogenic.

Other cytokines have also been found to play a role in obesity and type 2 diabetes. Over a decade ago, Hotamisligil and his colleagues were the first to recognise the link between inflammatory cytokines, particularly TNFα and insulin action in obesity and type 2 diabetes. How increased circulating levels of the inflammatory cytokine TNFα suppressed fat oxidation and caused insulin insensitivity had been a mystery. We tested the hypothesis that suppressed rates of fatty acid oxidation may be mediated via TNFα-induced inhibition of AMPK's actions. Activation of AMPK depends on phosphorylation by upstream protein kinases that include, LKB1, CaM KKβ and TAK1. These enzymes catalyse the phosphorylation of Thr172 in the AMPK α subunit. Inactivation of AMPK depends on protein phosphatases dephosphorylating Thr172. We found that TNFα treatment inactivates AMPK by increasing the level of the protein phosphatase PP2C, which in turn dephosphorylates Thr172. These results provide a mechanism to explain how TNFα suppresses fat oxidation through inhibition of AMPK and contributes to the development of insulin resistance in obesity.

Activation of AMPK in skeletal muscle increase exercise capacity

AMPK is a αβγ heterotrimer, where AMP binding to the γ subunit controls the α catalytic subunit activity. Previously we found that mutation of the γ subunit R70Q caused activation of AMPK and loss of the enzyme's dependence on AMP. Our collaborator Lee Witters at the Dartmouth Medical College has genetically modified mice so that they have the R70Q mutation in their skeletal muscle γ subunit. This mutation increases muscle AMPK activity leading to glycogen accumulation, which greatly improves exercise capacity on a treadmill. The use of genetically modified mice is a powerful means of testing the role of AMPK in the control of metabolism in response to exercise and hormonal treatments. We are extending these studies to evaluate what happens when control of lipid synthesis and fat oxidation by AMPK is genetically disrupted.

To understand the significance of research on AMPK one only has to consider the many Australians treated with cholesterol-lowering drugs called "statins". These act by inhibiting the body's production of cholesterol. The drugs cost the National Pharmaceutical Benefits Plan approximately $500 million a year. AMPK inhibits the production of cholesterol in the same way, and in addition switches off the production of fatty acids, triglycerides and fat cells, so drugs that can regulate AMPK may be more effective, with the potential to control the body's fat metabolism at multiple strategic points.

Bruce Kemp + Andrew Carey + Gregory Steinberg + Matthew Watt + William McKinstry + Belinda Michell + Bryce van Denderen + John Scott (R) Jonathon Oakhill + Zhiping Chen (L) + Sheena Wee + Rohan Steel + Frosa Katsis + Tristan Iseli + Nicholas Dzamko + Ruby Platt + Sarah Turpin Srijan Kumar Pinnamaneni + Matthew Bird + Ling-Shan Chan + Shanna Tam + Julian Maingard + Seamus Crowe

CARDIOVASCULAR DISEASE CLAIMS THE LIVES OF 1 IN 3 AUSTRALIANS

The role of angiotensin

A long term interest in our laboratory is the hormone angiotensin. Angiotensin controls blood pressure by constricting blood vessels, by controlling renal excretion of salt and water, and by controlling adrenal secretion of aldosterone. High levels of angiotensin cause hypertension. Angiotensin has many other actions. High angiotensin levels cause thickening of heart muscle and thickening of the walls of blood vessels. High levels of angiotensin also have toxic effects on tissues, promoting inflammation in tissues and contributing to diseases of the heart and blood vessels. Some of the most valuable drugs we use to treat cardiovascular diseases act by reducing these effects of angiotensin. These drugs include ACE inhibitors, angiotensin receptor blockers, and beta-blockers. ACE inhibitors act by blocking an enzyme which produces angiotensin, called angiotensin converting enzyme (ACE).

Discovery of new way to predict who might have a stroke

Stroke is a leading cause of death and disablility, with a risk of 21% for those living beyond 55 years of age. For many individuals, their initial stroke is the first indication of their stroke risk. Among those who survive a stroke, as many as one third suffer another stroke within five years. Recurrent strokes are associated with higher risk and greater degree of disability than initial strokes, and prevention of subsequent stroke in patients with cerebrovascular disease is an important objective of treatment. The aim of our research was to develop improved ways to identify people at increased risk of stroke so that preventive therapies could be targeted more effectively.

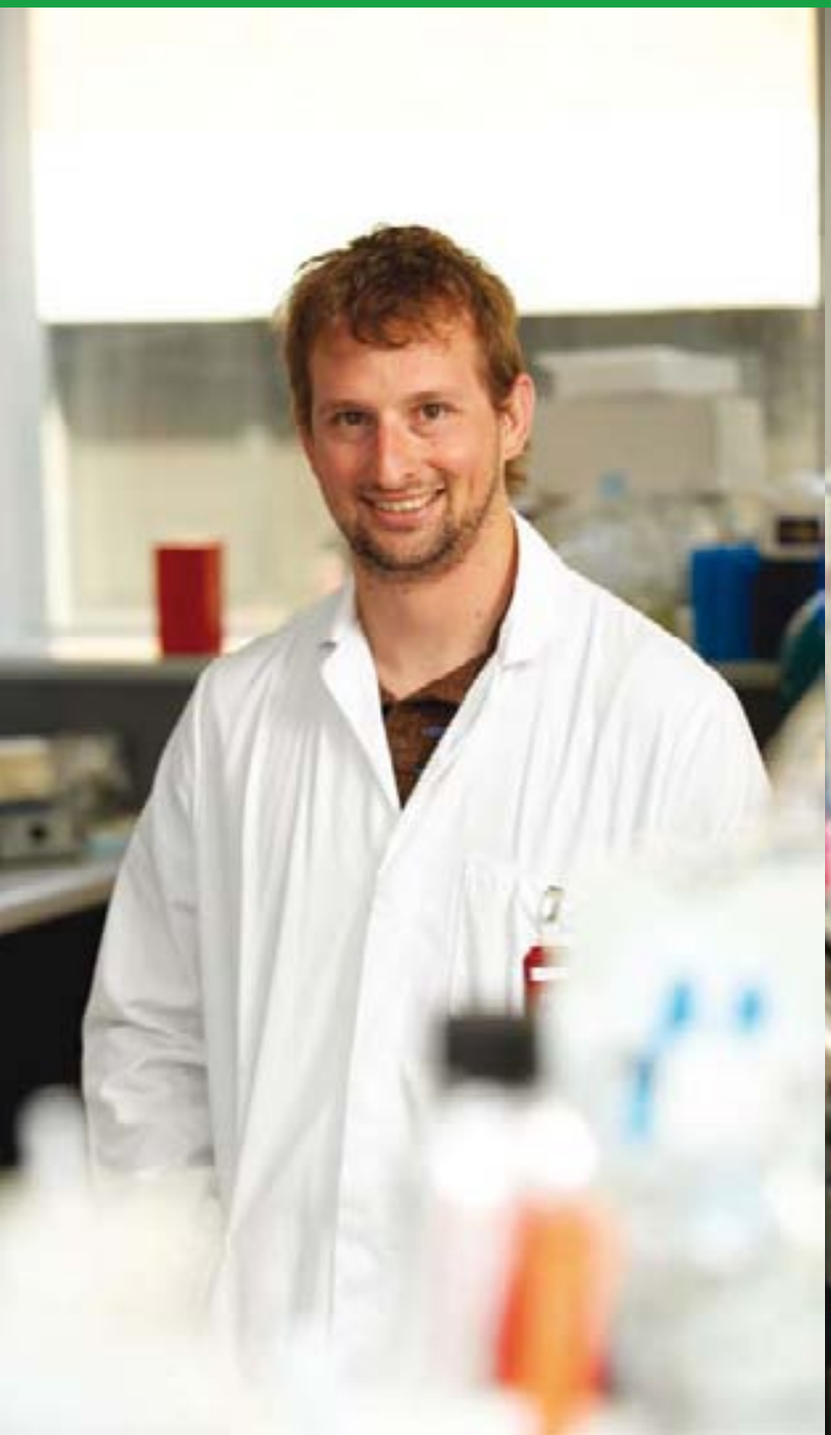
In collaboration with researchers at the George Institute for International Health in Sydney, we measured chemicals in the blood of several thousand people who had suffered a stroke and were monitored for up to five years. We found that people more likely to have a second stroke had increased amounts of two different chemicals in their blood (sVCAM-1 and NT-proBNP). By measuring these chemicals we can identify people at risk of recurrent stroke up to five years before it may occur. This new information will greatly assist our research to discover why strokes recur, and our search for new strategies to prevent and treat stroke.

New understanding of how beta-blockers produce benefit in heart failure

Heart failure is a serious condition that affects one in five people in their lifetime. Beta-blocker drugs play an important role in the treatment of heart failure and our research has provided new information about how these drugs produce benefit for heart failure patients. Beta-blocker drugs were initially thought to benefit heart failure patients by suppressing the effects of the sympathetic nervous system. However, studies in our laboratory have shown that beta-blocker drugs also reduce angiotensin levels. More recently, in collaboration with Dr Aggarwal at the Royal Melbourne Hospital, we showed beta-blocker drugs reduce aldosterone levels. Both angiotensin and aldosterone are important contributors to heart failure and the suppression of the levels of these two hormones is likely to contribute to the therapeutic benefits of beta-blocker therapy in heart failure.

Molecular Cardiology

Cardiovascular disease is a term used to describe a range of diseases affecting the heart and blood vessels. These include heart attacks, strokes and heart failure, and they are the major cause of death and sickness in our community. Our unit is investigating new ways to predict who is likely to experience cardiovascular disease, so that we can better prevent and treat it. We are interested in the role of different hormones in cardiovascular disease, and the effects of drug treatments on these hormones.



ARTHRITIS AFFECTS 3 MILLION AND 2 MILLION AUSTRALIANS HAVE OSTEOPOROSIS

Coupling factor: communication between the cells of bone

The internal structure of our skeleton is constantly changing; small areas of bone are continuously being destroyed by osteoclasts and new bone is deposited in the same place by a team of osteoblasts. This constant turnover of bone means that the skeleton is able to respond quickly to dietary stress or changes in physical activity. This is a tightly regulated process. Yet a mystery remains: how do the osteoblasts know how much bone matrix is needed and how do they know where to deposit it? It appears that osteoclasts release some factor, commonly referred to as "coupling factor", that signals to osteoblasts. When osteoclast activity is increased, the release of coupling factor is modified. Recent work in our unit has shown that the actions of coupling factor involve IL-6 and we are investigating this possibility further.

The only known therapy that can reliably increase bone density is daily injection of parathyroid hormone (PTH). Unfortunately, this therapy is expensive to produce and unpleasant to administer to patients. We have evidence now that injections of PTH stimulate osteoclasts to release IL-6-dependent coupling factor, and that in the absence of IL-6, PTH is unable to increase bone mass. By investigating this pathway of PTH action, we have identified new PTH targets and we are investigating their potential in osteoporosis therapy.

Cancer

One of the focus areas of the Bone, Joint and Cancer Unit is the spread of primary cancers to other sites in the body that results in secondary cancer. This process, known as metastasis, is a serious and unfortunately common complication of many cancers including breast cancer, which often spreads to bone. We have shown that a protein called osteoprotegerin inhibits the process of bone breakdown. Osteoprotegerin is commonly expressed by the bone forming cells, and we provided some of the first evidence that it is also produced by a number of cancers. We explored the consequences of regulating osteoprotegrin levels in breast cancers and determined that this factor can regulate tumour growth both in bone and in the breast. This identified a new role for this protein and indicated that high levels of osteoprotegerin in a tumour might be a poor prognostic indicator for patients. We are now determining how this protein affects tumour growth and whether we can counteract its activity.

Comparative Endocrinology

The major interest of the Comparative Endocrinology group is in the evolution of the parathyroid hormone family, which contain two of the major calcium regulating hormones in vertebrates, parathyroid hormone (PTH) and parathyroid hormone-related protein (PTHrP). Over the last 12 years we have demonstrated the presence of PTHrP in bony and cartilaginous fish, demonstrating that it has a long evolutionary history. In 2002 we identified the fish equivalent of PTH and we are interested in its role in fish and mammals. This year we completed a series of experiments on rat models that mimic post-menopausal osteoporosis and found that fish PTH can form new bone in mammals.

Jack Martin + Matthew Gillespie + Kong Wah Ng + Natalie Sims (L) + Elizabeth Allan + Steve Bouralexis + Ally Chau
Vanessa Cheung + Melissa Ciccomancini + Mirijana Cipetic + Jan Elliott + Jane Fisher + Kylie Fitzpatrick
Jonathan Gooi + Daphne Hards + Karl Häusler + Pat Ho (R)+ Vicky Kartsogiannis + Tali Lang + Virginia Leopold
Chi Ly + Narelle McGregor + Fran Milat + Rachel Mudge + Akira Nakamura + Döne Onan-Asik + Ingrid Poulten
Julie Quach Julian Quinn + Evange Romas + Hasnawati Saleh + Pat Smith + Melisa Vazquez + Emma Walker

Bone, Joint and Cancer

A healthy skeleton is important for normal bodily function: it is needed for all physical activity, to protect internal organs, and as a source of nutrients for the blood and immune system. Bone diseases such as osteoporosis, arthritis and cancer of bone all result in a reduction in bone mass. Our unit is seeking new therapeutic targets to treat these common debilitating diseases by studying the cells that build bone (osteoblasts) and the cells that destroy bone (osteoclasts) and the way that these cells interact with each other and with changes to their environment. Ultimately, we aim to identify new factors or ways to promote bone formation.

1 IN 3 MEN AND 1 IN 4 WOMEN WILL BE AFFECTED BY CANCER BY THE AGE OF 75

Identification and characterisation of substrates of cyclin-dependent protein kinases (CDKs)

CDKs promote cell cycle progression by phosphorylation of critical cell cycle regulatory molecules. An important unresolved issue relates to understanding the molecules targeted by CDKs and how their phosphorylation regulates cell division, since increased CDK activity can contribute to human cancer.

We have isolated a gene termed RBP1α which is related to retinoblastoma-binding protein 1 (RBP1). RBP1 binds to the tumour suppressor retinoblastoma protein (pRb) and recruits histone deacetylases (HDACs) to inhibit transcription and cell cycle progression. Our studies show that both RBP1 and RBP1α are phosphorylated by CDKs *in vitro* and in cells, leading to their dissociation from pRb. These studies strongly suggest that CDK-mediated phosphorylation of RBP1 and RBP1α leads to HDAC dissociation from pRb to alleviate their transcriptional inhibitory effects and promote cell cycle progression. Current studies involve determining the phosphorylation sites on RBP1α and RBP1 by mass spectrometry and defining if CDK-mediated phosphorylation of these proteins regulates cell cycle progression through effects on pRb and HDAC association, activity and transcription.

Similar to RBP1α, the chromatin-remodelling SWI/SNF complexes control cell proliferation by regulating transcription. We have undertaken studies in *Drosophila* in collaboration with Dr Helena Richardson, PMCC, to address if CDKs regulate SWI/SNF and cell cycle progression. *Drosophila* provides a powerful genetic system and since the cell cycle pathway is evolutionarily conserved, these studies will provide insight into cell division in human cells. Our studies indicate that SWI3 is phosphorylated on CDK sites in cells.

Importantly, transgenic flies expressing of SWI2 (BrmALA) which cannot be phosphorylated on CDK sites resulted in the ablation of wing tissue, while a mutant phosphomimic form (BrmASP) resulted in expansion of the posterior wing region. In addition, expression of BrmASP in the developing eye resulted in disorganised eyes, consistent with additional cell proliferation. These exciting new data provide the first evidence that the CDK phosphorylation sites on SWI2 (Brm) have important consequences on cell cycle progression *in vivo*. In addition, recent results suggest that the phosphomutant BrmALA exhibits altered binding to a regulator of DNA replication termed Geminin.

This work suggests that CDK-mediated phosphorylation of Brm may regulate cell cycle progression by controlling the synthesis of the cell's genetic material, DNA. Further studies will involve genetic, cell biological and *in vitro* studies to understand this regulation at a mechanistic level.

Regulation of cell cycle progression by ubiquitin-conjugating and -ligase enzymes

In addition to CDK-mediated phosphorylation, degradation of key cell cycle regulators by the ubiquitin/proteasome system is critical for cell division and deregulation of components of this pathway is also important in human cancers. The ubiquitylation pathway catalyses the covalent binding of the ubiquitin polypeptide to substrate proteins, tagging them for proteasome-mediated proteolysis. A major focus relates to understanding how ubiquitin-conjugating enzymes (UBCs) control proteolysis and cell division. We have focused on the ubiquitin-conjugating enzyme, Cdc34, which is a critical regulator of cell cycle progression in eukaryotic cells. We have identified the phosphorylation sites on Cdc34 and demonstrated that these sites are specifically phosphorylated by casein kinase 2. Cell cycle studies indicate that phosphorylation of these sites is important for Cdc34-mediated G_1-S phase cell cycle progression. Our data indicate that phosphorylation increases Cdc34 catalytic activity to increase the rate of protein ubiquitination and degradation of the cell cycle inhibitor Sic1. These results indicate that phosphorylation of Cdc34 is important for increasing its activity to promote the degradation of cell cycle inhibitors, and to stimulate cell cycle progression.

We have also unveiled a conserved site in UBCs, which is critical for their catalytic activity and cell cycle functions. Bioinformatics analysis suggests that this site is conserved in related enzymes termed E3 ligases (E3s). Overexpression of UBCs and E3s, which control cell cycle progression, is important in the development of human cancer. The conserved site we have identified may represent a novel target for the development of new cancer therapeutics. The recent approval of the proteasome inhibitor bortezomib for the treatment of advanced multiple myeloma augurs well for the development of drugs targeting specific abnormalities in the ubiquitylation pathway, such as overactive UBCs and E3s.

Cell Cycle and Cancer

Humans could not survive, or for that matter develop in the first place, if our cells could not proliferate and divide. The defined sequence of cellular duplication and division is called the cell cycle. When it is perturbed, cells lose their ability to control division, and become cancerous. Defining how increased cell division occurs is essential for understanding cancer development.

Cell division is controlled in two ways: protein activation and degradation. Enzymes called cyclin-dependent kinases add phosphate groups to proteins, causing them to become active, while the addition of a protein called ubiquitin marks other proteins for destruction. In the Cell Cycle and Cancer Unit we use a range of approaches to understand how cell division is controlled by the activation and degradation of proteins in the cell cycle, and how these processes go wrong in cancerous cells. These studies will increase our understanding of the molecular mechanisms of cell division and help us understand how human cancer starts and progresses.

EACH YEAR 345,000 PEOPLE ARE DIAGNOSED WITH CANCER IN AUSTRALIA

Scientists in the Molecular Genetics Unit have identified a new family of DNA damage response proteins that appears to act as a "foreman", responsible for assembling appropriate repair machinery near damaged chromosomes. We have identified the type of DNA damage that these proteins target, and how they carry out the repair. In addition, we have shown that these proteins are responsible for repairing damage caused by certain chemotherapeutic drugs; further research may reveal ways of rendering these drugs more effective.

Roles of Mdt1 as a blocked-end specific DNA recombination facilitator

Yeast cells lacking Mdt1 (*mdt1*Δ) are highly sensitive to the cancer chemotherapeutic bleomycin that causes chemically blocked DNA double-strand breaks. The main repair pathways for double-strand breaks involve the *RAD52*-dependent recombination pathway and the *YKU70/YKU80*-dependent end-joining and telomere-maintenance pathways. Bleomycin-induced DNA double-strand breaks can therefore not be repaired in cells that lack both of the *RAD52* and *YKU70* genes (*rad52*Δ*yku70*Δ), and additional deletion of *MDT1* in these cells does not increase their bleomycin hypersensitivity. However, *mdt1*Δ increases the bleomycin hypersensitivity of *rad52*Δ or *yku70*Δ single mutants. Altogether, these findings indicate that Mdt1 contributes to the repair of bleomycin-induced double-strand breaks in a manner that is required for maximum efficiency of both the *RAD52* and the *YKU70/80* pathways. We also found that *mdt1*Δ leads to increased sensitivity to protein-blocked DNA double-strand breaks caused by another chemotherapeutic, camptothecin, when combined with partially recombination-defective mutations, but cells lacking Mdt1 have no problems repairing "clean" enzyme-generated breaks that are readily re-ligatable. Telomeres are the linear ends of chromosomal DNA, and therefore by definition, represent double-strand breaks, and they are hidden under a protein cap to avoid inappropriate repair, which makes them look like protein-blocked double-strand breaks. However, in the absence of the enzyme telomerase that normally maintains telomeres, the *RAD52*-dependent recombination pathway has to be able to gain access to natural chromosome ends to maintain telomere structure by an alternative mechanism. Yeast used two pathways to achieve this: an efficient type II pathway that results in very long and heterogenous telomeres, and a less efficient type I pathway that results in very short and homogenous telomeres. Normally, over 95% of telomerase negative cells use the type II pathway, but remarkably, over 95% of *mdt1*Δ mutants lacking telomerase have the characteristically short telomeres of the inefficient type I pathway. Therefore, similar to the bleomycin response, Mdt1 also regulates recombination efficiency at natural chromosome ends, indicating that it functions in a blocked-end specific recombination facilitator pathway.

Roles of telomere-related functions in the cellular response to the chemotherapeutic drug bleomycin

Bleomycin is an efficient cancer chemotherapeutic, but its clinical use is limited by life-threatening DNA damage-unrelated side effects. Better understanding and specific inhibition of bleomycin repair could reduce such side effects by allowing the use of lower therapeutic bleomycin doses. Comparison of *rad52*Δ and *rad52*Δ*yku70*Δ bleomycin sensitivity profiles indicates that >90% of bleomycin repair depends on the *RAD52*-dependent recombination pathways and ~10% on *YKU70/80*. The general assumption was that this *Yku70/80* function involves its role in the non-homologous end-joining pathway (NHEJ), but as *Yku70/80* also has telomere-related functions, we wanted to test if the latter could be involved in bleomycin repair as part of the Mdt1-containing blocked-end specific recombination pathway. In support of this hypothesis, we found that deletion of the NHEJ-specific DNA ligase 4 has a much less additive effect on *rad52*Δ bleomycin hypersensitivity than *yku70*Δ. Moreover, we also found that the telomere-specific *yku80-135i* mutation, which does not affect NHEJ, considerably enhanced *rad52*Δ bleomycin hypersensitivity, almost to the same extent as complete *YKU80* deletion. These results indicate that, surprisingly, telomere-related functions contribute significantly to the repair of bleomycin-induced DNA lesions in yeast. If a similar mechanism is conserved in humans, it would be conceivable that combination with telomerase inhibitors might be a useful strategy to improve the efficacy of bleomycin chemotherapy in the clinic.

Jörg Heierhorst + Ana Traven + Andrew Hammet + Nora Tenis (R) + Joel Fletcher (L)
Angela Tam + Tricia Lo Liang + Brietta Pike + Carolyn McNees

Molecular Genetics

DNA damage accumulates spontaneously and environmentally throughout life, and is one of the key factors determining when cancer occurs and its malignancy. Ironically, most drugs used to kill cancerous cells act by damaging DNA. A better understanding of how the cell responds to DNA damage will improve our understanding of how cancer develops and may reveal new ways to treat it.

It is now clear that DNA structure is damaged in different ways, depending on the agent causing the damage, and that the cell reacts to this damage in a specific way, using a specific type of machinery to repair it. If the wrong machinery is used, this results in further DNA damage. The Molecular Genetics Unit works to understand how cells prevent cancer by dealing with DNA damage.

34,000 PEOPLE IN AUSTRALIA DIE FROM CANCER EACH YEAR

The search for LIMK1 inhibitors

It is now well established that LIMK1 is an important regulator of cell motility and invasiveness and is therefore a candidate for the development of drugs to inhibit its activity and eventually the spread of cancer cells from the original tumour to other parts of the body.

We have developed a high throughput assay to screen a compound library for molecules that can inhibit LIMK1 activity *in vitro*. To reduce the number of compounds to be screened, a computer model of LIMK1 structure was constructed. A computer program was used to screen the compound library for molecules that bind to the ATP-binding site of the kinase domain of LIMK1. The best 1000 compounds were assayed for their ability to inhibit LIMK1 activity resulting in 3 candidate molecules.

We are in the process of purifying the kinase domain of LIMK1 expressed in Baculovirus in order to crystallise it and solve its structure. Solving the structure of the LIMK1 kinase domain will enhance the search for LIMK1 inhibitors.

This work was done in collaboration with Dr Ian Street at WEHI and Prof Michael Parker of SVI's Structural Biology Unit.

The association between LIM kinase 1 and p25/TPPP interferes with the ability of p25 to assemble microtubules

We have recently demonstrated that LIMK1 activity is required for microtubule disassembly in human vein endothelial cells by an unknown mechanism. A search for LIMK1-interacting proteins identified p25α, a phosphoprotein that promotes tubulin polymerisation. We found that p25 is phosphorylated by LIMK1 *in vitro* and increasing p25 levels increased LIMK1 auto-phosphorylation. As LIMK1 is expressed in all tissues, we investigated the possibility that p25 is expressed in tissues other than brain in the mouse using rat monoclonal antibodies raised in our lab. Immunoblotting analysis revealed that p25 is not a brain specific protein, as its expression is detected in all mouse tissues and cell lines examined, albeit at lower levels than in the brain. Immunofluorescence analysis demonstrated that endogenous p25 is co-localised with microtubules in a variety of cell types and is also found in the nucleus. Down-regulation of p25 using specific p25-siRNA decreased microtubule levels while its overexpression in stable NIH-3T3 cell lines increased cell size and levels of stable microtubules. Our findings represent a surprising connection between the tubulin and actin cytoskeleton. We propose that the LIMK1/p25 interaction blocks p25 activity, thus promoting microtubule disassembly.

Ora Bernard (R)+ Rong Li + Karla Acevedo (L)+ Priscilla Soo

Cytoskeleton and Cancer

The cytoskeleton acts as the 'bones' of the cell, providing a scaffold for the cell's inner workings. The most abundant protein in the cytoskeleton is actin: actin filaments provide mechanical support for the cell, enable cell movement and participate in cell junctions and cellular contractions. Work in the Cytoskeleton and Cancer Unit is focused on a protein called LIM kinase 1 (LIMK1), which is involved in many cellular functions dependent on actin dynamics, such as cell differentiation, axon pathfinding, cell survival, cell division and cell motility. Most importantly, the group has shown that LIMK1 is involved in cancer spread, making LIMK1 an attractive target for drug development to inhibit this process.

VBCRC Invasion and Metastasis

MMP-13-specific inhibition

In collaborative studies with the Pharmacogenetics Unit, we have previously examined the effects of commercially developed MMP-inhibitors (Marimastat / B2516 and Prinomastat / AG3340) in a model of human breast cancer (MDA-MB-231). Both agents significantly inhibited the growth of MDA-MB-231 cells in mice, and delayed the onset and severity of bone metastatic lesions. Our current goal is to define and inhibit individual MMPs responsible for breast cancer growth and spread. We found that MMP-13 (collagenase-3) was abundant in these lesions, and found also significant inhibition with a new MMP-13-specific inhibitor from Pfizer Global. This is exciting because it represents the first use of a highly specific MMP inhibitor. MMP13 may prove an important target, and the Pfizer drug may have application in both primary breast cancer and bone metastases. Other studies using mice which have been engineered to lack MMP13 (kindly provided by Prof Zena Werb, UCSF, CA, USA) are ongoing.

Epithelial-Mesenchymal Transition

We have characterised a human breast cancer model of epithelial-mesenchymal transition (EMT). EMT endows normally stationary cells with the ability to migrate, invade tissue structures, and survive as single cells. PMC42 cells are a unique human breast cancer cell line which undergoes EMT in response to Epidermal Growth Factor, an important etiologic factor in breast cancer. Follow-up gene array studies performed by the Pharmacogenomics Unit have identified candidate effector molecules, which we are examining in clinical breast cancer specimens using immunohistochemistry. Multiplex tandem PCR (MT-PCR), carried out in collaboration with Prof. Keith Stanley, UNSW & Corbett Research, allows us to measure RNA levels of various EMT-related genes in a single archival section. We have also developed a novel human breast cancer transplantable xenograft model (EDW-01), which acquired mesenchymal marker proteins (vimentin) through sequential passage.

Integrin-Linked Kinase (ILK) Destabilisation and Chemosensitivity

We have targeted Integrin-Linked Kinase (ILK), an important survival signal activated by engagement of cells with their surroundings with integrin receptors. We chose ILK as a target molecule for RNA-directed therapies, including antisense oligonucleotides and short inhibitory RNA. In anchorage-independent cultures, where cancer cells have a survival advantage over normal cells, we found that targeting ILK potentiated the cell killing of conventional chemotherapies. Ultimately, ILK down-regulation could provide an adjunct for breast cancer chemotherapy.

Pharmacogenomics

Identifying metastasis genes

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. One of the processes we have been studying is known as epithelial-to-mesenchymal transition (EMT). In collaboration with A/Prof Erik Thompson's VBCRC laboratory at SVI, the Pharmacogenomics Unit has performed microarray gene expression profiling of human in vitro models of EMT to identify molecular mechanisms which regulate the EMT. The established 'gene-fingerprint' of the EMT is being refined for potential application in clinical diagnosis.

New drug targets in diabetic nephropathy

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, oxidative stress and an associated local over-expression of growth factors. Using cell culture models of this disease, we have identified a gene that plays a critical role in the generation and subsequent pathological consequences of oxidative stress. Given that pharmacological modulation of proteins involved in the generation of oxidative stress may be a suitable therapeutic strategy for diabetic nephropathy, we are collaborating with the Institute's Structural Biology Laboratory to elucidate the crystal structure of this protein and design specific inhibitors to block its detrimental biological activity.

New drugs that inhibit breast-to-bone metastasis

Bone is a particularly frequent site of metastasis for patients with prostate carcinoma and myeloma. In addition, for patients dying from carcinoma of the breast, approximately 85% have demonstrable metastasis to bone. We have been using genomic profiling technologies for several years to study mouse models of breast cancer metastasis to bone. To complement this work we have also sought to identify drugs that block this process. Thus far, we have identified two promising drug molecules that are capable of inhibiting breast-to-bone metastasis in our mouse models. One of the drugs is orally active and used in predominantly Asian countries for the systemic treatment of a variety of skin disorders. While its precise mechanism of action is not known, it does have a well established safety profile and therefore could be rapidly translated into clinical use.

Erik Thompson (L) + Manisha Shah + Tony Blick + Andrea Connor

Mark Waltham + Maria Schache + Sarah Vickery (R) + Maria Mikasinovic
Jia Ni Zhu + Nadia Sadli

VBCRC Invasion and Metastasis

The VBCRC Invasion and Metastasis Unit is part of the Victorian Breast Cancer Research Consortium, a series of Melbourne-based breast cancer-focused groups working as an "Institute Without Walls". The VBCRC Invasion and Metastasis Unit works on the role of matrix metalloproteinases (MMPs) in breast cancer. MMPs are enzymes that cut through tissue and are important not only at the primary tumour site, but also in the spread of the disease to other sites. We are especially interested in the spread of cancer to bone. Increased understanding of these processes will help to combat cancer spread.

Pharmacogenomics

Pharmacogenomics is the study of how genes affect our responses to medication. Work at SVI combines traditional sciences such as biochemistry with recent advances in our knowledge of genes and proteins. 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 are working with the Institute's Structural Biology Unit to design inhibitors to one of these key genes.

Tumour Cell Migration and Metastasis

The Tumour Cell Migration and Metastasis Unit works to identify the genes within cancer cells that enable them to metastasise. This will allow us to isolate and produce new drugs to block this process. To identify these genes, we have compared the genes present in cancer cells that have a high rate of metastasis, to those with a low rate. Using this technique, we have identified a number of genes that may be involved in cancer cell metastasis.

Novel Genes Involved in Breast Cancer Growth and Metastasis

Genetic comparisons of human breast cancer cells with differing metastatic potentials has led to the identification of a number of genes that may play a role in breast cancer growth and metastasis. We are currently characterising a number of these genes with particular focus upon FKBP52 and HSF-1. We are identifying the importance of these genes in breast cancer through over-expression and knockdown studies in several human breast cancer cell lines. For example, we have demonstrated that reduced expression of FKBP52 in the human breast cancer cell line, MDA-MB-231, results in a significant reduction in the ability of the cell to grow. These findings indicate that this gene could be an important regulator of breast cancer growth and may provide a novel drug target in the future. Moreover, we have shown that inhibition of HSF-1 activation can lead to reduced cancer cell growth and migration, important features of a metastatic tumour cell. We are currently examining the mechanisms by which this occurs in an attempt to identify novel ways by which breast cancer cells can be killed. Further characterisation of these genes will include examination of their role in cancer cell invasion and cell survival. Through these studies it is hoped that novel drug targets will be identified that will inevitably improve breast cancer treatment.

Haematology and Leukaemia

The Haematology and Leukaemia Unit focuses on understanding how blood cells mature and how leukaemia disrupts normal blood cell maturation. The group studies these processes by creating mouse models of leukaemia which mimic human disease.

The main research theme centres around T cell development and how studying this can help identify the causes of T cell leukaemia. We are attempting to identify new T cell oncogenes through the use of a retroviral cDNA library screening method in primary mouse cells. In order to create and analyse leukaemic mouse models we use multiparameter flow cytometry and cell sorting.

Current treatments for T cell leukaemia include aggressive intensive chemotherapy and bone marrow transplantation. More intense chemotherapy is not used because of deleterious side effects. Generally, the overall cure rate from these treatments is ~75%. The causative genes in this disease are varied. SCL, LMO1/2, Notch1 and Hox11 overexpression have been described in over 50% of cases. However, the majority of the remaining T cell oncogenes are unknown. Consequently, there is a real need to treat the remaining cases, which fatally relapse, with a more targeted approach. We are utilising retroviral cDNA library screening at a key proliferative T cell development checkpoint to uncover novel T cell oncogenes. Specifically, genes which promote the double negative (DN) to double positive (DP) transition in Rag-1-/- precursors should cause T cell leukaemia in mice when overexpressed. Therefore, the newly discovered T cell oncogenes will form the molecular foundation for the development of more rational T cell leukaemia treatment regimens. Eventually, this approach may even reduce the need for current aggressive chemotherapy in all T cell leukaemias.

Additionally, we are creating leukaemic mouse models of other blood cell lineages using retroviral overexpression. Specifically, we have created a mouse model of myeloid leukaemia by overexpressing Mixl1 in haemopoietic precursors in mice. One hundred percent of all mice receiving Mixl-expressing bone marrow develop a fatal myeloid leukaemia with a mean latency of 50 days. Similar to the haemopoietic stem cell (HSC) from which all blood cells derive, the existence of a leukaemic stem cell (LSC) has been proposed. It is hypothesised that the LSC is responsible for driving the leukaemic process and that identifying and eliminating this cell with specifically targeted drugs should improve patient treatment. Subsequently, we are actively identifying the LSC in Mixl1-induced leukaemia.

John Price (L) + Joseline Ojaimi + Jessica Moore + Kelly Waldeck
Matthew Pereira + Michelle Kouspou

David Izon (R) + Monique Smeet

Tumour Cell Migration and Metastasis

We do not clearly understand how tumour cells leave their original site, move through the body and establish tumours at other sites, a series of events known as metastasis. It is this ability to spread that makes cancer such a deadly disease. Due to our lack of knowledge, there are few drugs in use today that directly target metastasising cells.

Haematology and Leukaemia

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 the stem cell to differentiate into the different blood cells. If this process goes wrong, leukaemia can develop.

40 MILLION PEOPLE AROUND THE WORLD LIVE WITH HIV/AIDS

Optimal quality assurance of simple/rapid HIV assays used in non-laboratory settings: assessing technical performance

It is estimated that 100 million people worldwide will need to be tested for HIV to achieve universal access to HIV prevention, care and support by 2010. Increasing the use of simple/rapid (S/R) HIV assays and decentralisation of HIV testing from regional to district levels in areas of high HIV prevalence is vital to assure that infected people are identified most efficiently. A crucial component of the expansion of testing is both the retention of skilled laboratory workers and the training of non-laboratory health staff in performing S/R diagnostic HIV testing. As a result, a standardised quality assurance (QA) system and adequate training will be essential. We have characterised a novel approach to External Quality Assessment (EQA) for use with S/R HIV testing. Both experienced and non-experienced laboratory participants were able to interpret photographed results of selected S/R HIV tests. More accurate interpretation of results was observed with experienced laboratory participants. This novel approach to EQA could be used to monitor the performance of operators at point-of-care settings as part of an EQA Scheme and to guide monitoring and training. The NRL is now exploring the trial application of this methodology in two developing countries.

The role of viral fitness on control of virus replication in acute HIV type 1 infection determined by real-time PCR

Viral fitness is highly dependent on the host environment. For HIV, transmission and subsequent immune responses are the two most important factors influencing this. Viral load (the level of virus in the blood; VL) and viral fitness taken together can predict disease progression, at least in well-documented but limited studies. Results suggested that individuals harbouring isolates that replicate poorly and who have lower VL control virus replication and delay disease progression more readily than individuals who harbour rapidly replicating isolates and have higher VL.

These studies have been in individuals with established infections and little is known about the impact of viral fitness on the control of virus replication in early HIV-1 infection. To investigate the impact of viral fitness in early HIV-1 infection, we developed real-time PCR assays to detect production of the major different forms (total, integrated and circular) of viral DNA following *ex vivo* infection of peripheral blood mononuclear cells with isolates from individuals very early in HIV-1 infection.

The real-time PCR based assays allowed successful comparison of viral DNA production between subjects. For the selected reference strains, relative levels of DNA production correlated with viral fitness. Preliminary data obtained using primary isolates derived from individuals early in infection indicated increased viral fitness over time for 40% of subjects tested. Detailed comparisons with other clinical and immunological parameters will be added to the study's results. Identification of any relationship between viral fitness and disease progression may assist clinicians in determining the best options when treating HIV infected individuals.

Elizabeth Dax + Susan Best + Dale McPhee (R) + Kim Wilson + Roderick Chappel + Wayne Dimech + Darren Jardine
Thein Thein Aye + Rebecca Cattermole + Denison Chang + Bradley Dent + Barbara Francis + Rosina Gribben
Marina Karakaltsas + Sally Land + Lena Panagiotopoulos + Thu-Anh Pham (L) + Scott Read + Kim Richards
Joanne Schlegel + Kathy Smeh + Sandy Walker + Amasy Alkhateeb + Rosanna Fahmy + Clare Tomasov
Frank Torzillo + Linda Tracey + John Tomasov + Louie Opasinov + Helen Hasler

National Serology Reference Laboratory

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 laboratory results. Our work offers world's best practice in quality assurance of Human Immunodeficiency Virus (HIV) and Hepatitis tests in Australia and has helped us define and correct a number of problems with testing protocols and test performances. The NRL also supplies quality assurance programmes internationally to approximately 120 laboratories. NRL research is focused on improving HIV and Hepatitis C Virus (HCV) diagnostic testing and developing better markers for clinical prognosis.

FELLOWSHIPS, PRIZES AND GRANTS

Structural Biology

Fellowships and Prizes

- Michael Parker was awarded an ARC Federation Fellowship
- Michael Parker was awarded an NHMRC Honorary Fellowship
- David Ascher was awarded a St. Vincent's Hospital Research Week Junior Investigator Award
- Brett Cromer was awarded a Sir Randal Heymanson Foundation Fellowship
- Susanne Feil was awarded an NHMRC Industry Fellowship
- Lorien Parker was awarded a St. Vincent's Hospital Research Week Junior Investigator Award (and winner of best presentation on the day)

Grants

- MW Parker. Molecular analysis of glutathione transferase interactions with drugs and physiological ligands. ARC Discovery Grant
- MW Parker. Avian influenza: molecular basis of potential resistance to neuraminidase inhibitors. NHMRC Strategic Grant
- MJ Scanlon, DK Chalmers, DI Rhodes, MW Parker, J Deadman. Therapeutic approaches to treat human immunodeficiency virus infection: development of HIV-1 integrase inhibitors. ARC Linkage Grant
- G Polekhina, MC Waltham. Structural and drug discovery studies of oxidative stress regulator, thioredoxin-interacting protein. NHMRC Project Grant

Signal Transduction

Fellowships and Prizes

- Gillian Tannahill was awarded a Poster prize, St. Vincent's Hospital Research Week
- Sarah Jones was awarded a SVI Foundation Honours Award
- Elena Tucker was awarded a SVI Foundation Honours Award

Grants

- N Nicola, W Alexander, D Hilton, D Metcalf, R Norton, L Robb, G Roberts, R Starr, J Zhang. Molecular regulation of blood cell production and function. NHMRC Program Grant
- G Davey, W Heath, R Starr, F Carbone. The role of SOCS1 in the immune response. NHMRC Project Grant

Immunology and Diabetes

Fellowships and Prizes

- Kate Graham was awarded a JDRF Postdoctoral Fellowship
- Nirupa Sachithanandan was awarded a Royal Australian College of Physician's JDRF Fellowship

Grants

- TWH Kay. International Islet Transplantation Program in Australia Grant from the Commonwealth Department of Health and Ageing for the Tom Mandel Islet Transplant Program
- TWH Kay and HE Thomas. T-cell specificity and function in T1D pathogenesis and prevention. JDRF Program Project Grant

Protein Chemistry and Metabolism

Fellowships and Prizes

- Bruce Kemp became a Fellow of the American Association for Advancement of Science
- Matt Watt was awarded an International Biochemistry of Exercise Young Investigator Award
- Matt Watt was awarded the National Association of Research Fellows Post-Doctoral Investigators Award
- Nicolas Dzamko was awarded a National Heart Foundation travel grant to attend the "AMPK: impact on mammalian metabolism and disease" conference in Snowmass, Colorado
- Nicolas Dzamko was awarded a FASEB travel award at "AMPK: impact on mammalian metabolism and disease" conference in Snowmass, Colorado

Grants

- GR Steinberg. Cytokine signaling in obesity and insulin resistance. NHMRC Project Grant
- GR Steinberg. Hypothalamic AMP-activated protein kinase in obesity and type 2 diabetes. Diabetes Australia Research Trust Grant
- GR Steinberg. SVI Metabolic Research Program. Lord Mayor's Charitable Fund Eldon and Anne Foote Trust
- W McKinstry. Protein/peptide purification system. The TR&RB Dichfield Medical Research Endowment Fund, The J & R McGauran Trust Fund, The Alma Hazel Eddy Trust, and The Perpetual Foundation
- MJ Watt. Identifying novel factors that improve skeletal muscle metabolic function. Ramaciotti Foundation Establishment Grant.
- MJ Watt, GI Lancaster, I Darby, and MA Febbraio. Molecular basis of skeletal muscle lipoapoptosis. Australian Research Council Discovery Project.
- MJ Watt. Ciliary neurotrophic factor and adipocyte function: protective role in type 2 diabetes mellitus. Diabetes Australia Research Trust.
- SB Jorgensen. The role of resistin in the regulation of insulin sensitivity. Diabetes Australia Research Trust.

Molecular Cardiology

Grants

- D Campbell. Investigation of the pathogenesis of diastolic dysfunction. National Heart Foundation Research Grant-in-Aid

Bone, Joint and Cancer

Fellowships and Prizes

- Australia and New Zealand Bone and Mineral Society Travel Grants were awarded to: Natalie Sims, Vicky Kartsogiannis, Steve Bouralexis, Karl Häusler, Döne Onan-Asik, Keith Thompson, Elizabeth Allan, Hasnawati Saleh and Jonathan Gooi
- Vicky Kartsogiannis was awarded a travel grant for the 1st International Conference on Osteoimmunology: Interactions of the Immune and Skeletal Systems, Crete
- Natalie Sims was awarded Runner up, Best Scientific Poster (Biochemistry/Cell/Molecular Biology), St. Vincent's Research Week
- Jonathan Gooi was awarded Best Scientific Poster (Student), St. Vincent's Research Week
- Jonathan Gooi was awarded a Postgraduate Research Scholarship from the Osteoporosis Australia Research Fund
- Julie Quach was awarded a Dora Lush Postgraduate Scholarship (NHMRC)
- Ally Chau was awarded a Dora Lush Postgraduate Scholarship (NHMRC)
- Vanessa Cheung was awarded a Dora Lush Postgraduate Scholarship (NHMRC)
- Hasnawati Saleh was awarded a Melbourne International Fee Remission Scholarship and a Melbourne International Research Scholarship.

Grants

- M Gillespie. Equipment Grant. Evaluation of inhibitors of bone destruction associated with arthritis. Rebecca L. Cooper Medical Research Foundation Limited

Cell Cycle and Cancer

Grants

- B Sarcevic, H Richardson. Unveiling and characterisation of a fundamental pathway important in cell division. Australian Research Council
- B Sarcevic. A conserved catalytic site in UBCs and E3s as a potential cancer therapeutic target. The Cancer Council Victoria

Molecular Genetics

Fellowships and Prizes

- Jörg Heierhorst was awarded a NHMRC Senior Research Fellowship
- Brietta Pike was awarded a Human Frontier Science Program Long-term Fellowship
- Carolyn McNees was awarded a NHMRC CJ Martin Fellowship
- Carolyn McNees was awarded the TJ Martin Medal for Best Hospital Thesis in 2005
- Andrew Hammet was awarded a Ramaciotti Establishment Award
- Ana Traven was awarded a Ramaciotti Establishment Award

Cytoskeleton and Cancer

Grants

- O Bernard. Regulation of microtubule dynamics by LIM kinase1. NHMRC Project Grant

Pharmacogenomics

Grants

- G Polekhina, M Waltham. Structural and drug discovery studies of oxidative stress regulator, thioredoxin-interacting protein. NHMRC Project Grant

VBCRC invasion and metastasis

Grants

- E Thompson. Invasion and metastasis of breast cancer. Victorian Breast Cancer Research Consortium

Haematology and Leukaemia

Grants

- D Izon, L Robb. A new mouse model of myeloid leukaemia. Association for International Cancer Research.

Tumor Cell Migration and Metastasis

Grants

- JT Price, A Magliocco, J Ojaimi. FKBP52 and its Role In Breast Cancer Metastasis. Cancer Council Victoria.
- G Werther, V Russo, L Bach, JT Price, D Newgreen. Functional Analysis of IGF-Binding Protein-2 Molecular Interactions In Early Development and Disease. NHMRC Project Grant

NRL

Fellowships and Prizes

- Kate Learmonth was awarded an Australasian Society for HIV Medicine Undergraduate and Junior Researcher Award to attend and present at the ASHM meeting

Grants

- D McPhee, D Jardine, K Wilson. Development of an assay to assess relative fitness of primary HIV-1 viral isolates. Australian Centre for Hepatitis and HIV Research. Expression of Interest
- D McPhee, D Jardine and K Wilson. HIV-1 transmission and replicative fitness. American Foundation for AIDS Research Grant.
- K Wilson and G Dore. The humoral immune response to HCV to identify diagnostic and prognostic serological markers. NHMRC Project Grant

SERVICE TO THE SCIENTIFIC AND WIDER COMMUNITY

Service on Scientific Advisory Boards and Committees

Thomas Kay
- Member, Bio21 Scientific Advisory Committee
- Member, VBCRC Scientific – Advisory Committee
- Member, Research Development Committee, St. Vincent's Hospital
- Member, National Serology Reference Laboratory Management Committee
- Member, Medical and Scientific Advisory Committee, Juvenile
- Member, Diabetes Research Foundation
- Member, Research Council, Diabetes Australia
- Chair, JDRF Medical Scientific Review Committee, Immunology and Transplantation Panel
- Member, NHMRC Grant Review Panel (Immunology and Transplantation)
- Member, St. Vincent's Hospital Medical Executive Committee

Matthew Gillespie
- Member, Cancer Council of Victoria
- Member, National Committee for Medicine for the Australian Academy of Science
- Member, Science Policy Committee of the American Society for Bone and Mineral Society
- Member, Research Committee of NHMRC

Michael Parker
- Member, BioCARS Sub-Committee of the Australian Synchrotron Research Program
- Member, Oversight Committee of the Bio21 C3 Facility
- Member, St. Vincent's Hospital Research Grants Committee
- Member, NHMRC Grant Review Panel for Project Grants
- Chair, Victorian Government NCRIS working party on Proteomics

Jack Martin
- Member Scientific Advisory Board, Botnar Research Centre, Nuffield Orthopaedic Centre, University of Oxford, UK.
- Elected Vice-Chairman, International Society, "Cancer and Bone Society".
- Member NHMRC Human Genetic Advisory Committee

Bruce Kemp
- Member, Scientific Advisory Board & Management Committee for National Serology Reference Laboratory
- Member, Scientific Advisory Board, Mercury Therapeutics, Boston
- Chairman, CSIRO Molecular & Health Technologies Science Council
- Member, NHMRC Fellowships Committee Panel

Duncan Campbell
- Member, NHF Heart Failure Guidelines Committee

Jörg Heierhorst
- Member, NHMRC Grant Review Panel
- Member, Human Research Ethics Committee, St. Vincent's Health
- Co-organiser, St. Vincent's Institute/Department of Medicine Seminar Program
- Oral Presentation Judge, Telomere Workshop, Sydney
- Poster Judge, St. Vincents Hospital Research Week
- Poster Judge, Lorne Cancer Conference

John Price
- Scientific consultant, Avolix Pharmaceuticals Inv., Arizona, USA
- Member, University of Melbourne, Department of Medicine Postgraduate Research Committee

Robyn Starr
- Panel Chair, NHMRC Training Fellowships Assessment Committee
- Member, NHMRC Grant Review Panel
- Member, UROP Committee (Bio21)

Erik Thompson
- Founding President and Public Officer, Australasian Microarray & Associated Technologies Association
- Founding Treasurer, The EMT International Association
- Member, NHMRC Grant Review Panel
- Member, Tissue Bank Management Committee, Shared SVH/PeterMac Tissue Bank
- Member, St. Vincent's Hospital Research Development Committee
- Visiting Professor, Kanazawa Medical School, Kanazawa, Japan

Bryce van Denderen
- Professional secretary, Institutional Biosafety Committee, St. Vincent's Health
- Professional secretary, Animal Ethics Committee, St. Vincent's Health
- Seminar Organising Committee, St. Vincent's Institute

Lorien Parker
- President, St. Vincent's Students Society (until 03/06)

Sarah Turpin
- President, St. Vincent's Students Society (from 03/06)

Elizabeth Dax
- Chair, Australian Society of Microbiology, Research Trust Committee
- President, Australasian Society of HIV Medicine
- Associate member, Medical Devices Evaluation
- Member, AHMAC Blood Safety and Quality Working Group
- Member, NCCTG Invitro Diagnostics Working Group
- Member, Eye Research Foundation Fundraising Group

Dale McPhee
- Chair, Academic Advisory Committee, School of Biological and Chemical Sciences, Deakin University

Nadine Dudek
- Member, Occupational Health and Safety committee, SVI

Kate Graham
- Member, Occupational Health and Safety committee, SVI

Anne Thorburn
- Member, UniMelb Obesity

Service on Boards and Editorial Boards

Thomas Kay
- Associate Editor, Journal of Molecular Endocrinology
- Regional Editor, Autoimmunity
- Associate Editor, Endocrinology

Matthew Gillespie
- Board member, Research Australia
- Board member, International Society for Bone and Mineral Research
- Board member, Australian and New Zealand Bone and Mineral Society
- Editor, Journal of Bone and Mineral Research
- Editorial Advisory Board, Journal of Oral Biosciences

Jack Martin
- Board member, Victorian Breast Cancer Research Consortium
- Associate Editor, Bone
- Associate Editor, Endocrinology
- Associate Editor, Calcified Tissue International
- Editorial Board, Trends in Endocrinology and Metabolism
- Editorial Board, BoneKey

Bruce Kemp
- Editorial Board, Cellular Signalling
- Editorial Board, Journal of Molecular and Genetic Medicine

John Price
- Editorial Board Member of Recent Patent Reviews on Anti-Cancer Drug Discovery

Erik Thompson
- Associate Editor, The Breast Journal
- Associate Editor, Clinical and Experimental Metastasis
- Board Member, Metastasis Research Society (International)

Anne Thorburn
- Editor, Obesity Reviews

Service on Conference Organising Committees

Matthew Gillespie
- Program Chair, Australian and New Zealand Bone and Mineral Society, Queenstown, New Zealand
- Program Committee, International Bone and Mineral Society, Montreal, 2007
- Program Committee, International Bone and Mineral Society, Sydney, 2009

Michael Parker
- Member, Lorne Protein Organising Committee
- Chair, Program Sub-Committee of the Lorne Protein Organising Committee

Jack Martin
- Co-organiser, International Conference, "Cancer-induced Bone Diseases"

Bruce Kemp
- Member, Organising Committee, Lorne Conference on Protein Structure and Function
- Chair, Finance Subcommittee, Lorne Conference on Protein Structure and Function

Jörg Heierhorst
- Member, Organising Committee, and Session Chair, 3rd Australian Telomere Workshop, Sydney, 2006
- Co-chair, Organising Committee, and Chair, Keynote Session, 9th Australian Cell Cycle Workshop, Melbourne, 2006
- Member, Program Committee & Local Organising Committee, XXIII International Conference on Yeast Genetics and Molecular Biology, Melbourne, 2007

Robyn Starr
- Program Convenor, ASMR National Scientific Conference, 2006

Erik Thompson
- Member, International Advisory Committee, 11th International Congress of the Metastasis Research Society jointed with the 15th Annual Meeting of Japanese Association for Metastasis Research, 2006
- Co-Convenor, 5th Discovery Science and Biotechnology Conference, Melbourne, 2006

COLLABORATIONS

Structural Biology

- Dr H Drummer, Macfarlane Burnet Institute. HCV
- Dr A Poumbouris, Macfarlane Burnet Institute. HCV
- Prof L Tilley, Dept. of Biochemistry, La Trobe University. Malarial proteins
- Dr B Rawlinson, Department of Microbiology, Prince of Wales Hospital, NSW. Cytomegalovirus
- Dr D Rhodes, Avexa, Victoria. HIV
- Dr S Tucker, Biota, Victoria. Viral respiratory diseases
- Dr O Bernard, St Vincent's Institute. 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, Dept. of Medicine, Austin Health, The University of Melbourne. Prostate cancer proteins
- Prof B Kemp, St Vincent's Institute. Protein kinase regulation
- Prof A Lopez, Hanson Centre for Cancer Research. Cytokine receptor
- Prof J Martin, St Vincent's Institute. Phosphodiesterases
- Prof E Simpson, Prince Henry's Institute of Medical Research. Steroid receptors
- Dr D Stapleton, Bio21 Institute. Protein kinase regulation
- Dr R Thier, School of Biomedical Sciences, University of Queensland. GSTs
- Prof M Vadas, Hanson Centre for Cancer Research. Protein kinases
- Dr M Waters, IMB, University of Queensland, Queensland. Growth hormone receptor
- Dr A Albiston, Howard Florey Institute. IRAP
- Dr A Christopoulos, Dept. of Pharmacology, The University of Melbourne. Muscarinic receptors
- Dr R Cappai, Dept. of Pathology, The University of Melbourne. Proteins implicated in Alzheimer's disease
- Dr S Y Chai, Howard Florey Institute. IRAP
- Dr P Curmi, Dept. of Physics, University of New South Wales. CLICs
- Dr J Jamie, Department of Chemistry, Macquarie University. IDO
- Dr J Lynch, Department of Physiology, Queensland University. Ligand-gated ion channels
- Prof C Masters, Dept. of Pathology, The University of Melbourne. Proteins implicated in Alzheimer's disease
- Dr F Mendelsohn, Howard Florey Institute. IRAP
- Dr S Petrou, Dept. of Physiology, University of Melbourne. Ion channels
- Dr P Sexton, Howard Florey Institute of Experimental Physiology and Medicine. GPCRs
- A/Prof R Truscott, Dept. of Chemistry, University of Wollongong. IDO
- Dr S Bottomley, Dept. of Biochemistry and Molecular Biology, Monash University. Serpins
- Dr J Gamble, Hanson Centre for Cancer Research. Protein kinases
- Dr R Pace, Dept. of Chemistry, Australian National University. Photosystem II
- Dr P Thompson, Dept. of Medicinal Chemistry, Victorian College of Pharmacy. Phosphodiesterase inhibitors
- Dr R Tweten, Dept. of Microbiology and Immunology, University of Oklahoma. Pore-forming toxins and receptors
- Dr G van der Goot, Dept. of Biochemistry, University of Geneva. Aerolysin
- Prof P Dyson, Ecole Polytechnique Federale de Lausanne. Cisplatin drugs
- Prof M Lo Bello, Dept. of Biology, University of Rome "Tor Vergata". Glutathione transferases
- Dr L Garcia-Fuentes, University of Almeria. Glutathione transferases
- Prof B Mannervik, Dept. of Biochemistry, Uppsala University. Glutathione transferases
- Prof G Ricci, Dept. of Biology, University of Rome "Tor Vergata". Glutathione transferases
- Dr G Stenberg, Dept. of Biochemistry, Uppsala University. Glutathione transferases
- Prof S Ferreira, Instituto de Bioquimica Medica, Universidade Federal do Rio de Janeiro. APP
- Dr M Karsdal, Nordic Biosciences. Chloride channels

Signal Transduction

- Dr C Saris, AMGEN. Regulation of IL-27 signalling by SOCS3
- Dr D Tarlinton, The Walter And Eliza Hall Institute. The effect of the LYM1 NFÐB2 mutation on B cell development and function

Immunology and Diabetes

- Prof L Harrison, Drs S Mannering, A Lew, R Sutherland, S Londrigan, The Walter and Eliza Hall Institute. Immune mechanisms of beta cell life and death
- Prof J Trapani, Peter McCallum Cancer Institute; Dr 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
- Dr P Santamaria, The University of Calgary. Mechanisms of pancreatic beta cell death in TCR transgenic mouse models of type 1 diabetes
- Dr M von Herrath, La Jolla Institute for Allergy and Immunology. Mechanisms of beta cell death in the LCMV model of type 1 diabetes
- A/Prof P O'Connell, Westmead Millennium Institute. Clinical islet transplantation
- Dr S Andrikopoulos, The University of Melbourne. The role of SOCS proteins in insulin resistance
- Dr B Coulson, Department of Microbiology and Immunology, The University of Melbourne. Understanding the role of rotavirus infection in T1D using the NOD mouse model.
- Dr T Brodnicki, The Walter and Eliza Hall Institute. Identification of Mouse Diabetes Susceptibility Genes.

Protein Chemistry and Metabolism

- Dr M Febbraio, Baker Heart Research Institute. Inflammation and insulin resistance
- Dr L Witters, Darmouth 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 Physiology, University of Sydney. AMPK and ion transport
- Dr A Means Duke University Medical Centre. CaM kinase kinase Ð structure and function
- Dr J Hawley, RMIT University. AMPK in exercise and type 2 diabetes
- Dr L Spriet, University of Guelph. Regulation of lipolysis during exercise
- Dr R Farese, University of California. Insulin resistance and lipid metabolism
- Dr J Lee, Eulji University. Exercise and insulin resistance
- Dr D Carling, MRC Clinical Sciences Centre. AMPK physiological functions
- Dr M Birnbaum, Howard Hughes Medical Institute. Skeletal muscle AMPK physiological functions
- Dr J Proietto, Department of Medicine, University of Melbourne. Obesity and glucose metabolism
- Dr S Andrikopoulos, Department of Medicine, University of Melbourne. Obesity and glucose metabolism
- Dr D Cameron-Smith, Deakin University. Obesity and muscle metabolism
- Dr W Thomas, Baker Heart Research Institute. Adenovirus purification
- Dr M Ernst, Ludwig Institute of Cancer Research. gp130 signaling and metabolism
- Dr M Lazar, Head of Endocrinology and Metabolism, University of Pennsylvania. Resistin regulation of AMPK and SOCS3
- Dr W Alexander, The Walter and Eliza Hall Institute. SOCS3 and metabolism
- Dr B Kingwell, Baker Heart Research Institute. Lipoprotein regulation of AMPK
- Dr M Hargreaves, Dept of Physiology, University of Melbourne. AMPK functions in skeletal muscle
- Dr G Lynch, Dept of Physiology, University of Melbourne. Regulation of AMPK by muscle contraction
- Dr J Whitehead, University of Queensland. Adiponectin and AMPK – Dr A Hevener, Department of Endocrinology, University of California. Inflammation and insulin resistance
- Dr G Hotamisligil, Harvard School of Public Health. TNFα and AMPK in obesity and diabetes

Molecular Cardiology

- Drs M Woodward, J Chalmers, S Colman, A Patel, S MacMahon, The George Institute for International Health. Study of novel risk factors for heart failure, myocardial infarction and stroke
- A/Prof D Kelly and Prof R Gilbert, The University of Melbourne, Department of Medicine, St. Vincent's Hospital. Study of the effect of renin inhibition in the diabetic TGR(Ren-2) rat
- A/Prof AJ Jenkins, Department of Medicine, The University of Melbourne. Study of novel risk factors for heart failure, myocardial infarction and stroke
- Mr M Yii and Mr J Kenny, 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, Dept Epidemiology and Preventive Medicine, Monash University. Strategies for the detection of heart failure in the community
- Prof J Horowitz, The Queen Elizabeth Hospital. Effects of angiotensin-(1-7) on platelets
- Dr A Aggarwal, Royal Melbourne Hospital. Investigation of the effects of carvedilol on angiotensin and aldosterone levels in heart failure
- 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. JL Zhuo, Division of Hypertension and Vascular Research, Henry Ford Hospital. Study of the function of angiotensin IV in the kidney

Bone, Joint and Cancer

- Dr P Croucher, University of Sheffield. Myeloma effects upon bone cells
- Dr M Ernst, Ludwig Institute. IL-11 actions upon bone
- Dr A Fosang, Murdoch Children's Research Institute. Aggrecan effects upon the growth plate
- Dr E Gardiner, Princess Alexandra Hospital. NPY actions on bone
- Dr D Handelsman, ANZAC Institute. Sex hormones in bone turnover
- Dr M Henderson, Peter McCallum Cancer Institute. Breast cancer metastasis
- Dr B Jenkins, Monash University. IL-11 actions upon bone
- Dr M Karsdal, Nordic Biosciences. Bone anti-resorptives
- Dr N Kularni, 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 M Ocker, Department of Experimental Hepatology and Oncology, University of Erlangen
- Dr J Onyia, Eli Lilly and Company. PTH anabolic actions
- A/Prof J Price, Department of Biochemistry, Monash University. Stress proteins and anti-oxident effects in breast cancer bone metastasis
- Dr L Purton, Center for Regenerative Medicine, Harvard Medical School
- Dr L Robb, The Walter And Eliza Hall Institute. IL-6 effects upon bone
- Dr M Smyth, Peter MacCallum Cancer Institute. Natural Killer Cell and Dendritic Cell Functions
- Dr L Suva, University of Arkansas Medical School. IL-8 in breast cancer metastasis
- Dr N Udagawa, Matsumoto Dental University. Osteoclast inhibition
- Dr I Wicks, The Walter And Eliza Hall Institute. Animal models of arthritis
- Dr I Winkler, Biotherapy Program, Mater Medical Research Institute. Effect of stem cell mobilization on bone formation

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

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 hte yeast MDT1 gene
- Dr B Bhullar, Harvard University. Activation of Rad53 kinase by DNA damage
- A/Prof G McArthur, Peter MacCallum Cancer Institute. Recombinational repair analyses in human cells
- Dr X Du, Baker Medical Research Institute; Prof W Koch and Dr P Most, Thomas Jefferson University; Prof T Parker, University of Toronto; Dr A Remppis, University of Heidelberg; Dr J Baudier, INSERM Grenoble. Collaborative studies on S100A1 functions in mice

Cytoskeleton and Cancer

- Prof P Robinson, Children's Medical Research Institute. Identification of the LIMK1-interacting protein p25 and determination of its phosphorylation sites
- Prof J Bamburg, Colorado State University. The role of LIMK1 in the regulation of microtuble disassembly

Pharmacogenomics

- Drs L Udabage, G Brownlee and A/Prof T Brown, Monash University. Role of hyluronan sythase in breast cancer progression
- Dr A Stevenson, CSIRO. Phase-contrast X-ray radiography in biomedical research
- Dr J Kennedy, ENT Department, St. Vincent's Hospital. Gene expression analysis of acoustic neuromas

VBCRC Invasion and Metastasis

- 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
- Dr A Kelleher, NCHECR. Characterising antibody responses for HIV Long Term Non-progressors
- Drs P Gorry, M Churchill, Burnet Institute. Pathogenesis of HIV Long Term Non-progressors
- Drs J Learmont, J Sullivan and W Dyer, ARCBS. Pathogenesis of HIV Long Term Non-progressors

Haematology And Leukaemia

- Dr R Starr, St Vincent's Institute. 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 Institute. 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, St Vincent's Hospital. Modelling human leukaemia in mice

Tumour Cell Migration and Metastasis

- Dr 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.
- Dr I Campbell, Peter MacCallum Cancer Centre. Genotyping breast cancer cell variants
- Dr M Henderson, Uni. Melb. Dept. Surgery/Peter MacCallum Cancer Centre. Studies in clinical breast cancer specimens
- Dr D Newgreen, Murdoch Children's Research Institute. Epithelio-Mesenchymal Transition (EMT) in breast cancer
- Dr L Ackland, Deakin University. Epithelio-Mesenchymal Transition (EMT) in breast cancer
- A/Prof J Price. Monash University. Epithelio-Mesenchymal Transition (EMT) in breast cancer, Molecular determinants of bone metastasis
- Dr M Waltham, St Vincent's Institute. 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 S Pearson, University of New England. Studies of Second Harmonic Generation imaging in breast and prostate cancer
- Dr N Ahmed, Dept. Ob Gyn, University of Melbourne. EMT in Ovarian cancer spheroids
- Dr L Soon, Australian Key Centre for Microscopy and Microanalysis, NANO-MNRF. Breast cancer cell migration in 3D
- Dr R Henry, Monash University, SAXS analysis for mammographic density
- Dr I Haviv, Peter MacCallum Cancer Centre. Species-specific gene array for tumour stromal interactions
- Dr E Marcusson, ISIS Pharmaceuticals. Antisense oligonucleotides in breast cancer
- Dr R Fridman, Pathology, Wayne State University. MMP-integrin interactions
- Prof A Raz, Karmanos Cancer Center. Role of galectin-3 in breast cancer progression
- Dr H Sato, Kanazawa Medical School. MT-MMP regulation during epithelio-mesenchymal transition
- Dr M Seiki, Department of Cancer Cell Research, Institute of Medical Science, University of Tokyo. Collagen regulation of MT1-MMP function
- Dr T Sasaki, Max Planck Institute. SPARC / osteonectin / BM40 effects on MMP-2-activation in breast cancer cells
- Prof Z Werb, Anatomy, UCSF. MMP analyses

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
- Dr A Kelleher, NCHECR. Characterising antibody responses for HIV Long Term Non-progressors
- Drs P Gorry, M Churchill, Burnet Institute. Pathogenesis of HIV Long Term Non-progressors
- Drs J Learmont, J Sullivan and W Dyer, ARCBS. Pathogenesis of HIV Long Term Non-progressors

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PRESENTATIONS

Structural Biology

David Ascher
- St. Vincent's Hospital Research Week, Melbourne. Speaker

Brett Cromer
- World Congress of the International Society for Biomedical Research on Alcoholism, Sydney. Speaker
- School of Biomedical Sciences, University of Queensland, Brisbane. Seminar speaker

Luke Miles
- CSIRO Protein Expression Workshop, Molecular and Health Technologies, Parkville, Victoria. Speaker

Craig Morton
- Australian Society for Microbiology Conference, Gold Coast. Speaker
- CSIRO Protein Expression Workshop, Molecular and Health Technologies, Parkville, Victoria. Speaker

Lorien Parker
- St. Vincent's Hospital Research Week, Melbourne. Speaker

Michael Parker
- Department of Medicine, Austin Hospital, Melbourne. Seminar speaker
- Howard Florey Institute, Melbourne. Seminar speaker
- Bio21 Institute and Department of Biochemistry and Molecular Biology, University of Melbourne. Seminar speaker
- Australian Influenza Symposium, Canberra. Speaker
- International Conference on Structural Genomics, Beijing, China. Invited speaker

Signal Transduction

Sarah Jones
- Australian Health and Medical Research Congress, Melbourne. Speaker

Robyn Starr
- Division of Cancer and Haematology, Walter and Eliza Hall Institute, Melbourne. Seminar speaker
- Commonwealth Serum Laboratories, Melbourne. Seminar speaker
- MacFarlane Burnet Institute of Medical Research, Melbourne. Seminar speaker
- Peter MacCallum Cancer Institute, Melbourne. Seminar speaker
- Australian Health and Medical Research Congress, Melbourne. Speaker

Immunology and Diabetes

Eveline Angstetra
- Australian Diabetes Society, Gold Coast. Speaker

Emma Carrington
- Department of Microbiology and Immunology, University of Melbourne. Seminar speaker

Nadine Dudek
- Austin Research Institute, Melbourne. Seminar speaker

Thomas Kay
- Thymoz V – Innate Sculpting of Adaptive Immunity, Heron Island. Invited speaker
- American Diabetes Association meeting, Washington DC, USA. Invited speaker
- Barbara Ell Seminar Series, Victor Chang Cardiac Research Institute, Sydney. Invited speaker
- Animal Models for Type 1 Diabetes and Multiple Sclerosis, New York Academy of Sciences meeting, San Francisco, USA. Invited speaker
- Commonwealth Serum Laboratories, Melbourne. Seminar speaker
- Australian Diabetes Society symposium, Gold Coast. Invited speaker
- Southern Health Annual Scientific Meeting, Monash Medical Centre, Melbourne. Invited speaker
- Seeing the Future Symposium, Royal Victorian Eye and Ear Hospital, Melbourne. Invited speaker

Balasubramanian Krishnamurthy
- Australian Diabetes Society, Gold Coast. Speaker

Thomas Loudovaris
- Bernard O'Brien Institute of Microsurgery, Melbourne. Seminar speaker
- Centre for Blood Cell Therapies, Peter MacCallum Cancer Centre, Melbourne. Seminar speaker

Nirupa Sachithanandan
- Australian Diabetes Society, Gold Coast. Speaker

Helen Thomas
- Australian Health and Medical Research Congress, Melbourne. Speaker
- Australian Diabetes Society, Gold Coast. Invited speaker

Protein Chemistry and Metabolism

Bruce Kemp
- FASEB AMPK: Impact on Mammalian Metabolism and Disease, Snowmass, Colorado, USA. Invited speaker
- Asia Pacific Diabetes & Obesity Study Group, Kyoto, Japan. Invited speaker
- Queenstown Signal Transduction Meeting, Queenstown, New Zealand. Invited speaker
- International Congress on Obesity, Sydney. Invited speaker
- CSIRO Protein Expression Workshop, Molecular and Health Technologies, Parkville, Victoria. Invited speaker
- Autumn Congress of the Korean Diabetes Association, Gyeongju, Korea. Invited speaker

Greg Steinberg
- Baker Heart Research Institute, Melbourne. Seminar speaker
- Australian Health and Medical Research Congress, Melbourne. Speaker
- Merck Frosst Centre for Therapeutic Research, Montreal, Quebec, Canada. Seminar speaker
- University of McMaster, National Obesity Centre, Department of Medicine, Hamilton, ON, Canada. Seminar speaker
- University of Michigan, Department of Kinesiology, Ann Arbour, Michigan, USA. Seminar speaker
- FASEB summer conference, AMPK: Impact on Mammalian Metabolism and Disease, Snowmass, CO, USA. Speaker
- International Congress of Obesity, Sydney. Speaker

Bone, Joint and Cancer

Matthew Gillespie
- International Osteoimmunology Conference, Greece. Invited Speaker
- International Osteoporosis Foundation World Congress on Osteoporosis, Toronto, Canada. Seminar speaker
- Cancer and Bone Society, San Antonio, USA. Invited Speaker

Jon Gooi
- Australia and New Zealand Bone and Mineral Society/International Osteoporosis Foundation Annual Meeting, Port Douglas. Speaker

PRESENTATIONS

TJ Martin
- International Bone and Mineral Society Workshop on Cell Biology of Bone and Cartilage in Health and Disease, Davos, Switzerland. Invited speaker
- US Endocrine Society, Boston, USA. Invited speaker
- Grand Rounds Lecture, Memorial University of Newfoundland, Canada. Invited speaker
- Newfoundland Bone Conference and International Conference on PTHrP/PTH, Canada. Invited speaker
- Australia and New Zealand Bone and Mineral Society/International Osteoporosis Foundation Annual Meeting, Port Douglas. Invited speaker
- SE Asia Training Course in Osteoporosis. Invited speaker
- International Conference on Progress in Bone and Mineral Research, Vienna, Austria. Invited speaker

Julian Quinn
- The American Bone and Mineral Society Annual Scientific Meeting, Philadelphia, USA. Speaker
- Australia and New Zealand Bone and Mineral Society/International Osteoporosis Foundation Annual Meeting, Port Douglas. Speaker

Evange Romas
- Australia and New Zealand Bone and Mineral Society/International Osteoporosis Foundation Annual Meeting, Port Douglas. Speaker

Hasnawati Saleh
- Australia and New Zealand Bone and Mineral Society/International Osteoporosis Foundation Annual Meeting, Port Douglas. Speaker

Natalie Sims
- The University of Melbourne, Department of Medicine at Western Hospital. Invited speaker
- Australia and New Zealand Bone and Mineral Society / International Osteoporosis Foundation Annual Meeting, Port Douglas. Speaker
- International Bone and Mineral Society Bone Biology Workshop, Davos, Switzerland. Speaker

Cell Cycle and Cancer

Boris Sarcevic
- Austin Doyle Research Seminar Program, Austin Hospital, Melbourne. Seminar speaker
- Children's Cancer Institute, Sydney. Seminar speaker
- Annual Australian Cell Cycle Meeting, Melbourne. Speaker
- Australian Health and Medical Research Congress, Melbourne. Speaker

Molecular Genetics

Jörg Heierhorst
- European Conference on Telomeres and Genome Stability, Villars-sur-Ollon, Switzerland. Speaker
- Australian Telomere Workshop, Sydney. Speaker
- Australian Cell Cycle Workshop, Melbourne. Speaker
- Australian Health and Medical Research Congress, Melbourne. Invited Speaker
- Department of Biochemistry and Molecular Biology, Monash University Melbourne. Seminar Speaker
- Institute of Pharmacology, Medical University of Hanover, Germany. Seminar Speaker

Cytoskeleton and Cancer Metastasis

Ora Bernard
- The Walter and Eliza Hall Institute, Melbourne. Seminar speaker
- Peter MacCallum Cancer Research Institute, Melbourne. Seminar speaker
- The Children's Cancer Institute Australia for Medical Research, Sydney. Seminar speaker
- Department of Immunology, Monash University, Melbourne. Seminar speaker
- The Hebrew University, Jerusalem, Israel. Seminar speaker

Pharmacogenomics

Mark Waltham
- Hunter Medical Research Institute Translational Cancer Research Conference, Newcastle, NSW. Speaker
- Victorian Breast Cancer Research Consortium Symposium, University of Melbourne. Speaker

VBCRC Invasion and Metastasis

Erik Thompson
- Kanazawa Cancer Institute, Kanazawa, Japan. Seminar speaker
- Metastasis Research Society, Tokushima, Japan. Invited speaker
- Division of Cancer Cell Research, Institute of Medical Science, The University of Tokyo, Japan. Seminar speaker

National Serology Reference Laboratory

Alicia Arnott
- Australian Centre for HIV & Hepatitis Virology Research, Lorne, Victoria. Invited speaker

Susan Best
- TransQ-2006, National Conference of the Indian Society of Blood Transfusion and Immunohaematology. Ahmedabad, India. Invited speaker

Elizabeth Dax
- Australian Red Cross Blood Service, Perth. Invited speaker
- Spotlight on Quality meeting, Antwerp, Belgium. Invited speaker
- Standardisation of Genetic Amplification Techniques (SoGAT), Bern, Switzerland. Invited speaker
- International AIDS Conference, Toronto, Canada. Invited speaker

Darren Jardine
- International AIDS Conference in Toronto, Canada. Invited speaker
- International Congress of the International Society of Blood Transfusion. Capetown, South Africa. Invited speaker

Kate Learmonth
- Australasian Society for HIV Medicines Conference, Melbourne, Australia. Invited speaker

Dale McPhee
- Victorian Infectious Diseases Reference Laboratory, Melbourne. Invited speaker

Thu-Anh Pham
- Standardisation of Genetic Amplification Techniques, Bern, Switzerland. Invited speaker

Scott Read
- Symposium on Viral Hepatitis and Liver Disease, Paris, France. Invited speaker

SEMINAR PROGRAM

SVI Seminar Program

Dr David Izon
St Vincent's Institute
"Development of a functional genetic screen in mice; Notch points the way"

Dr Ora Bernard
St Vincent's Institute
"All that you need to know about LIM kinase"

Dr Matthew Watt
St Vincent's Institute
"Ciliary Neurotrophic Factor: a therapeutic target for insulin resistance?"

Dr Helen MacLean
Austin Hospital, Department of Medicine
"Investigating the mechanisms mediating the anabolic actions of androgens in skeletal muscle"

Mr Tristan Iseli
St Vincent's Institute
"Let's stick together – Subunit interactions of AMPK"

Dr Jörg Heierhorst
St Vincent's Institute
"DNA recombination; novel proteins involved in DNA repair and telomere maintenance"

Professor Rob Lewis
Monash Centre for Synchrotron Science, Monash University
"Biomedical Imaging and Therapy with Synchrotrons"

Dr Thomas Preiss
Victor Chang Cardiac Research Institute
"Control of translation by "microRNAs"

Professor Peter McIntyre
Department of Pharmacology, University of Melbourne
"Thermosensitive TRP channels as targets for chronic pain therapies"

Dr Helena Richardson
Peter MacCallum Cancer Institute
"Modelling cancer in Drosophila"

Dr Jonathan Oakhill
St Vincent's Institute
"Molecular mechanisms of iron absorption: From broccoli to meningitis"

Dr Suzanne Rogers
Department of Medicine, St. Vincent's Hospital
"GLUT12, diabetes and cancer"

Dr Julian Quinn
St Vincent's Institute
"Bone destruction – and how to make it worse"

Dr Kaye Truscott
Department of Biochemistry, La Trobe University
"Mitochondrial protein import and quality control"

Dr Gillian Tannahill
St Vincent's Institute
"The role of SOCS2 in IL-2 +IL-3 signalling"

Dr Hueng-Chin Cheng
Department of Biochemistry & Molecular Biology, University of Melbourne
"Mechanisms of regulation of Src-family kinases by their endogenous inhibitor CHK kinase"

Dr Mark Waltham
St Vincent's Institute
"Identifying and pre-clinical assessing new drugs to combat breast cancer metastasis"

Dr Kim Connelly
Department of Medicine, St. Vincent's Hospital
"Structural and functional characteristics of diabetic cardiomyopathy"

Dr John Scott
St Vincent's Institute
"Regulation of AMP-activated protein kinase"

Dr Jenny Martin
Department of Medicine, St. Vincent's Hospital
"Statins – miracle agents or expensive anti-inflammatories?"

Dr Kornelia Polyak
Department of Medical Oncology, Dana-Farber Cancer Institute, Harvard Medical School
"Molecular characterization of putative human normal mammary and breast cancer stem cells"

Dr Sabrina Giavara
Cambridge UK, KuDOS Pharmaceuticals
"Nhp6A/B-HMGB1 proteins and their involvement in the maintenance of genomic stability"

Dr Andrew Clayton
Ludwig Institute for Cancer Research
"Lighting up the association states of the EGF receptor"

Dr Sebastian Beck Jorgensen
St Vincent's Institute
"Regulation of muscle metabolism during exercise; involvement of AMPK"

Dr Brad Marsh
Institute for Molecular Bioscience, Brisbane
"Multi-resolution 3-D structure studies of the insulin-secreting pancreatic beta cell by cellular tomography"

Dr Elizabeth Williams
Monash Institute of Medical Research
"Cancer metastasis: Paradigms and processes"

Dr Brian Gabrielli
Princess Alexandra Hospital, University of Queensland
"C dc25B activates G2 phase Cyclin A/cdk2 to regulate the timing of and progression through mitosis"

Dr Andrew Hammet
St Vincent's Institute
"Histone H2A phosphorylation links checkpoint control and DNA repair"

Dr Sarah Russell
Peter MacCallum Cancer Institute
"T cell polarity: A new mechanism for the regulation of lymphocyte function"

Dr Brett Cromer
St Vincent's Institute
"Molecular mechanisms of ion channel gating"

Professor Herbert Herzog
Garvan Institute of Medical Research
"The role of NPY in energy and bone homeostasis: insights from knockout models"

Dr Hannah Robertson
Department of Anatomy & Cell Biology, University of Melbourne
"Differential effects of D-cbl long and short isoforms on MAPK activation, cell cycle progression, and apoptosis: implications for our understanding of mammalian cbl function"

Professor Patrick Sexton
Department of Pharmacology, Monash University
"Family B G Protein-Coupled Receptors, a complex life"

Dr Thomas Calzascia
Departments of Immunology & Medical Biophysics, University of Toronto, Canada
"Pathogen versus self/tumour antigen-induced T cell priming alters the requirement for TNF-alpha at multiple levels"

Dr Clem Stanyon
Department of Genome Sciences, University of Washington, Seattle, USA
"Cloning proteins for genome engineering"

Dr Bob Clark
Vice President Scientific Research, Tripos
"The next generation of Pharmacophore Determination: GALAHADTM"

Dr Mark Chong
New York University School of Medicine
"The ups and downs of gene expression during T cell development"

Dr Adam Rose
Department of Human Physiology, University of Copenhagen, Denmark
"Skeletal muscle CaMKs; expression, regulation and function"

Ms Misty Jenkins
Department of Microbiology & Immunology, University of Melbourne
"Secrets of a serial killer: The acquisition of influenza virus-specific CD8+ T cell cytotoxic function"

Dr Tom Brodnicki
Walter & Eliza Hall Institute
"Congenic & transgenic Approaches for identifying mouse type 1 diabetes genes"

Dr Stuart Berzins
Department of Microbiology & Immunology, University of Melbourne
"Can we manipulate NKT cell numbers to cure deficiencies?"

ORGANISATIONAL CHART

St Vincent's Institute is an independent medical research institute which conducts laboratory research into the cause, prevention and treatment of diseases with high impact on the community, such as:

- Diabetes, obesity and heart disease
- Bone diseases such as arthritis and osteoporosis
- Cancer and the spread of cancer
- Infectious diseases
- Alzheimer's and other neurological disorders

SVI is affiliated with St. Vincent's Hospital and The University of Melbourne and is a member institution of the Sisters of Charity Healthcare Service. SVI is accredited by the NHMRC.

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; and the Association of Australian Medical Research Institutes.

Through these links SVI provides a valuable service to clinical medicine, graduate education and community welfare.

SVI COMMITTEES

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
- Maintaining 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.

2006 Committee members (external):

Ian Reid, Michael McGinniss and Ruth O'Shannassy

2006 Committee members (internal):

Tom Kay and David Rees

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 (IP) assets of SVI.

In 2006 the CIP Committee recommended and helped to implement an IP policy at SVI and it reviewed SVI's current and future agreements with biotechnology and pharmaceutical companies. In addition the Committee was involved in reviewing and guiding the successful application to the Commonwealth for funding of SVI's participation in the Cooperative Research Centre for Cancer Therapeutics.

2006 Committee members (external):

John Sime (Chair), Barry Jackson, Michael McGinniss, Paula de Bruyn, Michelle Baker, Greg Robinson and Andrew Baker

2006 Committee members (internal):

Tom Kay, Michael Parker, 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.

During 2006 the Committee compiled and published a new OH&S Policy & Operations Manual; issued a number of Standard Operating Procedures; carried out a program of laboratory inspections; and arranged emergency and warden training.

2006 Committee members:

Matthew Gillespie (Chair), David Murfitt, Claire Tanswell, Virginia Leopold, Andrew Carey, Nadine Dudek and Kate Graham

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, non-communal equipment proposals for consideration according to its guidelines.

2006 Committee members:

Michael Parker (Chair), Matthew Gillespie, David Murfitt, David Rees, Julian Quinn and Claire Tanswell.

SVI IT Committee

IT Support at St Vincent's Institute is a shared resource, serving both SVI and The University of Melbourne Department of Medicine. The SVI/UoM DoM IT Committee meets on a fortnightly basis to review all aspects of IT support across both St Vincent's Institute and The University of Melbourne Department of Medicine.

The Committee reviews policy, procedures and issues concerning all aspects of IT support across these research areas at the St Vincent's campus. The committee co-opts others onto the Committee when particular expertise or extra input is required, for example, the re-design and up date of the SVI website.

2006 Committee members:

Matthew Gillespie, David Murfitt, Peter Tonoli, James Mugg, Chris Ryan, Natalie Burgess University of Melbourne (UoM) Department of Medicine (DoM)

SVI STAFF

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 *Qld* 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

Director

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

Associate Directors

Matthew T Gillespie, BSc(Hons) PhD *Mon;* NHMRC Principal Research Fellow; Associate Professor (Medicine), The University of Melbourne

Michael W Parker, BSc(Hons) ANU DPhil *Oxon;* NHMRC Senior Principal Research Fellow; Professor (Biochemistry and Molecular Biology), 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 FRS; ARC Federation Fellow; Honorary NHMRC Research Fellow; Professor (Medicine), The University of Melbourne

Research Faculty

Janette Allison, BSc(Hons); PhD *London* (from 01/06)

Ora Bernard, MSc *TelAviv;* PhD McGill; MPS *Mon* (from 01/06)

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

Brett Cromer, BSc(Hons) PhD *ANU*

Janine Danks, BSc LaT MSc *Melb* PhD *Mon* NHMRC Research Fellow; Associate Professor (Medicine), The University of Melbourne (until 5/06)

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

David Izon, BSc (Hons) PhD *Mon* (from 01/06)

Thomas Loudovaris, BSc(Hons) PhD *Melb*

Belinda Michell, BSc(Hons) MBA *Mon; PhD Melb*

Galina Polekhina, MSc(Hons) *Moscow* State; PhD Aarhus; NHMRC RD Wright Fellow

John Price, BSc(Hons) PhD *Aberdeen;* NHMRC RD Wright Fellow (until 05/06)

Julian Quinn, BSc(Hons) MSc DPhil *Oxon*

Boris Sarcevic, BSc(Hons) LaT PhD *Melb*

Natalie Sims BSc(Hons) PhD *Adel;* NHMRC Senior Research Fellow; Department of 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

Helen Thomas, BSc(Hons) *UWA* PhD *Melb;* NHMRC RD Wright Fellow

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

Bryce van Denderen, BSc(Hons) PhD *Melb*

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

Research Scientists

Karla Acevedo, Bsc (Hons) *LaT*, PhD *Melb*

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

Chris Anstey-Gilbert, BSc(Hons) *Salford* MSc Exeter PhD *Sheffield* (from 08/06)

Brett Bennetts, BSc(Hons) *Adel*

Steve Bouralexis, BSc *Flinders* BCompSc *Uni SA* BHealthSc(Hons) PhD *Adel;* NHMRC Peter Doherty Fellow

Andrew Carey, BSc(Hons) PhD *RMIT;* NHMRC Peter Doherty Fellow

Zhiping Chen, BSc *Shanghai* PhD ULP *France*

Nadine Dudek, BSc(Hons) *ANU* PhD *Melb* (until 10/06)

Susanne Feil, BSc MSc *Stockholm* PhD *Melb;* NHMRC Industry Fellow

Kate Graham, BSc(Hons) PhD *Melb* (from 07/06)

Andrew Hammet, BSc(Hons) PhD *Melb;* NHMRC CJ Martin Fellow

Guido Hansen, Dip Biol PhD *Cologne*

Karl Häusler, BAppSc *PIT* MAppSc RMIT PhD *Melb*

Vicky Kartsogiannis, BSc(Hons) PhD *Melb*

Balasubramanian Krishnamurthy, MBBS *Bangalore* MD Agra DM *Lucknow,* JDRF Postdoctoral Fellow

Rong Li, PhD *Xian Medical*

William McKinstry, BSc(Hons) *Tas* PhD Melb; Senior Fellow (Medicine), The University of Melbourne (until 9/06)

Luke Miles, BSc(Hons) PhD *LaT*

Rachel Mudge, BSc(Hons) PhD *Melb;* NHMRC CJ Martin Fellow

Jonathon Oakhill, BSc PhD (from 03/06)

Joseline Ojaimi, BSc(Hons) PhD *Melb* (until 05/06)

Döne Onan-Asik, BAppSc *RMIT*, DipEd *Melb*, PhD Mon

Brietta Pike, BSc(Hons) PhD Melb; NHMRC CJ Martin Fellow (until 03/06)

Martin Sadowski, Diploma *Giessen* PhD *Basel*

Maria Schache, BSc(Hons) PhD *Melb* (until 07/06)

John Scott, BSc (Hons) *Glasgow*PhD *Dundee (from 05/06)*

Monique Smeets, PhD *Vrije Universiteit Amsterdam*, Postdoctoral Research Fellow (from 03/06)

Rohan Steel BSc(Hons) *Melb* (from 12/06)

Gregory Steinberg, BSc PhD *Uni Guelph* NSERC Postdoctoral Fellow

Gillian Tannahill, BSc(Hons) PhD *Belfast* (until 10/06)

Ana Traven, BSc(Hons) MSc PhD *Uni Zagreb* NHMRC Peter Doherty Fellow

Peter Walsh, BSc(Hons) *LaT* PhD *Melb* (from 02/06)

Manisha Shah, PhD *Baroda* (from 05/06)

Sheena Wee, BSc(Hons) PhD *Melb* (from 11/06)

Matthew Watt, BAppSci(Hons) PhD *Deakin;* NHMRC Peter Doherty Fellow (from 01/06)

Yibin Xu, BSc *Suzhou* MSc *Beijing* PhD *ANU* (until 04/06)

Visiting Scientists

Evy Deleenheer, DPil *Oxford*

Antonio Garcia-Susperregui, BSc *Barcelona*

Sebastian Beck Jorgensen, Phd *Copenhagen*

Keith Thompson, PhD *Aberdeen*

Research Assistants

Rochelle Ayala-Perez, BSc *Melb*

Tony Blick, BSc(Hons) *Mon*

Melissa Ciccomancini, BSc(Hons) *Mon*

Mirijana Cipetic, BSc(Hons) *Melb*

Gabriela Crespi, Dip Biol Nat *Univ Cordoba* (from 09/06)

Hayley Croom, BSc (Hons) *Melb*

Nancy Hancock, BA *California State Fresno* MA *San Francisco State*

Gaurang Jhala, BSc MSc *Pune*

Frosa Katsis, BAppSc IIC *PIT*

Lei Shong Lau, BSc (Hons) *Melb* (from 02/06)

Jenny Leung, BSc(Hons) *Monash* (until 12/06)

Chi Ly, BSc(Hons) *Melb* (until 02/06)

Lina Mariana, BSc(Hons) *Melb*

Narelle McGregor, AssocDipApplSci *VUT,* BSc *LaT*

Carolyn McNees, BSc(Hons) *Melb*

Hooi-Ling Ng, BSc(Hons) *Melb*

Natalie Sanders, BSc(Hons) *Melb* (from 12/06)

Priscilla Soo, BSc(Hons) *Melb*

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

Nora Tenis, BSc *Mon* GradDipMedLabSc *Uni* SA

Melisa Vazquez, BAppSc *RMIT* (until 01/06)

Sarah Vickery, BSc *Melb* (from 10/06)

Jess Vieusseux, BBtech(Hons) *Flinders* (until 05/06)

Emma Walker, BSc(Hons) *Deakin*

Kwok Soon Wun, Dip Biotech *Ngee Ann Polytechnic* BSc(Hons) *Melb* (until 03/06)

Chief Technical Officers

Daphne Hards, BAppSc *RMIT* (until 10/06)

Virginia Leopold, BSc(Hons) *LaT*

Jan Elliot (until 06/06)

Pat Ho, BSc *Mon*

Patricia Smith, DipMedLabTech *RMIT* (until 08/06)

Senior Technical Officers

Melanie Rowe, DipAppSci Animal Tech *Box Hill*

Stacey Fynch, DipAppSci Animal Tech *NMIT*

Technical Officers

Kylie Gilbert, DipAppSci Animal Tech *VUT* (until 10/06)

Catherine Li, CertLabTech *Hong Kong Polytechnic* BAppSc *RMIT*

Maria Mikasinovic, DipAppSci Animal Tech, *VUT* (until 05/06)

Ingrid Poulton DipHealthMLS *RMIT*

Laboratory Assistants

Sally Emini

Inggrid Wardani

Senior Principal Research Associates

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

Tony 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

Jane Moseley, BSc PhD *Lond;* Associate Professor (Medicine), The University of Melbourne

Evange Romas, MBBS (Melb) FRACP PhD (Melb); Senior Lecturer in Medicine, University of Melbourne, Director, Rheumatology Clinics, St. Vincent's Health, Melbourne, Head, Rheumatology Research Unit, SVI

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

Senior Associates

Craig Morton, BSc(Hons) PhD *Melb*

Associates

Julian Adams BSc Msc *Cantab* PhD *Massey;*

Jerome Wielens, BApplSci(Hons) PhD *Mon*

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

Diabetes Program Manager

Anne Thorburn, BSc(Hons) PhD *Syd*

Scientific Executive Officer

Anne Johnston, BSc(Hons) PhD *Melb* (from 10/06)

Development Manager

Clare Lacey

Communications Manager

Jo Crowston, BA(Hons) *Sussex* (from 09/06)

Executive Officer Policy and Projects

Claire Tanswell, GCertBusAdmin *Swinburne*

Personnel and Grants Administrator

Gayle McMurray (until 03/06)

Payroll Assistant

Bonnie LaVelle (From 10/06)

Accounting staff

Froilan Altarez

Lisnawati Wirawan-Liauw, SE *Atmajaya Katolik Uni*

Jing Zhang AdvDipAcc *RMIT* (from 05/06)

Administrative Assistants

Steven Boz

Renton Carlyle-Taylor (until 07/06)

Beth Castles

Leonie Loveday

Kathryn O'Connell

Dimitra Samaras

IT Manager

Peter Tonoli

IT Support Officers

James Mugg, BA *LaT*

Chris Ryan BSc/BIS *Melb* (from 05/06)

National Serology Reference Laboratory, Australia

Director

Elizabeth M Dax AM M.B.,BS *Melb* PhD *Mon* MD *Melb*, Associate Professor (Microbiology and Immunology), The University of Melbourne

General Manager

Susan Best MAppSc *RMIT*. MBA *Melb*

Research Coordinator

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

Quality Manager

Roderick Chappel, BAgrSc PhD *Melb,MASM*

Project Manager

Wayne Dimech, BAppSc *RMIT* FAIMS MBA *LaT*

Scientists

Thein Thein Aye, M.B.,B.S Institute of Medicine 1 PhD *Nihon University*

Rebecca Cattermole BSc *Denmark* (from April 2006)

Denison Chang, BSc (Hons) *Mon*

Barbara Francis BSc, *Melb* Grad.Dip. App.Sci (Health Statistics) *SUT* PhD *SUT*

Darren Jardine BSc (Hons) PhD *LaT*

Marina Karakaltsas, BSc *LaT*

Sally Land BSc (Hons) Dip Ed *Melb*

Julie Nardone BAppSc *Deakin* *(from July 2006)*

Lena Panagiotopoulos BSc *LaT*

Thu-Anh Pham BAppSc, MAppSc *RMIT*

Scott Read BSc (Hons) *Lond*

Kim Richards BSc (Hons) *VU*

Joanne Schlegel BAppSc *RMIT* (until August 2006)

Kathy Smeh BSc (Hons) DipEd, B.Ed. M.Ed *Melb*

Sandy Walker BSc (Hons) *LaT*

Kim Wilson BAppSc QIT PhD *Melb*

PhD Student

Alicia Arnott BSc Hons *Mon*

Honours Student

Kate Learmonth BSc (Hons) *Melb*

Data Management and Website Officers

Amasy Alkhateeb BBiomed (Hons) *Deakin*

Rosanna Fahmy

Laboratory Assistant

Frank Torzillo

Executive Assistant

Linda Tracey G Cert Bus Admin *Swinburne*

Computer Systems Manager

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

Office Manager

Louie Opasinov, BSc Dip Ed *Melb*

Administration Assistant

Helen Hasler

STUDENTS AND GRADUATES

Postgraduate education at SVI

St Vincent's Institute offers opportunities for Postgraduate training through the University of Melbourne, Department of Medicine and Department of Biochemistry. In 2006, 31 students were studying for their PhD at SVI.

In addition, MSc and Honours programs are offered at SVI. Details of projects on offer can be accessed at

www.svi.edu.au/education/phdprojects

More information about the Postgraduate programs offered by the Department of Medicine can be accessed at:
www.medstv.unimelb.edu.au/Prospective/index.cfml

St Vincent's Institute Foundation Postgraduate Award

The St Vincent's Institute Foundation offers Postgraduate Student Awards to outstanding students commencing their PhD training at SVI. Successful applicants will receive a $5,000 p.a. top-up stipend for 3 years.

Foundation Honours Awards of $5,000 are offered to students undertaking their Honours year at SVI.

More information about the awards can be accessed at: www.svi.edu.au/education/studentaward or from Dr Robyn Starr, Foundation Postgraduate Student Awards Coordinator, Tel: 9288 2480 or email: rstarr@svi.edu.au

Applications are due October 31 of each year.

Successful applicants for the St Vincent's Institute Foundation Postgraduate Award in 2006 were:

- Joel Fletcher – sponsored by Hugh Dougherty

Successful applicants for the St Vincent's Institute Foundation Honours Award in 2006 were:

- Matthew Bird – sponsored by SVI Support Group
- Sarah Jones – sponsored by SVI Support Group
- Angela Tam – sponsored by SVI Support Group
- Shanna Tam – sponsored by Sydney Diocese
- Elena Tucker – sponsored by BNP Paribas

Students

Postgraduate Scholars

Doctor of Philosophy

Theodora Alexiou, BSc(Hons) *Mon*
'The generation and function of angiotensin in the brain'

Eveline Angstetra, BSc(Hons) *Melb*
'Mechanisms of immune destruction of pancreatic beta cells'

Alicia Arnott, BSc(Hons) *Deakin*
'Control of HIV-1 replication after early HAART: the role of viral phenotype and antibody responses'

David Ascher, BSc(Hons) *Qld*
'Structural characterisation of proteins involved in memory'

Peter Campbell, BSc(Hons) *LaTrobe*
'The development of islet and immune criteria that are predictive of clinical outcome in transplantation'

Emma Carrington, BSc (Hons) *Melb*
'The importance of Bcl-2 family proteins in islet development, survival and autoimmunity'

Ally Chau, BMedPharmBiotech(Hons) *South Australia*
'Interactions between breast cancer cells and the bone microenvironment'

Nicholas Dzamko, BSc (Hons) *Flinders*
'Hormonal activation of AMP activated protein kinase'

Eugene Estella, MBBS *Qld* FRACP
'Mechanism of β-cell destruction'

Kylie Fitzpatrick, BSc (Hons) *Mon*
'The role of nuclear FGF-2 in cancer metastasis'

Joel Fletcher, BSc(Hons) *Melb*
'Functional characterisation of the DNA damage repair gene ASCIZ'

Jonathan Gooi, BBiomedSc(Hons) *Melb*
'Osteoclast-mediated regulation of bone formation'

Tristan Iseli, BSc(Hons) *Melb*
'Structure and function of the glycogen binding AMP-activated protein kinase β-subunit'

Geoffrey K-W Kong, BSc(Hons) *Melb*
'Structural studies of Alzheimer's disease amyloid precursor protein'

Michelle Kouspou, BBiomedSc(Hons) *Melb*
'The role of Heat Shock Factor 1 in cancer cell biology'

Tali Lang, BSc LaTrobe(Hons) *Mon*
'Wnt signalling in breast cancer'

Jenny Leung, BBiomedSc(Hons) *Mon*
'Assessment of integrin-linked kinase in human breast cancer cells'

Lisa McCarthy, BSc(Hons) *Deakin*
'Investigation of cancer cell inhibition by a novel extract of shark cartilage'

Mark McKenzie, BSc(Hons) *Melb*
'Protection of pancreatic beta cells from perforin-mediated cell death'

Lorien Parker, BSc(Hons) *Melb*
'Structural studies of glutathione transferases'

Matthew Pereira, BSc LaTrobe (Hons) *Melb*
'The role of IFIT1 in tumor cell growth, progression and metastasis'

Ruby Platt, BSc(Hons) *Virginia*
'Novel application of Tranilast for the treatment of acute myeloid leukaemia'

Julie Quach, BApplSc(Hons) *RMIT*
'Novel PTH and PTHrP targets in osteoblasts and osteoblast progenitors'

Nirupa Sachithanandan, MBBS *Mon* FRACP
'Association and predictive power of vascular disease risk factors with insulin resistance and the vascular complications of type 1 diabetes'

Hasnawati Saleh, MSc *Qld*, BSc (Hons) Hasanuddin, DipSci *Qld*
'The influence of lymphocytes on the metabolism of bone'

Randy Suryadinata, BSc(Hons) *Melb*
'Identification and characterisation of novel CDK substrates important in cell cycle progression'

Sarah Turpin, B.App.Sci
'Fatty acids and skeletal muscle damage: implications for obesity and type 2 diabetes'

Razan Wafai, BSc(Hons) *Vic*
'Investigation of Molecular Markers for Epithelial to Mesenchymal Transitions in Human Breast Cancer'

Kelly Waldeck, BSc(Hons) *UWA*
'The role of FKBP52 in tumour progression and metastasis'

Postgraduate Scholar

Doctor of Science

Frances Milat, MBBS *Mon* FRACP
'The PTH and wnt pathway as anabolic targets in bone'

Undergraduate Scholars

Bachelor of Science (Honours)

Kate Learmonth, BSc *Melb*
'The subjective interpretation of simple/rapid HIV tests: Implications for quality'

Meng Kang Wong
'Expression of epithelial-mesenchymal transition (EMT) markers in breast cancer progression'

Undergraduate Research Opportunity Program (UROP)

St Vincent's Institute participates in the Undergraduate Research Opportunities Program (UROP), administered by Bio21. This Program gives undergraduate students the opportunity to undertake their own project in a research lab, in order to introduce them to a research environment and encourage them to pursue careers in science. In 2006 there were 5 UROP students at SVI. More information about UROP can be accessed at: www.bio21.com.au/urop.asp or from Dr Ora Bernard, Undergraduate Student Coordinator, Tel: 9288 2480 or email: obernard@svi.edu.au

Applications are open in April and September of each year, for mid – and end of year intakes, respectively.

Seamus Crowe

'Ciliary neurotrophic factor effects on adipocyte biology'

Cze-Yen Lee

'Analysis of diabetes in NOD mice with defective IL-1 and IFNγ signalling'

Julian Maingard

'AMPK expression in the macrophage'

Alisa Sedgifar

'Regulation of cell cycle progression by CDK-mediated Ðphosphoryl ation of the Brahma chromatin remodelling complex'

Felix Zheng

'Analysis of intracellular class I MHC processing pathways in the pancreatic beta cell'

Summer Vacation Research Scholars

Aun-Teeng Koh

David Riglar

Nadia Sadli

Jia Ni Zhu

Graduations

The following graduated Doctor of Philosophy, The University of Melbourne

Abhilasha Gupta, BSc(Hons) *Melb*

'The nuclear localisation of AMP-activated protein kinase'

Carolyn McNees, BSc(Hons) *LaTrobe*

'ASCIZ, a novel human protein for the repair of methylating DNA damage'

Erin Verity, BSc(Hons) *Swinburne*

'The importance of neutralizing antibodies in any potential vaccine against HIV-1'

Mark Walter, BSc(Hons) *LaTrobe* BEc *Adel*

'Structure and function of the γ-subunit of AMP-activated protein kinases'

The following graduated Bachelor of Science (Honours), The University of Melbourne

Matthew Bird, BBiomedSc *Melb*

'Crystallisation of AMPKa complexed with CaMKKb'

Ling-Shan Chan

'Regulation of Glycerol-3-Phosphate Acyl-Transferase by AMP-activated Protein Kinase'

Junquan Huang, BBiomedSc *Melb*

'Antigen specificity and pathogenicity of pancreatic islet-infiltrating T cells in non-obese diabetic mice'

Sarah Ann Jones, BSc *Melb*

'MLD4: A novel mode of B lymphocyte regulation'

Liang Lo, Dipl Biotechnology *Singapore*

'Involvement of the RNA recognition motif (RRM) in the functions of Mdt1'

Angela Tam, BASc *Melb*

'Hotspots of bleomycin induced DNA double strand breaks'

Shanna Tam, BBiomedSc *Melb*

'The role of AMPK in osteoclast (bone destroying cell) differentiation'

Elena Tucker, BASc *Melb*

'Investigation of a mutation in NFkB2, a gene important for immune function and development'

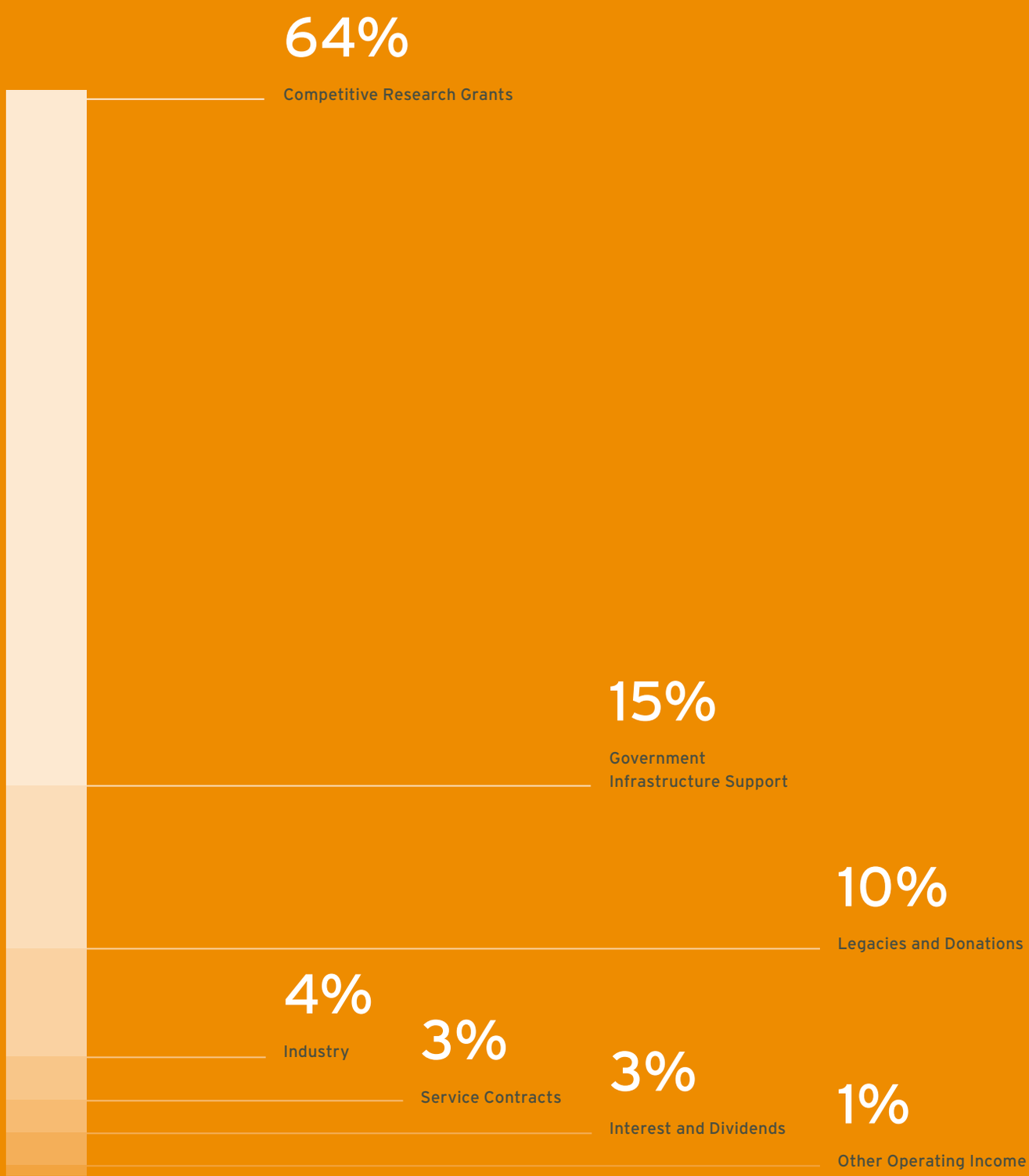
Su Ee Wong, BBiomed Sc *Melb*

'Mechanism of protection from diabetes in mice overexpressing dominant negative human Fas'

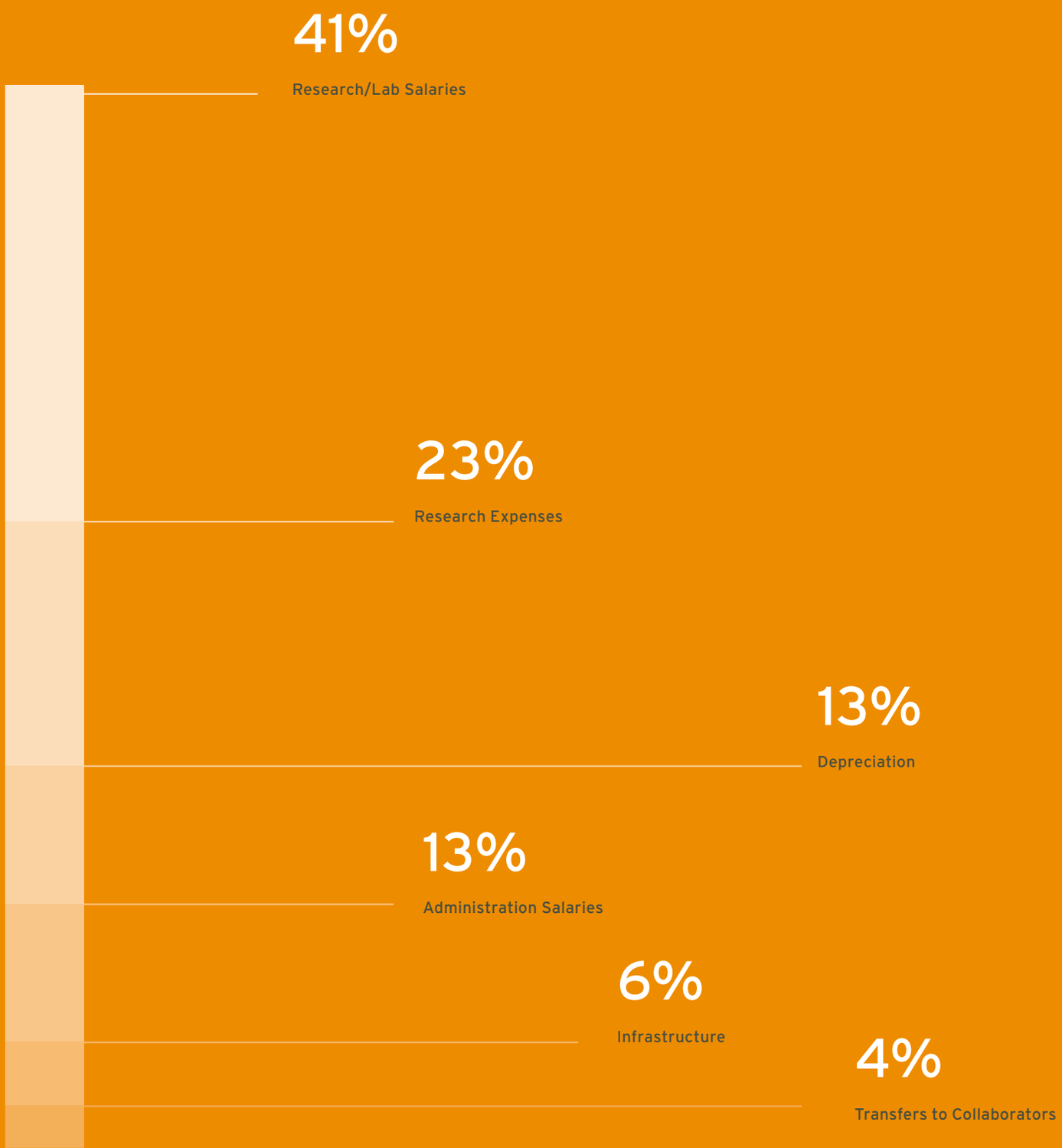
St Vincent's Student Society

This society is run by students and organises both social and career development events throughout the year. An offsite Student Retreat is held annually, which provides great educational and socialising opportunities for students.

INCOME


64%
Competitive Research Grants
15%
Government
Infrastructure Support
10%
Legacies and Donations
4%
Industry
3%
Service Contracts
3%
Interest and Dividends
1%
Other Operating Income

EXPENDITURE



DIRECTORS' REPORT

Your Directors present their report on the company for the financial year ended 31 December 2006.

1. Directors

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

Ms Susan M Alberti
Prof James D Best
Sr Mary Fankhauser (resigned 13 April 2006)
Mr Paul Holyoake (from 29 May 2006)
Prof Thomas WH Kay
Ms Ruth A O'Shannassy
Mr Gregory J Robinson
Mr Douglas A Wright
Prof James A Angus
Mr Jeffrey N Clifton
Ms Nicole M Feely
Mr Barry J Jackson
Mr Michael McGinniss
Mr G John Pizzey
Ms Brenda M Shanahan

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

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 Practicing Accountant, Chartered Secretary. Mr Rees has worked for St Vincent's Institute of Medical Research for 8 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 $3,899,218. 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) had a very successful 2006, increasing revenue by 26% following the 20% increase in 2005. The Institute's continued growth can be attributed to new research grants and donations. In 2006 the Institute's diabetes research team was awarded a four year grant of $2.0 million per year for islet transplantation research. The grant was awarded by the Juvenile Diabetes Research Foundation and funded through the Department of Health and Ageing.

Research income from all sources represents 83% of total revenue. The Institute's researchers have been extremely successful in being awarded competitive research grants. Competitive direct research grant income awarded to researchers represents 70% of the total revenue. This covers government, non-government and overseas funding sources.

DIRECTORS' REPORT

The research grants not only provide on-going funding for the researcher but it also has a significant flow-on effect through additional government infrastructure funding. The State and Commonwealth Governments determine the amount of infrastructure funding paid to research institutes by applying a formulae, which in general terms, is based on a percentage of the peer reviewed grants funds awarded to the Institute during the year. As the Institute's research activity expands so too does the need to maintain the appropriate level of support services for researchers. The government's policy of linking infrastructure support to research growth is important as it helps ensure that research development and progress is not hampered by an inability to provide services to the researcher.

The Institute received infrastructure support from the Commonwealth and State Governments through the NHMRC and Department of Innovation, Industry & Regional Development (DIIRD), respectively. The total infrastructure support was $2,581,536 and these funds were used to provide administration and other support services to researchers, in accordance with government guidelines.

There was an overall increase in support costs of 20% in 2006 while the Institute's research activities grew by 27% in 2006. In 2006 the administration and support services represented 19% (33% including depreciation and ammortisation costs) of total expenditure.

The Institute's fundraising from private donors and foundations increased by $383,412 in 2006 and this is largely attributed to special fund raising events.

In 2006 expenditure on equipment was $535,000, well down on last year but purchases are expected to reach $1,000,000 in 2007.

In 2006 the number of staff and students was 129 (2005 – 117). In addition the company acts as the host institute for the National Serology Reference Laboratory (NSRL), providing administration and research support to the 31 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

Likely developments in the operations of the company and the expected results of the operations in future financial years have not been included in this report. However the company is anticipating further increases in research activity in 2007.

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 2006 to the date of this report, this company has complied with the requirements of the *Environmental Protection Act*.

DIRECTORS' REPORT

11. Meetings of directors

During the financial year, 17 meetings of directors (including committees) were held. Attendees were:

	Directors' Meetings		Committee Meetings			
			Commercialisation		Audit & Finance	
	Number eligible to attend	Number attended	Number eligible to attend	Number attended	Number eligible to attend	Number attended
S M Alberti	6	2	–	–	–	–
JA Angus	6	2	–	–	–	–
JD Best	6	3	–	–	–	–
J N Clifton	6	4	–	–	–	–
Sr M Fankhauser	2	2	–	–	–	–
NM Feely	6	2	–	–	–	–
P Holyoake	3	3	–	–	–	–
BJ Jackson	6	4	5	3	–	–
TWH Kay	6	6	5	5	6	6
M McGinniss	6	6	5	4	6	6
R A O'Shannassy	6	6	–	–	6	5
GJ Pizzey	6	4	–	–	–	–
GJ Robinson	6	5	5	3	–	–
BM Shanahan	6	6	–	–	–	–
DA Wright	6	4	–	–	–	–

12. 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.

DIRECTORS' REPORT

13. 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.

The company was not a party to any such proceedings during the year.

14. Auditor's Independence Declaration

The lead auditor's independence declaration for the year ended 31 December 2006 has been received and can be found on page 62 of the financial statements.

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

Director
BM Shanahan

Director
RA O'Shannassy

Dated this 19th day of March 2007,
Melbourne, Australia

webb
audit & assurance

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 2006 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.

WEBB AUDIT PTY LTD

AP MARKS
Director

Melbourne: 22nd March 2007

Webb Audit Pty Ltd
ABN 29 995 702 662

A member of the Webb Group
Cnr Toorak & Tooronga Roads Hawthorn East Vic 3123 Australia
PO Box 185 Toorak Vic 3142 Australia
Telephone +61 3 9822 8686 Facsimile +61 3 9824 8578
audit@webbgroup.com.au www.webbgroup.com.au

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 2006 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 2006 Financial Report of St Vincent's Institute of Medical Research.

Income Statement

The net surplus from ordinary activities increased by $2,092,695 (116%) on the previous year. The significant increase in net surplus is attributed to revenue and other income increasing by $3,709,260 (26%) and this is partly offset by an increase in expenditure of $1,616,565 (13%). The increase in revenue is due to a combination of factors including increases in donations, income carried forward from 2005 and a net increase in research grant income. The increase in research funding also led to an escalation in direct research expenditure of $1,950,532 (28%). In 2005 the Institute was involved in several joint ventures which required a transfer of funds to collaborators. The collaborations continue but such expenditure was not required in 2006, and this is the main reason for Other Expenses decreasing by $771,660 in 2006.

In 2006, the key sources of funds for the Institute were 65% from government granting bodies, of which 22% was specifically for infrastructure support and 10% from legacies and donations. Expenditure is mainly represented by research salaries and direct research expenses (64%), support services (19%) and depreciation and amortisation (13%).

Balance Sheet

In 2006 the total Net Assets increased by $3,911,969, representing an increase of 27% on 2005, due to:

- Current Assets increased by $2,128,118 (37%) and Total Current Liabilities decreased by $2,335,106 (53%), thereby improving the company's liquidity position and building on the growth that occurred in 2005. The decrease in current liabilities was mainly due to a reduction in Other current liabilities, which covers grants carried forward to the next financial year.
- The net value of the property, plant and equipment decreased by $1,192,869 and financial assets increased by $629,433.

Statement of Changes in Equity

The increase in equity of $3,911,969 (27%) from 2005 to 2006 is due to the net surplus from operating activities of $3,899,218 and a small increase in the financial asset reserve of $12,751.

Cash Flow Statement

The 2006 net cash position increased by $1,270,584 (26%), notwithstanding that grants received (excluding grants carried forward from 2005) and payments to suppliers and employees had the combined impact of reducing the cash position by $2,976,848. However this reduction in cash was offset by income from donations, legacies and bequests increasing by $723,259 and payments for investing activities decreasing by $1,457,182.

INCOME STATEMENT THE YEAR ENDED 31 DECEMBER 2006

	Note	2006 ($)	2005 ($)
Revenue	2	17,732,444	14,048,097
Other income		118,536	93,623
Consumables used		(2,593,770)	(1,884,478)
Employee benefits expense		(7,540,829)	(6,016,734)
Depreciation and amortisation expense		(1,755,900)	(1,601,062)
Other expenses		(2,061,263)	(2,832,923)
Surplus for the year		**3,899,218**	**1,806,523**

The accompanying notes form part of these financial statements.

BALANCE SHEET AS AT 31 DECEMBER 2006

	Note	2006 ($)	2005 ($)
ASSETS			
Current Assets			
Cash and cash equivalents		6,227,226	4,956,642
Trade and other receivables		1,679,868	813,243
Other assets		-	9,091
Total Current Assets		**7,907,094**	**5,778,976**
Non-current Assets			
Trade and other receivables		250,000	250,000
Financial assets		1,497,028	867,595
Property, plant & equipment		10,949,857	12,142,726
Total Non-current Assets		**12,696,885**	**13,260,321**
Total Assets		**20,603,979**	**19,039,297**
Current Liabilities			
Trade and other payables		868,484	934,506
Short-term provisions		758,238	783,297
Funds held in trust for NSRL accrued leave		138,280	138,280
Other current liabilities		319,553	2,563,578
Total Current Liabilities		**2,084,555**	**4,419,661**
Non-current Liabilities			
Long-term provisions		142,535	154,716
Total Non-current Liabilities		**142,535**	**154,716**
Total Liabilities		**2,227,090**	**4,574,377**
NET ASSETS		**18,376,889**	**14,464,920**
EQUITY			
Retained surplus		18,151,822	14,252,604
Financial asset reserve		225,067	212,316
TOTAL EQUITY		**18,376,889**	**14,464,920**

The accompanying notes form part of these financial statements.

STATEMENT OF CHANGES IN EQUITY FOR YEAR ENDED 31 DECEMBER 2006

	Note	Retained Surplus	Financial Asset Reserve	Total
		$	$	$
Balance at beginning of financial year		**14,464,920**	**–**	**14,464,920**
Financial asset reserve adjusted for 2005		(212,316)	212,316	–
Adjusted opening balance		**14,252,604**	**212,316**	**14,464,920**
Revaluation increment		–	12,751	12,751
Surplus for the year		3,899,218	–	3,899,218
Balance at end of financial year		**18,151,822**	**225,067**	**18,376,889**

The accompanying notes form part of these financial statements.

CASH FLOW STATEMENT FOR THE YEAR ENDED 31 DECEMBER 2006

	Note	2006 ($) Inflows (Outflows)	2005 ($) Inflows (Outflows)
Cash flow from operating activities			
Grants received		12,227,449	13,230,351
Payments to suppliers and employees		(12,290,034)	(10,316,088)
Donations, legacies and bequests		1,830,079	1,106,820
Other revenue		226,863	557,720
Interest received		352,235	150,413
Dividends received		103,705	40,462
Net cash provided by operating activities		2,450,297	4,769,678
Cash flow from investing activities			
Purchase of plant and equipment		(563,030)	(1,632,541)
Leasehold improvements		–	(825,574)
Payments for investments		(616,683)	(178,780)
Net cash (used in) investing activities		(1,179,713)	(2,636,895)
Net Increase/(decrease) in cash held		1,270,584	2,132,783
Cash at the beginning of the year		4,956,642	2,823,859
Cash at the end of the year		**6,227,226**	**4,956,642**

The accompanying notes form part of these financial statements.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2006

Note 1: 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.

The financial reports of St Vincent's Institute of Medical Research comply 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.

The accounting policies have been consistently applied by the company and are consistent with those of the previous year unless otherwise stated.

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2006

Note 2: Revenue

	Note	2006 ($)	2005 ($)
Operating activities			
– government grants	4-5	11,373,926	9,519,559
– other grants		3,401,515	2,352,011
– contract services		473,961	342,532
– legacies, bequests, donations		1,849,233	1,465,821
– dividends from other corporations		103,705	40,462
– interest from other corporations		364,579	153,999
– royalty		124,631	21,324
– other		40,894	152,389
Total revenue		**17,732,444**	**14,048,097**
Non-operating activities			
– unrealised gains on shares		–	56,020
– realised gain on disposal of shares		118,536	37,603
Total other income		**118,536**	**93,623**

Note 3: Surplus

The following expenditure was incurred in determining the surplus:

	Note	2006 ($)	2005 ($)
Expenses			
– research		3,255,655	2,355,589
– research salaries and on-costs		5,728,380	4,677,914
– infrastructure		887,598	789,029
– admin. & lab. support salaries and on-costs		1,812,449	1,338,820
		11,684,082	9,161,352
Transfer of funds to external, joint collaborators		511,780	1,572,783
Depreciation of non-current assets		1,038,153	910,972
Amortisation of non-current assets		717,747	690,090

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2006

Note 4: Grants – Commonwealth Government

	Note	2006 ($)	2005 ($)
National Health and Medical Research Council			
– Infrastructure support		970,008	975,792
– Research grants		7,045,774	4,396,426
Australian Research Council		507,270	411,530
Department of Health and Ageing		958,659	–
		9,481,711	5,783,748

Note 5: Grants – Victorian State Government

	Note	2006 ($)	2005 ($)
Department of Innovation, Industry & Regional Development			
– Infrastructure support		1,611,528	1,655,204
– Science, Technology & Innovation Initiative		–	1,780,607
– Other direct research grants		280,687	300,000
		1,892,215	3,735,811

Note 6: Trade and other receivables

	Note	2006 ($)	2005 ($)
Current			
Grants and reimbursements		1,679,868	813,243
Non-current			
St. Vincent's Hospital Melbourne – Imprest Advance		250,000	250,000

Note 7: 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 2006

DIRECTORS' DECLARATION

The directors of the company declare that:

1. The financial statements and notes, as set out on pages 64 to 70 are in accordance with the Corporations Act 2001 and:
   a) comply with Accounting Standards and the *Corporations Regulations 2001:* and
   b) give a true and fair view of the financial position as at 31 December 2006 and of the performance for the year ended on that date of the company:
2. In the directors' opinion there are reasonable grounds to believe that the company will be able to pay its debts as and when they become due and payable.

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

Director
BM Shanahan

Director
RA O'Shannassy

Dated this 19th day of March 2006, Melbourne, Australia

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

Scope

The concise financial report and directors' responsibility

The concise financial report comprises the income statement, balance sheet, statement of changes in equity, cash flow statement, notes to the financial statements and the directors' declaration for St Vincent's Institute of Medical Research (the company) for the year ended 31 December 2006.

The directors of the company are responsible for the preparation and presentation of the financial report in accordance with Australian Accounting Standard AASB 1039: Concise Financial Reports.

Audit Approach

We conducted an independent audit of the concise financial report in order to express an opinion on it to the members of the company. Our audit was conducted in accordance with Australian Auditing Standards, in order to provide reasonable assurance as to whether the concise financial report is free of material misstatement. The nature of an audit is influenced by factors such as the use of professional judgement, selective testing, the inherent limitations of internal control, and the availability of persuasive rather than conclusive evidence. Therefore, an audit cannot guarantee that all material misstatements have been detected.

We also performed an independent audit of the full financial report of the company for the financial year ended 31 December 2006. Our audit report on the full financial report was signed on 19th March 2007, and was not subject to any qualification.

In conducting our audit of the concise financial report, we performed procedures to assess whether in all material respects the concise financial report is presented fairly in accordance with Australian Accounting Standard AASB 1039: Concise Financial Reports.

We formed our audit opinion on the basis of these procedures, which included:

- testing that the information included in the concise financial report is consistent with the information in the full financial report, and
- examining, on a test basis, information to provide evidence supporting the amounts, and other disclosures in the concise financial report which were not directly derived from the full financial report.

Our procedures include reading the other information in the Annual Report to determine whether it contains any material inconsistencies with the concise financial report.

Webb Audit Pty Ltd
ABN 29 995 702 662

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PO Box 185 Toorak Vic 3142 Australia
Telephone +61 3 9822 8686 Facsimile +61 3 9824 8578
audit@webbgroup.com.au www.webbgroup.com.au

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Independence

In conducting our audit, we followed applicable independence requirements of Australian professional ethical pronouncements and the Corporations Act 2001.

Audit Opinion

In our opinion, the concise financial report of St Vincent's Institute of Medical Research for the year ended 31 December 2006 complies with Australian Accounting Standard AASB 1039: Concise Financial Reports.

WEBB AUDIT PTY LTD

AP MARKS
Director

Melbourne: 22nd March 2007

Webb Audit Pty Ltd
ABN 29 995 702 662

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DONORS AND BEQUESTS

Private Donors, Bequests and Foundations:

$50,001 plus

Alberti AO, S

Bennelong Foundation

Leslie, N /Boolarong Pty Ltd

The Brenda Shanahan Charitable Foundation

The Marian & EH Flack Trust

The Pratt Foundation

$25,001 to $50,000

The Clive and Vera Ramaciotti Foundations administered by Perpetual Trustee

The Sarah & Baillieu Myer Family Foundation

$5,001 to $25,000

Bell Charitable Fund

Carson, I

DJ & LM Fox Foundation

Dougherty, H

Eldon & Anne Foote Trust administered by Lord Mayor's Charitable Fund

George Castan Family Charitable Trust

Harold & Cora Brennen Benevolent Trust administered by Equity Trustees Limited

Hart Charities

Iseli, A & C

Joe Arcaro & Associates Pty Ltd

Lowe, D

Norman, Mavis & Graeme Waters Perpetual Charitable Trust

North, C

Rebecca L Cooper Medical Research

Salta Properties Pty Ltd/ Westgate Logistics Pty Ltd

Schiavello (Vic) Pty Ltd

The Alma Hazel Eddy Trust administered by Perpetual Trustee

The Calvert-Jones Foundation

The Eirene Lucas Foundation

The J & R McGauran Trust Fund administered by Perpetual Trustee

The Perpetual Foundation

The Pickard Foundation

The Wishbone Deli

TR & RB Ditchfield Medical Research Endowment Fund administered by Perpetual Trustee

Watson, B

$501 – $5000

Abdallah, J & C

Abdallah, T & S

Arcaro, J & G

Archicentre Ltd

Balderstone, Sir James & Lady Balderstone

Barry Hall Group

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Bowness, W

Bruce Aitken & Associates Pty Ltd

Burgess, A

Campbell, T

Capital Properties Pty Ltd

Castellos Hotels

Caulfield, G

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Clarke, B

Clifton, J & S

Commins, A

Commins, H

Commins, N

Dale, G & R

DBR Coporation Pty Ltd

Demediuk, N & F

Emerson, S & L

F & J Ryan Foundation

Frost, R

Gainsmith, W

Goh, D

Grant, J & M

Gray, M & S

Hale, G

Halliday, S

Harris, AW

Holyoake, P & M

Jackson, B

Johnstone, A & J

Katsanevakis, C & D

Kay, C

Kelly, AP

Kelly, P

Komor, C

Macek, C

Major Engineering Pty Ltd

McHale, J

McNulty, M

McPhail, B

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Mercieca, A

Michelmore AO, J

Michelmore, A

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O'Brien, N & C

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Pellicano, A

Pizzey, J & B

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REIV Young Agents Group

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Spry-Bailey, P

Stops, G & W

SVH Emergency Care Centre

Tabak, L

The Michael & Andrew Buxton Foundation

Thomas, C & C

Wilson, P & G

Wraith, A

Xipell, J

Yencken, T & M

Young, C

Young, D

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Less than $ 501

Aarons, E

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Barker, R

Barui, S

Beaton, OW

Bell, B

Bennett, M

Bennett, R

Berold, B

Bloch, F & S

Bray, E

Cameron, V

Candy, B

Cannings, D

Carr, K

Cherry, J & Murdoch, K

Clegg, G

Clements, A

Coderre, N-A & McKeage, R

Cole, J

Connors, E-N

Copolov, J

Cortesu, C

de Graff, B & Guilfoyle, P

de Gruchy, D

de Salis, A

Degan, P

Deverich, J

Dubravica, S & DJ

Eureka Tower Staff

Ewin, R & J

Finley, R

Frank, B

Freadman, J

Friedman, H

Gearing, L

Gibson, M

Goh, S

Griffith Hack

Grusuvin, J & Graham, S

Hanson, K

Hogg, T

Hunter, I

Kaplan, S & S

Karamihas, M

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Lawrence, PB

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Lee, D

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Martin, J

Masel, L

Maughan, G

McGinniss, M

McKeage, D

McKeage, R & Lahoud, A

McLean, D

Mills, H

Muto, A

Nelson, S

O'Bryan, N

O'Neill, F

Plant, K

Plonka, A

Ralph AC, J

Robertson, J

Rogers, R

Sakell, T

Santamaria, J

Scott-Stevenson, S & Chrystall, M

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Webster, N

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Woodward, A

Woodward, K

Donations given in memory of:

Jill Ralston

James Burn

Vera Petrakou

We also acknowledge those donors who wish to remain anonymous

Trusts and Foundations permanently established for the purpose of allocating funds to the St Vincent's Institute on an ongoing basis:

John Holt Medical Research Endowment – administered by Perpetual Trustee, The Mary Jane Polinelli Foundation – administered by Perpetual Trustee, K & A Bongiorno Research Endowment – administered by Perpetual Trustee, DJ & LM Fox Foundation – administered by a private trustee.

The following permanent funds are included in the company's pool of invested funds with income being directed to the Institute's medical research program:

Albert H Maggs Endowment, Diane B Jones Endowment, George Menzies Carson Bequest, Lorna M Miller Endowment, Mary T Porter Estate, Merna Dorothea Sheahan Estate, The Mary Potter Research Grant.

HOW CAN YOU HELP SVI?

There are many ways you can support medical research at SVI. You can fund the purchase of vital equipment, the work of a scientist or the discovery of a drug to treat devastating diseases such as diabetes, cancer, arthritis or heart disease.

It is simple to **give a donation** to SVI and bring us one step closer to finding a solution for common diseases. You can make a tax deductible gift by sending a cheque to SVI, calling us with your credit card details on (03) 9288 2480 or completing the attached donation slip. Many supporters **donate in celebration** asking guests to their wedding or birthday to donate to SVI in lieu of a gift. Donors to your celebration fund will be acknowledged with a letter and informed of the vital medical research undertaken at SVI. Please contact Robin Berry on 03 9288 2480 or email: rberry@svi.edu.au to make arrangements.

Alternatively, you can enjoy the benefits of membership and **join the SVI 1000 Club.** With an annual donation of $1,000 you can join more than 300 members in attending a wide range of events with high profile speakers and the opportunity to network with other members of the Club.

You are invited to **attend SVI events**, which range from intimate dinners with high profile guest speakers to fun dinners held in renowned Melbourne venues. If you would like to attend an event or organise an event on our behalf, please contact Clare Lacey for more information on 03 9288 2480 or email: clacey@svi.edu.au.

There are many benefits if you wish to **build a corporate partnership** enabling you to meet your marketing and social responsibility objectives. Your company could make a tax deductible donation or **sponsor an event or publication**. In turn your company would receive recognition through logo placement in prominent positions and inclusion on our honour board, in the SVI newsletter and annual report.

There is also the opportunity for you or your company to join the **$10,000 Discovery Fund**. All tax deductible donations will be invested in a capital accumulation fund by an approved fund manager. At the optimum time the income will be diverted to support research initiatives at SVI with the capital remaining intact. All investors will receive regular fund performance reports. Please complete the form overleaf or contact Robin Berry for more information on 03 9288 2480 or email: rberry@svi.edu.au.

If you are holding a conference, dinner or awards ceremony for your company or association you could **nominate SVI as the beneficiary** of the event. Please contact Robin Berry for more information on 03 9288 2480 or email: rberry@svi.edu.au.

Giving to SVI through **workplace giving** means that your donation goes straight to funding research with no administration costs. You can give small, tax efficient deductions from your salary, which over time will have a big impact on the prevention of diseases affecting your community. Please contact Robin Berry on 03 9288 2480 or email: rberry@svi.edu.au to find out how you can nominate SVI in your company's Workplace Giving program.

You can provide a lasting legacy and make a continuing difference to medical research when you **make a bequest to SVI**. Your solicitor can include a bequest to SVI in a new will or add a codacil to an existing will. Please contact Robin Berry on 03 9288 2480 or email: rberry@svi.edu.au if you would like to discuss your gift for the future.

If your loved one was affected by diabetes, cancer, arthritis, heart disease or an infectious disease you may wish to **donate In memoriam.** Donors to your memorial fund will be acknowledged with a letter and informed of the vital medical research undertaken at SVI. Please contact Robin Berry on 03 9288 2480 or email: rberry@svi.edu.au to make arrangements.

SVI 1000 Club Membership

Type of Membership:

☐ New ☐ Continuing
☐ Corporate ☐ Individual

SVI 1000 Club Member ($1,000 per annum)
$

☐ 1yr ☐ 2yrs
☐ 3yrs ☐ 3yrs+

Other Donation

☐ Donation $

All gifts over $1000 will automatically qualify you as a member of the SVI 1000 Club. SVI respects your privacy. If you do not wish to receive some or all of our supporter information, please contact our office on (03) 9288 2480.

Thank you for your support.
All amounts of $2 and over are tax deductible.
SVIMR ABN 52 004 705 640

☐ Mr ☐ Mrs ☐ Ms ☐ Miss ☐ Other

First Name Surname

Position Company

Address Suburb P/Code State

Ph Work Fax Mobile

Ph Home Email

Payment Details

☐ Cheque (please make payable to St Vincent's Institute)
☐ Credit Card (please tick one of the following cards to complete details)
☐ Diners ☐ Visa ☐ Mastercard ☐ Amex

☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

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SVI $10,000 DISCOVERY FUND

St Vincent's Institute is an independent medical research institute which conducts laboratory research into the cause, prevention and treatment of diseases with high impact on the community, such as:

- Diabetes, obesity and heart disease
- Bone diseases such as arthritis and osteoporosis
- Cancer and the spread of cancer
- Infectious diseases
- Alzheimer's and other neurological disorders

Investing in a world class institute to combat disease

SVI's scientists are world-class leaders in their field and work to ensure that research is directed towards clinical applications, which will improve health and alleviate the effects of disease.

Continuous discovery needs continuous investment

Dedicated scientists at SVI depend on grant funding and need philanthropic assistance to:

- Develop new research initiatives
- Recruit high calibre scientists
- Bridge the gaps in grant funding cycles
- Purchase state of the art equipment

Maximising your investment

Your fully tax deductible donation will be invested in a capital accumulation fund for five years with all income being reinvested. At the optimum time the income will be diverted to support research initiatives at SVI but the capital will remain intact. The funds will be invested in Australian equities, including property and managed by an approved fund manager, who will provide you with performance reports every three months. All investments will be held in the Discovery Fund.

Mutual benefits

While investing in the future of medical research you will benefit through exposure in SVI newsletters, annual reports, the foyer honour board and event honour roll. Exclusive events will be held for $10,000 Discovery Fund members to update you on our progress and give you the opportunity to meet fellow members.

The goal of medical researchers is to alleviate pain and suffering

We are aware that cancer is the number one killer in Australia, that 1 million Australians have diabetes and that disease debilitates millions every day, but it is not until we see the loss of a loved one or experience the pain of one of these diseases that we truly realise their impact.

Emily's Story

Louise White falters when she speaks of the final months of her daughter's life. More than a year after melanoma surgery, Emily, aged just 26, found a lump under her arm but it was too late, the melanoma had spread and despite surgery she died two months later with her parents and her husband by her side. SVI is seeking ways to prevent the spread of cancer.

Pete's Resolve

Pete Campbell was diagnosed with Type 1 Diabetes when he was just 2 years old. Now 29, he injects insulin five times a day to stay alive. Having taken part in research programs for most of his life, Pete decided to undertake PhD studies at SVI and is hoping that his work will one day make a difference in the treatment of diabetes.

How you can help

To make your pledge of $10,000 annually for five years and join the $10,000 Discovery Fund, please complete the form below and contact Robin Berry on 03 9288 2480, email: rberry@svi.edu.au or Christine Tarascio on 0418 318 627.

$10,000 DISCOVERY FUND MEMBERSHIP

I Pledge $10,000 per year for five years to the SVI Discovery Fund

☐ Mr ☐ Mrs ☐ Ms ☐ Miss ☐ Other

First Name

Surname

Position

Company

Address

Suburb P/Code State

Ph Work Fax

Mobile Ph Home

Email

SVI is endorsed as a tax deductible gift recipient
SVIMR ABN: 52 004 705 640

Payment Details

☐ Cheque (please make payable to St Vincent's Institute)

☐ Credit Card (please tick one of the following cards to complete details)

☐ Diners ☐ Visa ☐ Mastercard ☐ Amex

☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Expiry Date / Amount being paid $

Signature

Options Please email/mail me

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☐ Promotions ☐ Science Forum Invitation

☐ Yes, I would like to take a tour of St Vincent's Institute

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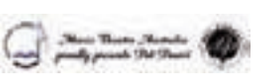

DRUG DISCOVERY

AUTOIMMUNE DISEASES

TYPE 1 DIABETES

TYPE 2 DIABETES AND OBESITY

SVI
ST VINCENT'S INSTITUTE
~ continuous discovery

St Vincent's Institute
Postal: 41 Victoria Parade, Fitzroy Victoria 3065
Location: 9 Princes Street, Fitzroy Victoria 3065

Tel: 03 9288 2480
Fax: 03 9416 2676
Email: enquiries@svi.edu.au
Web: www.svi.edu.au
ABN: 52 004 705 640