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Innovative discoveries that have an impact on the treatment of common diseases is our mission clearly ambitious and unpredictable. It requires knowledge, creativity and imagination, drive and determination, and luck as well. These need to rest on a solid foundation. A look back at the past year affirms that the combination of excellent people, up-to-date technology and equipment and an open, collaborative building blocks for breakthroughs.

Especially important are young scientists and it is striking how many major achievements there were amongst this group in the last year. In 2012, PhD student David Ascher won a Victoria Fellowship to travel to Cambridge University's renowned Laboratory of Molecular Biology. Another prominent PhD student has been Sabine Jurado, whose work on the ASCIZ protein was published in the prestigious Journal of Experimental Medicine and led to several awards.

A little further up the scale of seniority were researchers emerging as independent investigators, such as Jon Oakhill and John Scott who were awarded their first NHMRC grant on the regulation of AMP-activated protein kinase, which controls the body's fat and glucose metabolism. Helen Thomas, a type 1 diabetes researcher, entered the elite of Australian medical research by being granted a NHMRC Senior Research Fellowship. Helen is also a Chief Investigator on a recently awarded NHMRC Program Grant, so she is securely funded for the next 5 years and will no doubt make a very significant contribution to diabetes research over that time.

Our technology platforms received a very welcome boost in 2012 with purchase of equipment for cancer research funded by a grant of \$2m from the Australian Cancer Research Foundation. This is particularly focused on SVI's research into cancers of the blood and bone.

Work like this is successful and productive especially when it involves collaboration. Osteosarcoma and leukemia research at SVI are both highly

collaborative endeavours between laboratory-based scientists such as Carl Walkley, Louise Purton, David Izon and Michael Parker. In addition, we are fortunate to be co-located with clinicians at St Vincent's Hospital such as Peter Choong, Victoria's lead sarcoma surgeon and Harshal Nandurkar and others, who are experts in blood disorders.

We are also lucky to be able to collaborate with major technology platforms at The University of Melbourne. These include the Life Sciences Computation Initiative, which provides expertise in computing for the analysis of large data sets. Related to this is the University's IBM Blue Gene "world's greenest supercomputer" which was used by Michael Parker and colleagues in 2012 to create a 3D reconstruction of the common cold virus. Collaboration opportunities are one of the main expected benefits of the Aikenhead Centre for Medical Discovery being planned on the St Vincent's campus.

Of course all this science requires resources. It is no secret that times are difficult in government funding in many sectors, including medical research. We are grateful for the support we receive from the Victorian Government's Operational Infrastructure Support Scheme and from the Federal Government. However, we are determined to reduce our reliance on government although this may be difficult in the current economic climate. We are very grateful to all our philanthropic supporters and to our SVI Foundation led by its Chair Susan Alberti AO and Madeleine Whiting, Development Director. Especially exciting in 2012 has been the emergence of strong philanthropic interest in SVI from a new generation of donors including the Breakthrough Committee and the **5point Foundation.**

We are very grateful to our Board for their expertise and guidance and we especially wish to acknowledge the outstanding contribution of Mr Michael McGinniss who stepped down from the Board and the Audit and Finance Committee at the end of 2012. We also appreciate the interest in the Institute from the Trustees of The Mary Aikenhead Ministries. All of you – our scientists, our supporters, our governance and our governors – can take great pride in the achievements of SVI.

STRUCTURAL BIOLOGY UNIT



Kerry's husband Brian

passed away in May 2012 at the age of 65. Brian was diagnosed with early onset dementia in 2004.

"On the first day of the 2001 school year Brian came home from work and said to me, 'I can't go back, I don't know what I'm doing, I can't laugh with the kids anymore, I'm really disorganised and confused."

Brian was a teacher, a sportsman, a devoted father of three and a loving husband. He loved life, his family and friends. He had coached basketball to state and national level and was President of his Cricket Club.

At first we thought that he had depression. Anti-depressants helped his mood swings but he had changed. I noticed he wasn't as good socially and, while he responded when people spoke to him, he no longer initiated conversations and became increasingly dependent. In early 2004 Brian complained that he couldn't word find. He also found it difficult to communicate and his writing deteriorated. After a series of tests, to our horror Brian was diagnosed with early onset dementia. It didn't seem possible, but looking back, all the signs were there.

Over the next few years Brian's skills continued to deteriorate. From a person who loved reading he became illiterate. However, the most frustrating thing for him was his inability to communicate and take part in discussions with family and friends. His visual-spatial skills were also badly affected.

The day Brian lost his licence was a most distressing time for him. It was a stark realisation that his world was plummeting away from him and that he had no control over it. However, Brian had insight about what was happening to him and throughout his ordeal he displayed enormous courage.

Dementia/Alzheimer's disease robbed Brian of his life and his dignity. In its many forms, this disease not only robs sufferers of their futures, it also has a devastating effect on their families as they cope with the ongoing loss of their loved ones."

Alzheimer's disease

Alzheimer's disease is the most common form of dementia. It is a degenerative brain condition, characterised by memory loss and increasingly impaired cognitive function. It is most commonly diagnosed in people over 65 years of age. The cost of Alzheimer's in Australia is estimated at more than \$3.6 billion per year. As our society ages, it is becoming an increasing burden.



In the early 1900s, in what must have been a somewhat unpleasant experiment for participants, researchers concentrated the nasal secretions from people with colds and dripped them into the eyes of an uninfected person, thereby proving how a cold was spread. Researchers later identified the virus responsible for this transmission: the human rhinovirus.

More than 50 years later, researchers at SVI and the University of Melbourne cleverly combined their expertise with the most powerful supercomputer of its kind in the Southern Hemisphere, to reveal

what the rhinovirus looks like in threedimensions. The work will now pave the

way for new drug development.

The lead researcher on the project, Michael Parker explains, "Rhinovirus causes huge problems for people with underlying respiratory conditions like asthma, is responsible for a lot of hospital admissions in these people and can even lead to death."

He goes on to say that a new antiviral drug to treat rhinovirus infections is being

developed by Melbourne company Biota Holdings Ltd. The research, carried

out in collaboration with researchers at the University of Melbourne, will help the scientists delve deeper into how the drug works at a molecular level. "This work offers exciting opportunities for speeding up the discovery and development of new

antiviral treatments and has the potential to save many lives around the world,"

Michael said.



Drs Sophie Broughton and Urmi Dhagat have joined forces in SVI's Structural Biology Unit to make an impact on the blood cancer leukaemia. Since arriving in the Unit with their newly minted PhDs in hand, the young researchers have had a number of successes.

In 2012, Urmi was awarded an early career Peter Doherty Fellowship from the National Health and Medical Research Council and Sophie was awarded a Leukaemia Foundation Postdoctoral Fellowship. Recently they also received a joint grant of \$30,000 awarded by the Margaret Walkom Bequest to fund a high-resolution microscope for their

research. These grants are supporting the two to pursue their careers in the cutting-edge field of structural biology and drug discovery.

Urmi and Sophie are focusing on proteins involved in the development of leukaemia, which they aim to manipulate in order to provide new treatment options. Sophie says "My background in protein expression through to crystallisation and Urmi's strengths in medicinal chemistry and structural biology provide us with a broad skill set that is a great advantage to us in our shared projects." Urmi adds, "We often bounce ideas off each other, which motivates us to try new things and think outside the box".

The productivity and capabilities of researchers in the Structural Biology Unit have been greatly enhanced by the establishment of SVI's Australian Cancer Research Foundation (ACRF) Rational Drug Discovery Centre, which was possible thanks to a \$2 million grant made by the ACRF in 2012.

Combined with their passion for medical research, access to the new technologies in the Centre gives these young researchers every chance of further success.



BRIGHT SPARKS

Students at SVI are trained by some of Australia's leading scientists to learn skills to help people affected by common diseases.

The best of these students are offered SVI Student
Top-up Scholarships, which boost their modest stipends by \$5,000 per year.

Since 2003, support from the SVI 1000 Club has helped to fund 32 PhD students and 25 Honours students. The other major supporter of SVI Student Top-up Scholarships is the hard-working SVI Support Group, which has been raising money for the cause for over 13 years. To date the group, chaired by SVI Foundation Board member Claire O'Callaghan, has raised an impressive amount of more than \$220,000.

At the Annual SVI Support Group Dinner in 2012, PhD student David Ascher from the Structural Biology Unit explained the difference that the SVI Student Scholarship made to him. "Aside from the obvious financial help, academically it is very important to have these awards when applying for fellowships - having received a Scholarship can make the difference between getting or missing out on an important opportunity." In 2012, David was one of 12 young Victorian scientists awarded a prestigious 2012 Victoria Fellowship. The Award has taken him to Cambridge University to work alongside a world leader in structurebased drug discovery. It was an initial donation from dedicated SVI supporter Colin North that provided David's scholarship.

SVI would like to thank the SVI Support Group and all those who have supported students at the Institute, with special thanks to those individual donors who have funded Scholarships.

SVI Support Group

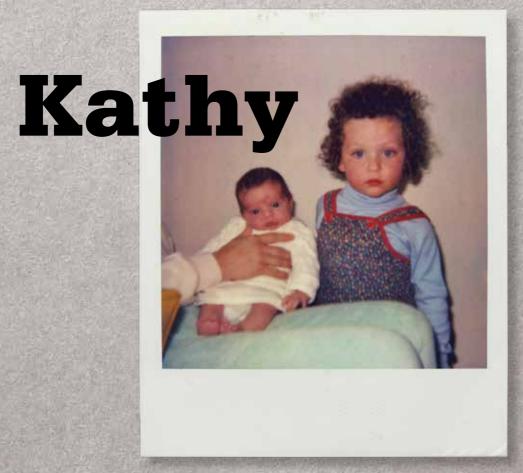
Mrs Claire O'Callaghan (Chair) Mrs Margaret Batrouney Mrs Maureen Breheny Mrs Colleen Bolton Mrs Cathy Clancy Ms Bernadette Dennis Mrs Cathy Gilbert Mrs Angela Griss Ms Barbara Handlev Mrs Carole Hart Ms Jo Lonergan Mrs Margaret Lorkin Mrs Gail McHale Mrs Geraldine Peck Ms Faye Reeve Mrs Dawn Hill-Regan Mrs Rosalea Rogers Mrs Judy Ryan Mrs Christina Westmore-Peyton Mrs Therese Whiting Mrs Natalie Woodley Mrs Thecla Xipell

For more information on becoming a student, visit us at www.svi.edu.au/students.

For more information on funding SVI Top-up Scholarships contact the SVI Foundation on (03) 9288 2480 or email foundation@svi.edu.au.



IMMUNOLOGY AND DIABETES UNIT



was diagnosed with diabetes just a couple of days after she turned 5.

"My Dad's mum and sister both passed away due to complications from type 1 diabetes, many years before I was born.

My Mum was a nurse so she picked up that something was wrong with me quite quickly. I remember being very, very thirsty. After I was diagnosed, I have clear memories of Mum having to chase me around the house every morning to give me an injection. When you are 5, an injection is a big deal. However, it didn't take me too long to make my diabetes work to my advantage. I was a cheeky kid and if I ever happened to get in trouble I was very quick to report that I wasn't feeling well and could go into a coma at any moment!

These days, routine is the key to my success. As a general rule I eat sensibly, am active and I keep regular appointments with my doctor. I do still struggle to keep my sugars good all the time, but I'm not too hard on myself and accept that things such as stress, which I can't always control, can affect my sugar levels.

The thought of going blind or having a limb amputated in the future always plays on my mind, but I do my best to reduce the risk of this happening by taking care of myself. I hope that a cure is found. In the meantime, I know that further inroads are being made towards treating the complications associated with diabetes, which will give me a much better outlook than my grandmother and aunt had."

Type 1 diabetes

Six Australians are diagnosed with type 1 diabetes every day, many of them children. People with type 1 diabetes are dependent on insulin injections and are at risk of serious complications from the disease.



A lot of what we know about type 1 diabetes comes from studies carried out in mice. Such studies have shown that it is the immune system, in the form of 'killer' cells called T cells, which are responsible for the destruction of the insulin-producing beta cell.

SVI's Dr Stuart Mannering, however, is not particularly interested in diabetes in mice. "What interests me specifically is type 1 diabetes in humans and identifying the cells that cause it. These studies are, however, complicated by the fact that it is not possible to see what is happening inside the pancreas in a type 1 diabetic - in fact, at the moment we can't even tell that someone is going to get the disease until after most of their beta cells have already been killed."

Until recently the only access the

group had to live human T cells was from the circulating blood of someone with the disease, where the cells are scarce and may be different from those cells found in the pancreas.

However, Stuart and his group recently achieved a world first. Stuart explains,

SVI'S DR STUART

MANNERING.

PARTICULARLY

INTERESTED IN

MOUSE.

'Beta cells live in groups of cells called islets within the pancreas. We are fortunate to have access to human pancreatic islets from organ donors that we isolate as part of the Australian Islet Transplantation Program. With this expertise, we have

been able to isolate the few remaining islets that were present in the pancreas of deceased organ donors who had type 1 diabetes. When we cultured

these islets in a special type of liquid conducive to the growth of T cells, we found that after a couple of days T cells started emerging from the islets."

This is the first time that anyone has been able to analyse human T cells caught at 'the scene of the crime'. Now that

> they have the T cells growing in the lab, they are able to interrogate each T cell type to find out why it was attacking the beta cells. They do this by showing them a parade of beta-cell proteins in order to see which ones they recognise.

understand what drove the T cells to kill the beta cells in the first place, and use this knowledge to prevent type 1 diabetes in the future.



SVI's newest recruit, Dr Mark Chong, joined the Immunology and Diabetes Unit at SVI at the end of 2012.

Mark did his postdoctoral stint from 2004-2009 in a research lab at New York University. He says that it was a tough environment. "About 50% of people who go there to do their postdoc end up leaving science. You don't go there to be nurtured, you go because the head of the lab is a true pioneer, there is cutting-edge work, lots of funding, and everyone there has ambitions to publish a big paper."

The skills that Mark learnt during his postdoc have stood him in good stead since then. "I realised early on that if you want to be at the cutting edge, you have to be willing to engage in new technologies and you can't rely on commercially available reagents – you need to be able to develop your own. We have often had to write our own computational programs to analyse results."

Following his work in New York, Mark returned to the Walter and Eliza Hall Institute, before deciding to join the Immunology and Diabetes Unit at SVI.

Mark is keenly interested in what is known as the dark matter of the genome – small chains of nucleotides called microRNAs. Until recently, biology teachers taught a simple formula to

explain how proteins – our body's workhorses – are made: DNA makes RNA makes protein. Identified only recently, it has now been shown that many small pieces of RNA, known as microRNAs, do not encode proteins, but rather exert their influence over those RNAs that do. Mark's work has uncovered the role that microRNAs play during the development of T cells, the cells responsible for autoimmune diseases such as type 1 diabetes.

Mark is excited at the possibilities that lie ahead: he has plans to expand his group, writing his own programs as he goes.

RAISING HOPE

When Sue Alberti's only child, Danielle, was diagnosed with type 1 diabetes at 12 years of age, finding a cure became an important part of Sue's life.

When Danielle passed away in 2001 at 32 years of age from complications of the disease, it became a dedicated mission.

Among her many roles,
Sue is Chair of the SVI
Foundation, where she works
tirelessly to promote SVI
research and help to find new
ways to bolster funding. Since
its inception, the Susan Alberti
Medical Research Foundation
(SAMRF) has raised millions
of dollars towards Sue's goal
of curing type 1 diabetes.

The Susan Alberti Medical Research Foundation held its 28th annual Signature Ball in 2012, proceeds from which resulted in a substantial contribution to SVI's research into type 1 diabetes.

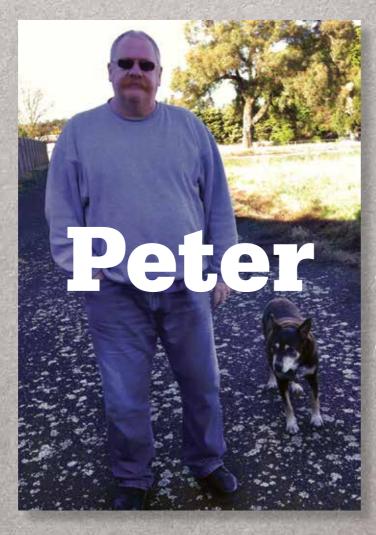
This support will help to continue the ground-breaking work of the Australian Islet Transplant Program. Through the Program, people with difficult-to-treat type 1 diabetes are transplanted with insulin-producing islets from deceased organ donors. The Victorian arm of the Program, led by SVI's Immunology and Diabetes Unit, has resulted in seven people with type 1 diabetes receiving transplants of islets. Four of these patients became independent of the need to inject insulin, resulting in a significant improvement in the quality of their lives.

If you would like more information about attending the Annual Susan Alberti Medical Research Foundation Signature Ball, visit www.susanalbertifoundation. org.au.





PROTEIN CHEMISTRY AND METABOLISM UNIT



was 46 when diagnosed with type 2 diabetes.

"I have a family history of this accursed disease, predominantly through my mother: her father, two sisters and two brothers, as well as my older brother and my mother all had type 2 diabetes.

"I have a family history of this accursed disease, predominantly through my mother; her father, two sisters and two brothers, as well as my older brother and my mother all had type 2 diabetes.

A high blood glucose score when I visited my GP for another issue started off the merry-go-round of specialists, medications, blood tests and GP visits.

I have to monitor my blood glucose levels daily, and have regular tests at the GP. The complications I have developed include diabetic retinopathy, nephropathy and neuropathy. Nerve damage in my foot has restricted my ability to exercise. I am careful to monitor blood pressure and do anything else I can to ward off further complications.

It would be easy to allow feelings of depression, doubt and frustration to take hold and flourish, if not for the support and love of friends, and especially family.

I feel that there is hope for a cure, and I will help in my own small way, by donating my bits and pieces to medical research after my passing." $\frac{1}{2} \int_{\mathbb{R}^{n}} \frac{1}{2} \int_{\mathbb{R}^{n}} \frac{1}{2}$

Type 2 diabetes

Type 2 diabetes results in damagingly high levels of glucose in the circulation. It is estimated that half a million Australians suffer from the condition. This number is thought to be an underestimation of the full extent of the problem.



One of the world's most ancient drugs may hold the answers to a very modern goal for our aging population: preventing cancer.

Recent studies show that, in addition to its analgesic and anti-inflammatory actions, the wonder drug aspirin also lowers a person's risk of developing cancer.

Graham Hardie's group from the University of Dundee, in collaboration with SVI's Bruce Kemp and his long-time collaborator Greg Steinberg, are exploring the mechanisms behind this unexpected effect. Their study, published in the prestigious journal Science in 2012, showed that aspirin's active ingredient,

..THE WONDER

DRUG ASPIRIN

LOWERS

A PERSON'S RISK

OF DEVELOPING

salicylate, activates an enzyme called AMP kinase, a key regulator of energy metabolism and focus of research in the Protein Chemistry and Metabolism Unit.

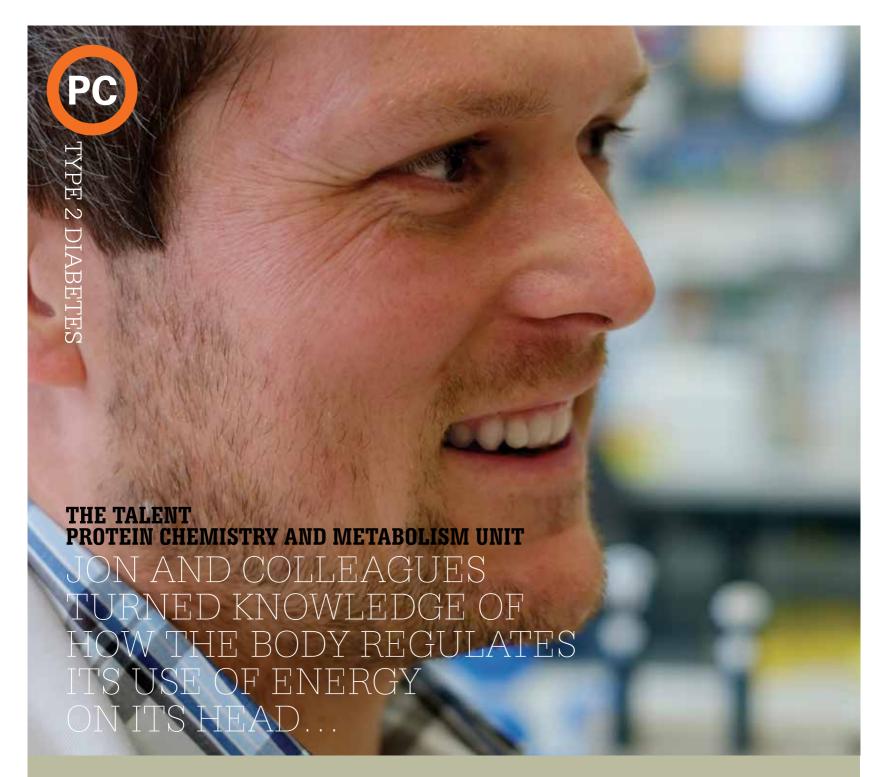
The studies imply that aspirin's purported anticancer effect may occur through salicylate's regulation of energy pathways.

Bruce says, "Anything that activates AMP kinase will suppress cell proliferation and metabolic disease and so it is no

surprise that activating AMP kinase is good for you". Bruce's group at SVI have been studying AMP kinase since they first purified and sequenced the enzyme in the early 1990s.

Their most recent finding potentially heralds the

development of new metabolic disease and anti-cancer drugs.



When Jon Oakhill arrived in Australia from the U.K. in 2006 and applied for a postdoctoral position at SVI, he didn't necessarily plan to stay in Melbourne in the long-term. He certainly didn't imagine that he would end up as a permanent resident, running his own research team and raising two avid Hawthorn supporters.

"I initially chose the Protein Chemistry and Metabolism Unit at SVI, headed by Bruce Kemp, because I felt my career needed a kick-start under the mentorship of an internationally renowned biochemist. I have stayed on because of the fundamental nature of Bruce's research and the cooperative environment within the Institute which, over the last 2-3 years, have led to my own major (and unexpected) career advances."

The focus of research in the Unit is the protein AMP-activated protein kinase (AMPK), which is the body's master regulator of cellular energy. In recent years, AMPK has emerged as a major player in human disease, with important roles in cancer, heart disease and neurodegenerative diseases.

In 2012 Jon received funding for the first time as a chief investigator in his own right in the NHMRC's Project Grant system. The Project Grant scheme is the main avenue of funding for small teams of medical researchers.

The project is based around Jon's recent work on AMPK, published in two major research articles. In 2010 and 2011, Jon and colleagues turned knowledge of how the body regulates its use of energy

on its head, by providing insights into how AMPK signalling is initiated in response to energy deprivation. In doing so the group solved a 40 year-old problem that had eluded the best efforts of multiple international laboratories. Based on —his studies, Jon teamed up with fellow expatriate John Scott to find new ways to activate the protein.

"Our research aims to uncover how changes in energy metabolism are linked to metabolic diseases, cancer and neurodegenerative diseases. Ultimately, this will lead to the development of novel therapeutics to combat these diseases, which take such a heavy toll on health and quality of life."

HEALTHY DISCUSSIONS

Throughout the year, the SVI Foundation runs events with the aim of introducing SVI's research to a wider audience.

In June 2012, SVI examined the science of food, at an exclusive evening for SVI 1000 Club members. Guests at the 'Food Matters: You are what you eat' event enjoyed discussions with the Editor of The Age's Good Food Guide, Janne Appelgren, St Vincent's Hospital's Dr Marno Ryan and SVI PhD student Hayley O'Neill. The three answered questions from guests about current food trends, the Mediterranean diet and the effects of food on our health.

A second event was held in August, on the eve of the Olympics, when 170 guests braved a chilly Melbourne morning to gather in the Olympic Room at the MCG and celebrate elite performance at SVI's 'From the Lab to London' breakfast. A group of six well known Olympians spoke with emotion about the highs and lows of being an elite

performer, drawing parallels between the motivation and talent needed to perform at sport's highest level as an athlete with that of elite medical researchers.

In December, guests gathered at the Telstra Conference Centre to attend the 2012 SVI Forum, 'Medical Research and Biotechnology in the Asian Century'. The Forum examined the huge potential for Australia in the convergence of the Asian Century and the age of biotechnology, with speakers reflecting on how we can best take advantage of Australia's position in order to improve both health and economic outcomes.

If you would like to be informed of events being held by the SVI Foundation, contact the SVI Foundation on (03) 9288 2480 or email foundation@svi.edu.au.

You can also follow us on Twitter, Facebook, or visit our website, www.svi.edu.au.



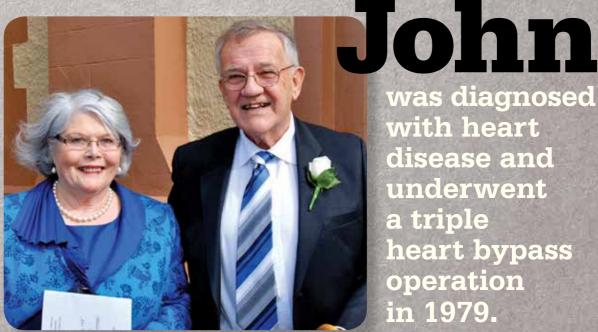
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MOLECULAR CARDIOLOGY UNIT



was diagnosed with heart disease and underwent a triple heart bypass operation in 1979.

"I was 48 years old with five children between the ages of 6 and 16 and working long hours when I had a few episodes of tingling up my arm and slight chest pain.

I knew I was a little overweight and had high cholesterol, but I had changed my diet recently to get rid of any salt. I didn't drink much alcohol and I didn't eat many fatty foods. I could not afford to slow down, I had a business to run and a family to support.

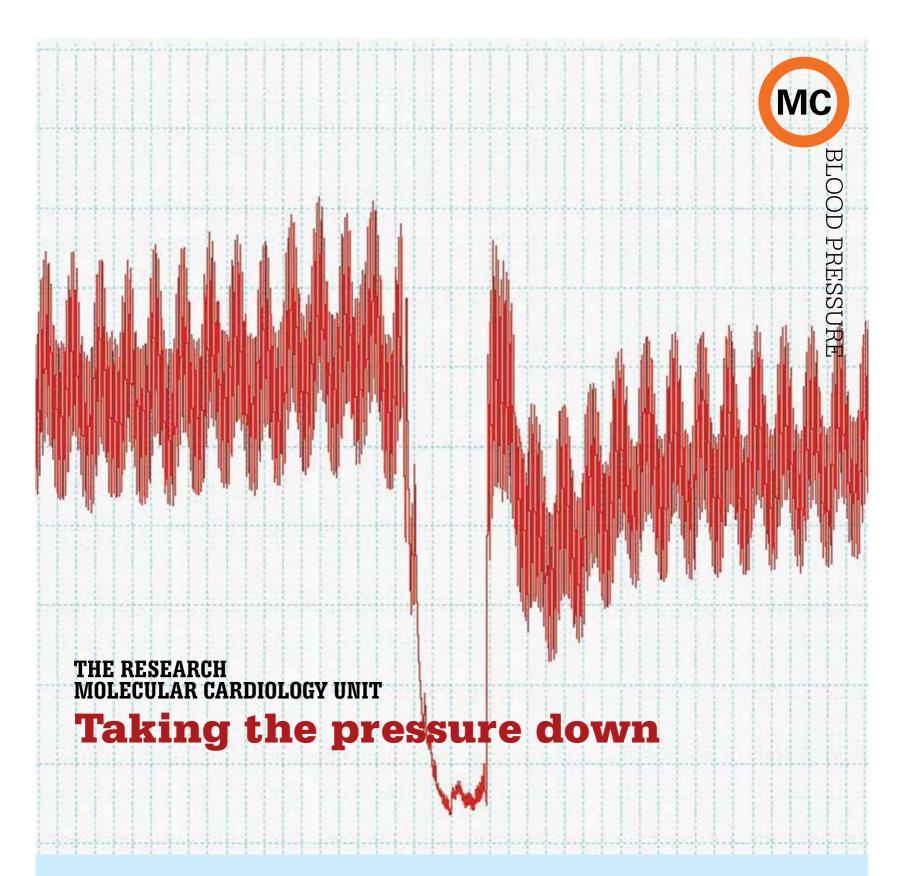
Gradually though over 6 months I found myself feeling weaker and puffing and panting just walking up the steps to our house. I did not know what was wrong with me. After a trip to the GP I was sent straight to St Vincent's Hospital where I was admitted overnight for some tests. They told me I had ischaemia and to me that could have been a fleabite for all I knew about medical terms! On the 12th June 1979 I underwent a triple bypass operation. After the operation I went straight back to work.

Since then I have undergone two reworks on the original bypass. It has now been 22 years since my last operation and the disease lays dormant. I have a check up every 6 months and I try and walk every day and eat the right foods.

We all have the idea that medicine is a magic bullet and that you take a pill and everything is fixed. I am 82 now and have had a lifetime of heart disease and I have seen enormous changes in medical treatment in that time. Medical research is a long road and every step is an improvement on the last. I could be a lot fitter but I am doing well if I can get up tomorrow."

Heart disease

Heart disease is Australia's number one killer, with one in five people developing it in their lifetime. Someone in Australia dies from a heart attack every 10 minutes.



In 2012, Jock Campbell published a study showing that half of the people taking medication for high blood pressure could achieve better control of their hypertension if they took combinations of available medicines.

The study, led by SVI and Bupa Australia, in collaboration with the University of Melbourne, Monash University and the Baker IDI Institute, measured the blood pressure of 3623 Victorians aged 60 or more who were taking tablets to treat the condition.

Fifty-two percent of the study's

participants recorded high blood pressure levels even though they were taking

medication to lower their blood pressure. Of these, nearly half were taking one type of tablet and a further third were taking only two types of tablet.

Jock says that more people could achieve better control of their blood

pressure if they took combinations of available medicines. "Guidelines for the management of hypertension in Australia recommend that up to four drug classes be used in combination if necessary to

> achieve the target blood pressure. Our study shows that these guidelines are not being followed effectively. High blood pressure can lead to serious problems such as heart attack, stroke, heart failure or kidney disease, so it is vital that the condition is managed in order to avoid

these serious problems."

.IT IS VITAL THAT

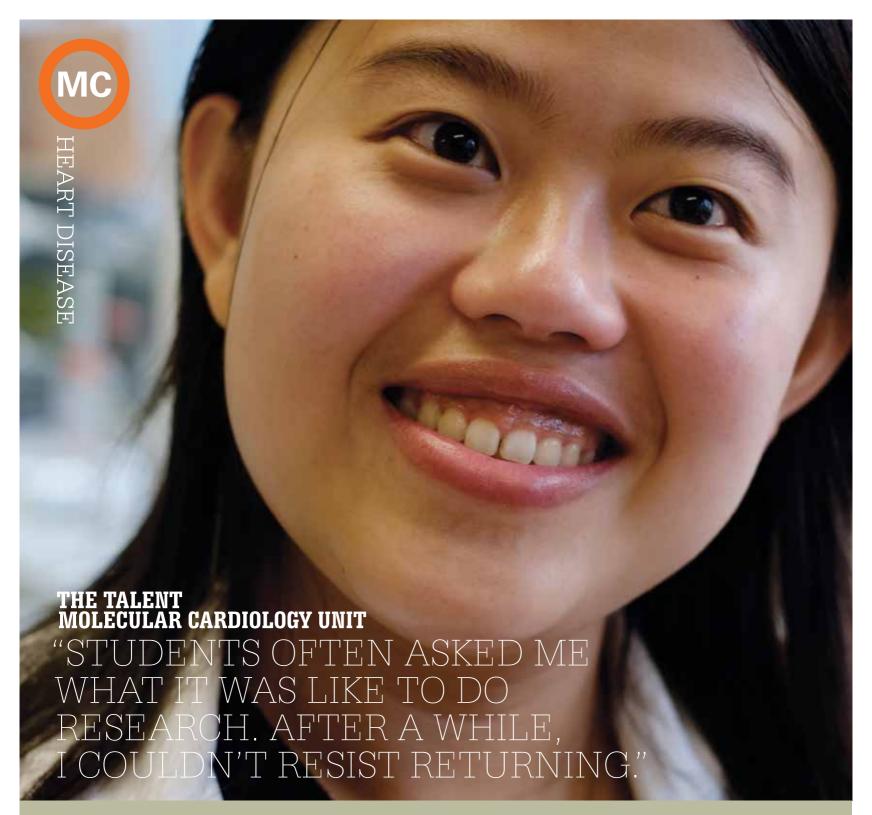
THE CONDITION

IS MANAGED IN

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THESE SERIOUS

PROBLEMS.



Jock Campbell, head of SVI's Molecular Cardiology Unit, is passionate about communicating with the community. He says, "Research involves much more than just doing experiments. As researchers, we have an obligation to communicate effectively with people to tell them why we are asking the questions that we ask, how we go about finding the solutions, and to seek their help in answering these questions."

Jock's PhD student Suang Suang Koid has recently entered the third year of her PhD and is equally enthusiastic about communication.

"After completing my Honours degree,

I worked for 3 years as a tutor at the University. I found it very fulfilling teaching undergraduate students. In that role, students often asked me what it was like to do research. After a while, I couldn't resist returning to research to do a PhD."

Suang's PhD project focuses on the potential of a drug called Aliskiren for the prevention and treatment of cardiovascular diseases.

Suang says, "Cardiovascular diseases, in particular high blood pressure, stroke, heart attack and heart failure, affect many Australian families. The aim of my research is to investigate whether a new

drug called Aliskiren, which was approved for the treatment of high blood pressure in 2007, is also effective for the prevention and treatment of heart attack and heart failure. To do this, I am looking at how the drug helps prevent the death of heart muscle during a heart attack. If Aliskiren preserves heart function, or in other words, prevents damage, patients would not only have better prospects of survival, but would also be more likely to continue to perform normal daily activities. I think this is really exciting because I know the research I am doing has genuine potential to improve patient quality-of-life."

SVI GOLF DAY

SVI'S DRIVING FORCE

With over \$106,000 raised in 2012, SVI and Newcrest Mining's annual Charity Golf Day was a great success for the fifth year running.

The event, which was held on the 15th of October at Albert Park Golf Course, saw 26 teams tee off, with proceeds going to heart research at SVI.

The melodic hum of bagpipes greeted the golfers after 18 holes, and participants were treated to an evening of wine tasting, oyster shucking and dinner, over which they were offered golfing advice by pro Bruce Green and entertained by comedian Keith Scott.

In memory of the Founding Chair of the SVI Golf Committee, Michael Dwyer, who passed away from heart disease in 2012, the 'Michael Dwyer Memorial Trophy' was launched. It was an honour to have Michael's wife Sally in attendance to present the award to Luke Mussared from Maxxia for the straightest drive on hole 6.

The team from Credit Suisse also went home with an award, with captain Peter Paltoglou taking home the Jack Holt trophy for coming first on the day.

The Golf Day has raised in excess of \$342,000 over the last five years. The event would not be possible without the support of its sponsors, particularly long-term supporter and Gold Sponsor Newcrest Mining.

Greg Robinson, CEO of Newcrest Mining said, "The day is such a great event and is growing in popularity each year. We are proud to be the Gold Sponsors and so pleased that so many of our suppliers choose to participate each year, ensuring funds are raised for such an important cause."

SVI is grateful to the Golf Committee for their tireless work to make the event such a success. Chaired by Leon Wiegard, the group consists of Michael Kay, Mark Kerr, Barry Holbrook, Charlie Happell, Damian Murphy and Peter McCarthy. For more information contact the SVI Foundation on (03) 9288 2480 or email foundation@svi.edu.au.

Thanks to our corporate sponsors: Gold Sponsor



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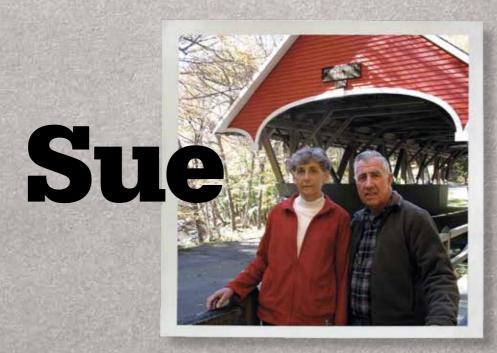
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Ausenco Services, Australian Reliance, Barclays Capital, BP Australia, Byrnecut Australia, Coffey Geotechnics, Credit Suisse, Ernst & Young, Fluor Australia, Macquarie Leasing, Maxxia, Minter Ellison, Orica Limited, Pinnacle Drilling, Sinclair Knight Merz, Traverse Drilling, Westpac Institutional Bank





BONE CELL BIOLOGY AND DISEASE UNIT



was diagnosed with rheumatoid arthritis when she was 51.

"I had been experiencing severe pain and swelling in several joints for about 2 months."

My GP referred me to a specialist who diagnosed rheumatoid arthritis. I was sent for a bone density scan, which showed I also had severe osteoporosis. My arthritis is managed well: I still have pain but I cope.

The osteoporosis didn't trouble me until about two and a half years ago, when I fractured my sternum. I was only making a bed when it happened. Since then I have had numerous spontaneous hip fractures.

I can no longer do many of the things I used to do: I enjoy working in our garden, but I can no longer do the heavier gardening work. I have had to use crutches when recovering from the hip fractures.

I knew about osteoporosis, but not much about rheumatoid arthritis – I didn't know that it could affect more than just the joints.

My husband has been a great help. My daughter has always badgered me about taking care of myself, and hasn't let up since! Although I don't have the mobility and stability that I used to, I cope pretty well. I am on weekly injections and other medications for my rheumatoid arthritis. Since having the fractures, my rheumatologist has put me on Forteo, which I give myself daily by injection, but this treatment is limited to 18 months. It would be great if there were something else that could be of benefit that could be taken for longer.

I hope that in the future it will be possible to detect these diseases earlier, particularly for osteoporosis, as early treatment may prevent fractures." $\frac{1}{2} \int_{-\infty}^{\infty} \frac{1}{2} \int_{-\infty}^{\infty} \frac{1}{2}$

Osteoporosis

One in two Australian women and one in three men will suffer an osteoporotic fracture. The direct health costs of the condition are estimated to be \$1billion per year.



Natalie Sims and her group have been painstakingly sifting through proteins that are found within growing bone in order to identify those that might be exploited for the development of new therapies for diseases such as osteoporosis.

Natalie says, "Many people think of bone as being a static tissue, but in fact it is constantly being broken down and rebuilt. When more bone is broken down than is built, this results in osteoporosis. leading to weakened bones and increased risk of fracture and breakage."

She goes on to say that while there are treatments that can stop further bone loss, there is currently only one drug available that works to increase bone mass. However, for safety reasons, this drug can only be administered for a

period of 18 months, after which bone breakdown will recur.

The group are working to understand the pathways that are involved in maintaining bone's exquisite balance between destruction and construction. One of the ways they do this is by using

...THERE IS

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INCREASE BONE

MASS.

genetically modified mice, in which one or more proteins have been mutated or removed. By examining the effect this has on the skeletons of the mice, they can extrapolate information about the role of the protein.

The group's recent studies led them to a protein known as leukaemia inhibitory factor (LIF). They showed that LIF had a specific role in

the growth plate of bone (the area of growing tissue that controls bone length) and stimulated the activity of the cells in bone that determine adult standing height. and the cells that form bone itself.

The skeletal defects in the mice were strikingly similar to those seen in

people with Stüve-Wiedemann syndrome, a rare genetic disorder that leads to skeletal abnormalities, respiratory difficulties, and death in the early years of life. Further study of the mice will reveal more about the role of this important protein and may also help

to develop new treatments, not only for osteoporosis, but also for Stüve-Wiedemann syndrome.



When SVI's Professor Jack Martin was nominated as the Victorian Senior Australian of the Year candidate in late 2012, he was typically modest, acknowledging the important role that mentors had played in his success.

"I had three wonderful mentors early in my career. They gave me remarkable opportunities, taught me the need for imagination, experimental rigor and attention to detail, supported me throughout my career and influenced many important decisions."

This advice helped Jack on his way to become one of Australia's most esteemed

medical researchers. He cites the greatest scientific achievement of his career as the discovery of parathyroid hormone-related protein, a hormone produced by cancers that causes elevated blood calcium levels and contributes to their spread to bone.

In addition to his active research projects, Jack has paid forward, serving as mentor to countless researchers over the years. Recently, Jack was responsible for convincing Dr Rachelle Johnson, a young American postdoctoral researcher, to join him in the Bone Cell Biology and Disease Unit at SVI for her first postdoctoral stint.

"While Jack was by far the most senior and successful researcher I interviewed with when looking for my first postdoctoral position, what actually convinced me to join him in Melbourne was not his prior success, it was his continuous passion for research and his personal interest in my training and career development", says Rachelle.

Rachelle's research focuses on the signaling pathways that drive bone cell function. She is exploring how these pathways can be targeted to restore bone quality in degenerative bone diseases such as osteoporosis and osteoarthritis.

BC TOUR SV.

DISCOVERING SVI

Are you curious to find out more about research at SVI?

You are welcome to tour the laboratories, meet with our researchers and hear about the cutting-edge of medical research into diseases that affect all Australians, including type 1 and 2 diabetes, heart disease, bone diseases such as arthritis and osteoporosis, Alzheimer's disease and cancer.

Tours take about one hour and can be tailored to suit your availability and interest in a particular disease.

Dr Nicole Walsh from the Bone Cell Biology and Disease Unit regularly hosts group tours around her laboratory. "I really enjoy explaining my research to the groups who tour the lab. Everyone knows someone who is affected by arthritis and it is good to be able to shed some light on what we know about the disease for these people, dispel some of the myths, and give them hope that we are actively working on finding new treatments for this debilitating condition."

For more information contact the SVI Foundation on (03) 9288 2480 or at foundation@svi.edu.au.



STEM CELL REGULATION UNIT

Emily

became Australia's first female Winter Paralympian in 2006. Nine years earlier she had been diagnosed with osteosarcoma and told her chances of survival were less than 15%.



"I remember the day I was diagnosed like it was yesterday.

I was young, busy and certainly didn't have time to be sick. I look back on that period of my life now and thank my lucky stars that I was naive about cancer and its treatment. Not knowing what I was in for over the coming 12 to 18 months was definitely a blessing. Treatment included surgery, chemotherapy and amputation of my right leg above the knee.

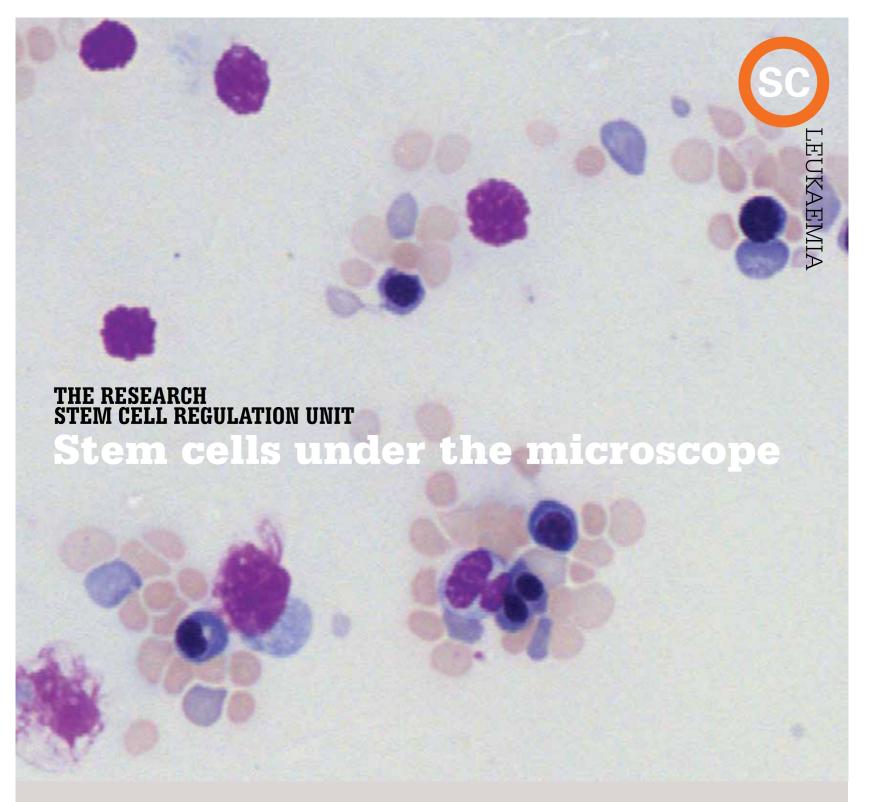
It wasn't long after I rode my first ski lift at Mt Buller when I was about 25 that I bumped into the Australian Disabled Ski Team during one of their training sessions. From there, add some opportunity, blood, sweat and tears, and I found myself at the winter Paralympics in Turin, Italy. It was one of the most incredible experiences of my life - and one that would never have transpired had it not been for the loss of my right leg to cancer.

I spent seven years travelling the world and skiing at some of the most amazing ski resorts. I have some fantastic memories from that period in my life. In 2009 I 'hung up the boot', so to speak and returned to full time work as an engineer in the water industry. In 2010 I married my best friend and fellow team-mate Cameron Rahles-Rahbula and in January 2012 we welcomed our son Archie into the world.

Cam and I feel so blessed to have Archie in our lives, especially given that there was doubt that we could have children due to the cancer treatment we had both received. We are very lucky! It goes without saying that I fear relapse, and for this reason I'm thankful for the ongoing research into this disease. It is my hope that treatments continue to improve, with an eventual cure found. Even the inroads on reducing the severity of side effects caused by cancer treatments are a substantial win in my eyes!"

Osteosarcoma

Osteosarcoma is the most common primary tumour of bone and is normally diagnosed in adolescence. While treatment has improved survival rates, around 70% of the patients diagnosed with metastatic osteosarcoma do not survive the disease.



In 2008, Melbourne leukaemia patient Graham Barnell was the eighth person in the world to receive a revolutionary stem cell treatment in Seattle. The experimental therapy to replace his diseased bone marrow used stem cells from umbilical cord blood that had been multiplied in the laboratory.

At first, the treatment was a success. The father-of-two was cleared of the rare and normally fatal type of leukaemia. However, after battling infection after infection, he died from pneumonia in 2009. Associate Professor Louise Purton's research aims to develop new treatments for people diagnosed with leukaemia, in order to give them options that weren't

available to Graham.

Louise explains, "There are a number of improvements that need to be made to

GRAHAM BARNELL

WAS THE EIGHTH

PERSON IN THE

WORLD TO RECEIVE

A REVOLUTIONARY

STEM CELL

TREATMENT

the experimental treatment that Graham received in order to make it more widely available. These include increasing the number of stem cells available for transplant and making sure that they are developmentally ready to do the job."

Louise's research aims to hijack the same methods that the body uses to regulate the development of blood cells. She has previously shown that activating or inhibiting the vitamin A pathway can both increase the number of immature stem cells and speed up the process

to convert them into mature blood cells.

Louise has received human ethics approval to start collecting umbilical cord samples from babies born at St Vincent's Private Hospital over the next 4 years to use in her research.

Louise says, "The ultimate dream is to get the treatment up and running in Melbourne, but that remains in the future."



Dr Emma Baker joined the Stem Cell Regulation Unit at SVI in 2009, bringing with her specific expertise in a relatively new research field, 'epigenetics'. She is using her skills to find new treatments for the bone cancer, osteosarcoma.

Emma explains, "Osteosarcoma is the most common primary cancer of bone, and the fifth leading cause of cancer related death in children. Osteosarcoma cancers are very aggressive and the chances of survival are unacceptably low. New treatments are desperately needed to improve patient outcomes."

Emma goes on to say that she is interested in how the genes in

osteosarcoma cells are controlled differently to the normal bone forming cells found in the skeleton. Genes are normally tightly controlled by 'epigenetic factors', which determine how DNA is packaged in a cell. Recent evidence has shown that mistakes made by these factors can cause cells to become cancerous.

Emma was one of 30 young Australian researchers who received funding in 2012 from the Cure Cancer Australia Foundation Young Investigator Postdoctoral Fellowship Scheme to continue her work on the epigenetic signatures found in osteosarcoma. She

was also awarded a \$100,000 grant from the 5point Foundation to further her work.

"In the Stem Cell Regulation Unit, Carl Walkley has established mice that develop a disease that is very similar to the human condition." Emma continues, "I am using these mice to examine the influence of epigenetics on the development of osteosarcoma. This allows us for the first time to test the effect of new drugs on this cancer, with the aim of improving the dire survival statistics. The support that I have had through the Cure Cancer Australia Foundation and the 5point Foundation gives us a better chance of finding new ways to treat this devastating disease."

SVI IN THE COMMUNITY

SVI is very much indebted to the wonderful support that we receive from the community. Here are some of the highlights from 2012:

Gifts in celebration:

Roz Kaldor-Aroni, whose husband Benni is one of the longest serving SVI Foundation Board Members, raised an impressive \$10,000 by donating to SVI in lieu of gifts for her 50th birthday in December 2012. Roz said, "I have always loved science and for my birthday I wanted to find a way of sharing this passion with my friends and family."

Corporate giving:

In 2012, over \$13,000 was directed towards heart research by Edgewise Insurance Brokers, who nominated SVI as one of their preferred charities by

donating commissions from some of their insurance policies. Richard Coloretti, Chief Executive Officer of Edgewise said, "We are proud to be associated with SVI and would recommend other companies support their world class medical research, which is vital to the health of the whole community."

Community support:

The Vermont Cancer Research Fundraising Group has been supporting SVI's cancer research since 2002, with a total of \$56,000 donated to date. The All Souls Opportunity Shop has donated \$5,000 to SVI since 2008. This group supports a wide variety of worthwhile causes and SVI is fortunate

to be one of them. Another community fundraiser for SVI in 2012 was the second annual Age City2Sea. Team SVI, composed of a mix of SVI supporters, staff and family members, raised nearly \$6,000 to support SVI's Summer Student Scholarship Program.

If you would like to know more about supporting SVI, contact the SVI Foundation on (03) 9288 2480 or email foundation@svi.edu.au.





(MOLECULAR GENETICS UNIT, GENOME STABILITY UNIT, HAEMATOLOGY AND LEUKAEMIA UNIT, CELL CYCLE AND CANCER UNIT, PHARMACOGENOMICS UNIT, INVASION AND METASTASIS UNIT)

Margaret



was diagnosed with breast cancer in 1990 and underwent a mastectomy and chemotherapy as a result.

"I was 46 and in good health (I thought), when I noticed a small lump in my breast, but it didn't alarm me as I had had a lump removed previously, which turned out to be benign.

My GP wasn't really concerned about it, and recommended that I wait a month to see what happened, but something in the back of my mind told me that I should take it more seriously. I insisted that he ultrasound and biopsy the lump.

When I woke from the anaesthetic after the biopsy, my husband and the surgeon were there and one of them said "It's cancer". I was a bit stunned and, after talking to the oncologist, I felt quite aggressive towards it, wanting to get rid of it completely as soon as possible. I had a mastectomy, removal of 23 lymph nodes under my left arm and chemo, and eventually was given the all clear.

My father died from complications from brain cancer when he was 61 and I was 28, and I was devastated by his death. My paternal grandmother also died of cancer, but in those days it was simply called 'women's cancer', and could have been breast, ovarian, or something else.

I have been 'cancer free' for 23 years, but each year when I have a mammogram and general health check, I have a nasty

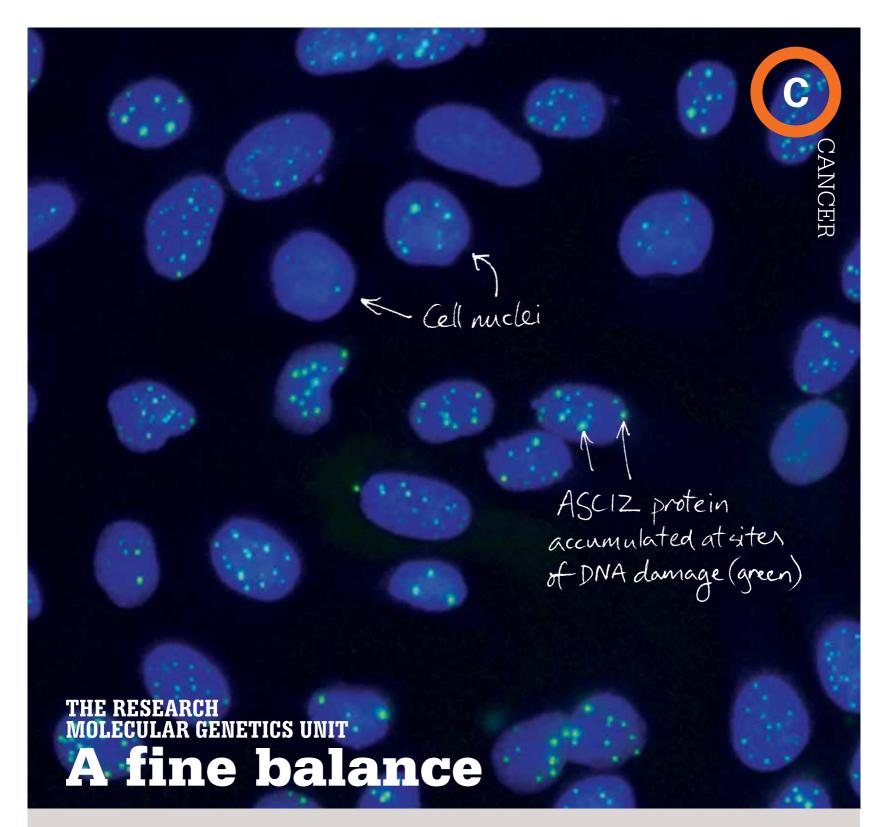
sinking feeling that this might be the year it reappears.

The most unexpected and delightful outcome of having cancer was that I found out how many people truly cared about me, people who I would have thought of as only peripheral to my life. Cancer had the effect of removing my 'stiff upper lip' and I find myself at unexpected times being moved to tears at the sheer joy of being alive.

Such great strides have been made in breast cancer research, prevention, treatment options and disseminating knowledge to the general public that I feel hopeful that similar success can be seen with other cancers."

Cancer

One in three Australian men and one in four women are directly affected by cancer before the age of 75. Whilst survival rates have increased over the past 20 years, cancer is a leading cause of death in Australia: more than 100 Australians die every day from the disease.



The cells of the body's immune system are tasked with the important job of recognising the difference between self and non-self. If they become over-zealous, they can attack the body, causing autoimmune diseases such as type 1 diabetes and multiple sclerosis. On the other hand, if they don't do their job well enough, they will not be able to protect the body from infection-causing organisms.

Recent research from the Molecular Genetics Unit has begun to explain how this fine balance is maintained. Research in the Unit has focussed for some years on a protein called ASCIZ, which the team discovered while looking for genes that

responded to DNA damage in yeast.
Subsequent research showed that ASCIZ has a number of disparate functions:

THE RESEARCHERS

PUBLISHED THEIR

WORK IN THE

PRESTIGIOUS

JOURNAL OF

EXPERIMENTAL

MEDICINE.

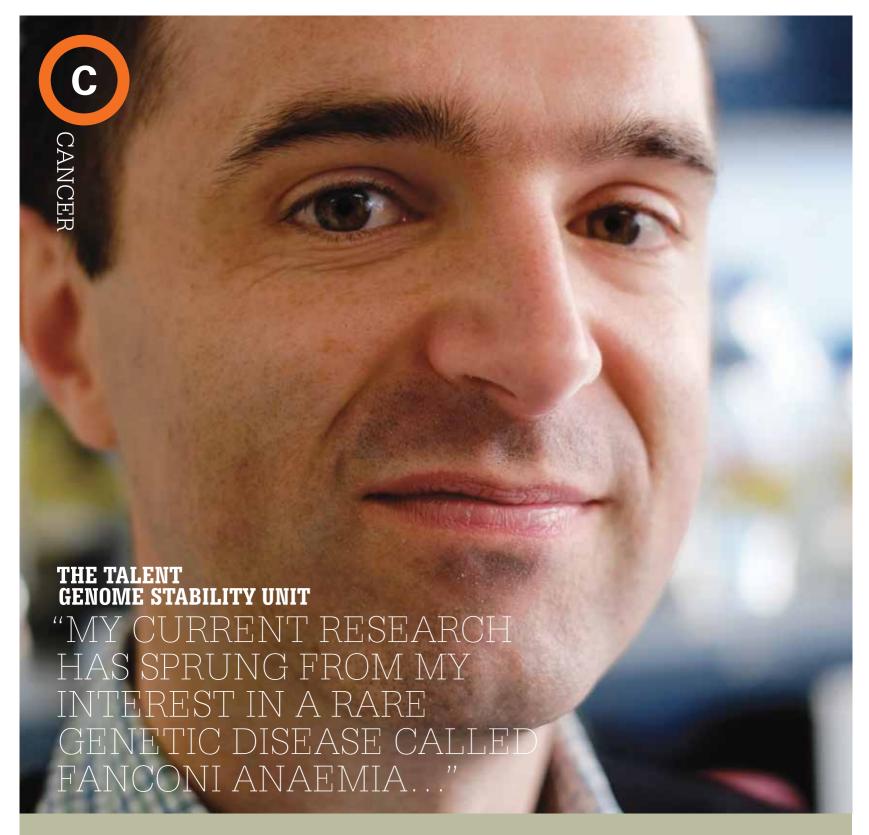
in addition to repairing DNA damage, it is essential for lung development in mice and it also has an unexpected role in sorting out the immune system's B cells in the bone marrow during development.

By removing or replacing ASCIZ and some of its protein partners within cells, PhD student Sabine Jurado, Associate Professor Jörg Heierhorst and colleagues were able to manipulate the number of B cells that developed in mice. This enabled them to sort out the hierarchy within the pathway,

and to show that ASCIZ functions as a supervisor of quality control during the development of B cells. The researchers published their work in the prestigious Journal of Experimental Medicine in 2012.

While the group continues to focus on the potential of ASCIZ for improving cancer therapies,

they will continue to examine the role of this surprising multi-tasker in maintaining the fine balance within the immune system.



One in eight Australian women will be diagnosed with breast cancer in their lifetime. That could be thirty of the girls from your high school graduating class, five of the women on the tram with you in the morning or three sitting next to you at the movies. Those statistics are shocking enough: however, if your family carries a mutation in one of the 'breast cancer genes', BRCA1 or BRCA2, the risk of developing breast cancer increases to 80%.

Dr Andrew Deans, from SVI's Genomic Instability Unit was awarded a postdoctoral fellowship from the National Breast Cancer Foundation (NBCF) in 2012, to fund his work into BRCA2 and related proteins.

Andrew says, "My current research has sprung from my interest in a rare genetic disease called Fanconi Anaemia, which causes birth defects, bone marrow failure, and a high susceptibility to cancer. There is no cure for the disorder, which affects 1 in 350,000 births. Many of those affected do not reach adulthood."

He goes on to say that the disease can be caused by mutation of a gene called BRCA2, impairing the cell's ability to repair DNA damage, which can result in cancer. If you are unlucky enough to carry a mutated copy of BRCA2, your risk of getting breast or ovarian cancer is considerably increased compared to the general population. If you carry two copies, you will have Fanconi Anaemia.

By reconstructing the DNA repair mechanism in which BRCA2 is involved, Andrew aims to understand the connection between familial breast cancer and Fanconi Anaemia. This may lead to new strategies for treatment of both of these conditions.

BREAKING THROUGH

David Tarascio has long heard his mother, SVI Foundation Board member Christine Tarascio, speak of the important work that goes on at SVI.

In a way, he felt that the Institute was well taken care of by the SVI Foundation and their fundraising activities, with which his mother has been particularly involved since the Foundation's inception.

It was only when he toured the Institute with his friend Mark Sullivan last year, that he realised he too could have an impact. Mark says "Everyone in the community will at some time be touched by a disease that SVI researchers are working on, whether it is cancer, heart disease, diabetes, or Alzheimer's, to name a few. The opportunity I had to come and talk to the researchers first hand convinced me that I could help SVI promote their important work to a new audience."

In 2012, David, Mark and a group of friends formed SVI Breakthrough Committee with the aim of educating and engaging young professionals on the importance of medical research and its potential impact. The members of the committee include Jo Ashton. SVI researcher Andrew Deans, Tim Richardson, Sally Henderson, Mark Sullivan and David Tarascio. The new Committee had its first meeting in 2012 and have since held a number of events.

For more information contact the SVI Foundation on (03) 9288 2480 or email foundation@svi.edu.au.



SVI STAFF 2012–2013

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Prof Michael W Parker
(Deputy Director)
Prof Bruce E Kemp
(Pehr Edman Fellow)
Prof Jack Martin (John Holt Fellow)
A/Prof Jörg Heierhorst
(Associate Director)
A/Prof Louise Purton
(Associate Director)
A/Prof Natalie Sims
(Associate Director)

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Structural Biology Unit

Prof Michael Parker
David Ascher
Dr Brett Bennetts
Dr Sophie Broughton
Matthew Chung
Gabriella Crespi
Dr Urmi Dhagat
Larissa Doughty
Dr Susanne Feil
Chen Gao (PhD student)
Dr Michael Gorman

Nancy Hancock

Dr Jessica Holien

Dr Jerome Wielens

Dr Sara Lawrence
Dr Belinda Michell
Dr Luke Miles
Dr Craig Morton
Dr Tracy Nero
Dr Lorien Parker
Julian Tang (PhD student)

Immunology and Diabetes Unit

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Dr Tom Brodnicki
Dr Stuart Mannering
A/Prof Helen Thomas
May Abdulaziz Alsayb (PhD student)
Michelle Ashton (PhD student)
Rochelle Ayala-Perez
Tara Catterall
Jonathan Chee (PhD student)
Edward Chu (PhD student)
Lorraine Elkerbout
Dr Colleen Elso
Stacey Fynch
Hannah Graham

Dr Kate Graham Allison Irvin Gaurang Jhala (PhD student) Mugdha Joglekar Aimee Khoo Cameron Kos Dr Bala Krishnamurthy

Janine Kuehlich Yue Li Dr Thomas Loudovaris Leanne Mackin Lina Mariana Dr Zia Mollah Caroline McBride Andra Necula Karolina Novak (Honours student) Vimukthi Pathiraja (PhD student)

Vimukthi Pathiraja (PhD student) Hong Sheng Quah (PhD student) Natalie Sanders Dr Anne Thorburn Sam Thorburn
Prerak Trivedi (PhD student)
Jibran Wali (PhD student)
Nancy Wang (PhD student)
Dr Yuxing Zhao

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Dr Zhi-Ping Chen
Toby Dite (Honours student)
Dr Sandra Galic
Vy Hoang (PhD student)
Samah Issa
Frosa Katsis
Naomi Ling
Dr Jonathon Oakhill
Matthew O'Brien
Hayley O'Neill (PhD student)
Dr Suzanne Rogers
Dr John Scott
Lisa Murray-Segal

Molecular Cardiology Unit

A/Prof Duncan Campbell
Duncan Campbell
Francoise Campbell
Dr Jennifer Coller
(Masters by Research student)
Laura Mocioaca
A/Prof David Prior
(Clinical Research Fellow)
Suang Suang Koid (PhD student)

Bone Cell Biology and Disease Unit

A/Prof Natalie A Sims Prof Jack Martin Dr Nicole C Walsh Holly Brennan Ling Yeong Chia (PhD student) Blessing Crimeen-Irwin Pat. Ho Joshua Johnson Dr Rachelle Johnson Emma McGowan (nee Walker) Narelle McGregor Ingrid Poulton A/Prof Evange Romas Farzin Takyar (PhD student) Brett Tonkin Dr Stephen Tonna Christina Vrahnas (Honours student)

Stem Cell Regulation Unit

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Dr Carl Walkley
Dr Emma Baker
Shreya Bhattacharya (PhD student)
Alistair Chalk
Elisabetta DeLuca

Dr Sita Dewamitta
Ankita Gupte
Jean Hendy
Chacko Joseph (PhD student)
Tanja Jovic
Brian Liddicoat (PhD student)
Alvin Ng (PhD student)
Dr Julie Quach
Megan Russell
Dr Therese Standal
Scott Taylor
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Molecular Genetics Unit

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Dr Lindus Conlan
Kimberly Gleeson
Nicolas Hoch (PhD student)
Dr Sabine Jurado (PhD student)
Xianning Lai (PhD student)
Alice Schofield (PhD student)
Angela Tam
Nora Tenis

Genome Stability Unit

Dr Andrew Deans Joybrata Banerjee Vince Murphy Dr Fenil Shah Sylvie van Twest

Cell Cycle and Cancer Unit

Dr Boris Sarcevic Kevin Mittelstaedt (PhD student) Ain Roesley (PhD student) Maria Soetjipto (Honours student) Dr Randy Suryadinata George Yang (Honours student)

Pharmacogenomics Unit

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Invasion and Metastasis Unit

Prof Erik (Rik) Thompson
Tony Blick
Vijani Dissayanake
Devika Gunasinghe (PhD student)
Dr Annet Hammacher
Dexing Huang
Dr Honor Hugo
Cletus Pinto (PhD student)
Dr Manisha Shah
Eliza Soo (PhD student)
Anthony Tachtsidis (PhD student)

Dr Eva Tomaskovic-Crook Dr Bryce van Denderen Edwin Widodo Tania Zheng (Honours student)

National Serology Reference Laboratory, Australia Susan Best (Director) Nilukshi Malawa Arachchi Lena Arvanitis Dr Thein Thein Aye Penny Buxton Liza Cabuang JingJing Cai Roderick Chappel Stirling Dick Wayne Dimech Cathryn Dunkley Stephen Gilmour Helen Hasler Marina Karakaltsas Geraldine Kong Sally Land Dr Mark Lanigan Tamara McDonald Alison Natoli Dr Susie-Jane Noppert

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Sandy Walker

Dr Kim Wilson

Dr John Tomasov

Rosanna Torzillo

Marlene Tschaepe Guiseppe Vincini

Dr Derya Sahin

Senior Principal Research Associates

Prof Peter Choong Prof Anthony d'Apice Prof Kong Wah Ng

Principal Research Associates

A/Prof Ora Bernard Prof Michael Henderson Prof Darren Kelly Dr Craig Morton A/Prof John Slavin A/Prof Gregory Steinberg

Senior Associates

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Associates

Dr Julian Adams Dr Renwick Dobson Dr Nirupa Sachithanandan

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Higher Degrees Conferred 2012

Sabine Jurado, PhD, University of Melbourne Xianning Lai, PhD, University of Melbourne Alice Schofield, PhD, University of Melbourne Shanna Tam, PhD, University of Melbourne Nancy Wang, PhD, University of Melbourne

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Ms Brenda M Shanahan Mrs Susan M Alberti AO Professor James Best Mr Paul Holyoake Mr Faul Holyoake Professor Thomas WH Kay Mr John T Macfarlane Mr Stephen Marks Mr Michael McGinniss Professor Patricia O'Rourke Ms Ruth O'Shannassy Mr Christopher Page Mr Gregory Robinson

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F

FINANCIAL SNAPSHOT

Income

52% 19%

Competitive Research Grants

Legacies, Bequests & Donations

17%

Government Infrastructure Support Service

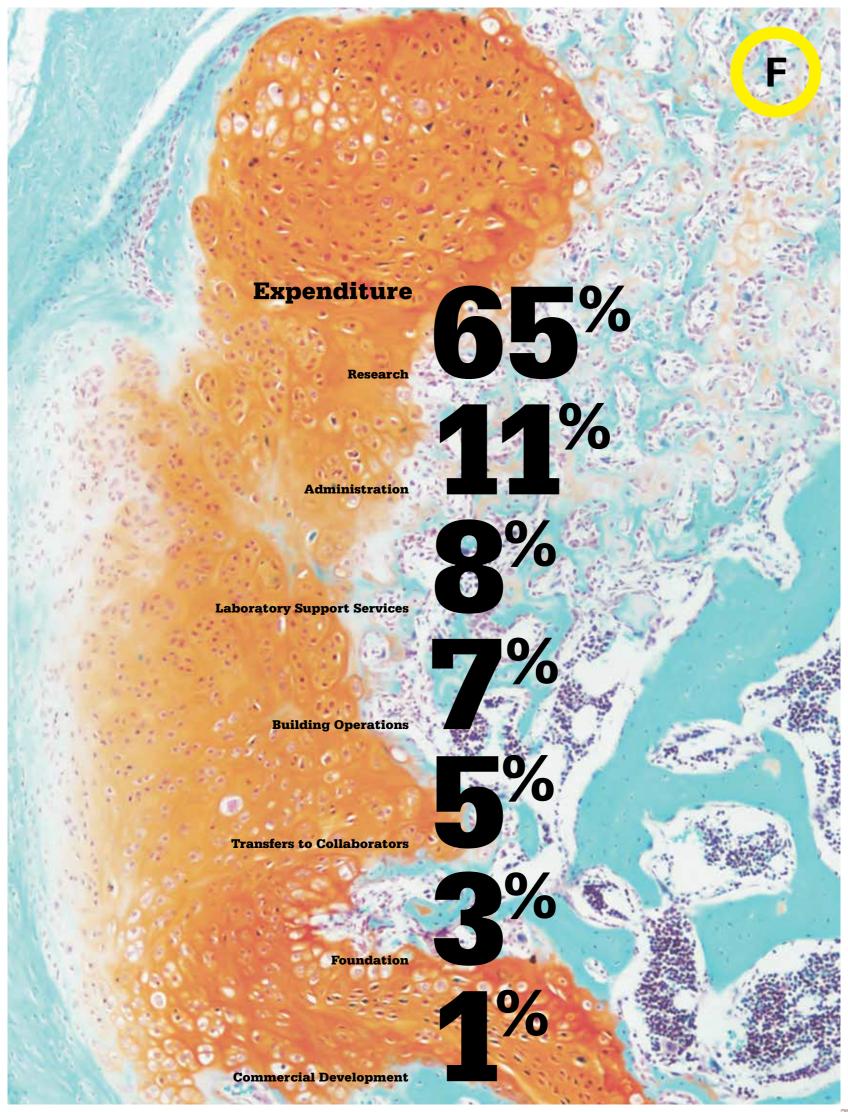
Contracts & Other Income

0%

Investment Income

2%

Industry Grants





Statement of Financial Position as at 31 December 2012

	Mote	2012 (\$)	2011 (\$)
Current assets		16,107,995	15,256,952
Non-current assets		13,145,309	10,934,479
TOTAL ASSETS		29,253,304	26,191,431
Current liabilities		4,565,921	3,646,001
Non-current liabilities		128,554	204,233
TOTAL MARINTES		4,694,475	3,850,234
NEW ASSETS		24,558,829	22,341,197
EOURS			
- Retained surplus		24,314,304	22,658,536
– Reserves		244,525	(317,339)
TOWAL FOUNCY		24,558,829	22,341,197

Statement of Comprehensive Income for the year ended 31 December 2012

Statement of Comprenensive income for the year ended 31	. December	2012	2011 (\$)
Revenue	1	16,182,772	15,135,998
Other income		6,716,759	5,042,860
TOTAL REVENUE		22,899,531	20,178,858
Consumables and general research expenses		(4,026,292)	(4,482,852)
Employee benefits expense		(12,465,207)	(11,675,402)
Depreciation and amortisation		(2,031,513)	(1,918,271)
Administration expenses		(1,735,264)	(1,480,315)
Transfers to collaborators		(985,487)	(826,760)
TOTAL EXPENSES		(21,243,763)	(<mark>20,383,6</mark> 00)
Surplus/(Deficit) for the year		1,655,768	(204,742)
Other Comprehensive income:			
Net gain/(loss) on revaluation of financial assets		561,864	(379,292)
Total Comprehensive income for the year		2,217,632	(584,084)
Total Comprehensive Income attributable		2,217,632	(584,034)
to members of the entity			
NOTE IN COVERNMENT CHANTS			
National Health and Medical Research Council:			
Independent Research Institutes Infrastructure Support Scheme		1,467,519	1,360,360
- Research grants		7,846,493	7,062,785
Australian Research Council		213,251	424,303
Department of Innovation, Industry, Science and Research			213,391
Total Commonwealth grants		0.527.963	9.060.839
Victorian State Government, Department of Business			
and Innovation – Operational Infrastructure Support Program		1,825,304	

The summary financial information shown above does not include all the information and notes normally included in the statutory set of financial statements. A full set of statutory financial statements can be obtained upon request to the Chief Finance Officer. The statutory financial statements comply with Australian Accounting Standards and were unqualified by the auditors, William Buck Audit (Vic) Pty Ltd.

10,000 FUND

INVESTING IN HOPE

St Vincent's Institute's \$10,000 Discovery Fund was established with the goal of raising \$5 million of capital, the income from which will be used to support vital research at SVI.

A commitment is made by members of the \$10,000 Discovery Fund to donate \$10,000 each year for five years.

SVI Foundation Board member, Christine Tarascio, became the Chair of the Fund at its inception in 2005 and says, "While we are all aware that diseases such as cancer and diabetes are debilitating on a day-to-day basis and that many people die as a result, we generally take our good health for granted. It is not until we are affected either by the loss of a loved one or experience the pain of these diseases that we truly realise their impact. A much-loved member of my family suffered from Alzheimer's disease, which not only affects the life of the sufferer, but also has a major impact on the lives of their extended family. SVI researchers are working to eradicate the pain and suffering caused by this and other conditions affecting Australian families, but there is still much to be done and the scientists need our financial support."

The Fund currently has over 30 members, who have become a close-knit group. Christine says, "As a member of the Discovery Fund you are kept abreast of developments in research and given opportunities to meet up at exclusive events throughout the year. It is always a great pleasure to meet with the other members and get an insight into the most recent breakthroughs that have occurred at the Institute."

If you would like more information about joining the Fund, contact Christine Tarascio on 0418318627.

SVI would like to sincerely thank the members of the \$10,000 Discovery Fund:

Susan Alberti AO Joe & Gwen Arcaro Benni Aroni Graeme W. Briggs Anthony Burgess Enzo and Melina Ceravolo Frank Costa OAM Maria Foti John and Helen Gillam Jim & Georgina Hatzimoisis Andrew & Lyn Henderson Michael Iacobucci/Peter Edwards (SI Capital) Richard & Liz Jenkings John (JT) & Melinda Macfarlane Howard & Sally McDonald Colin North Sam & Rita Piedimonte Barry & Karen Plant Mario Salvo Tony & Elda Schiavello Brenda Shanahan John & Franca Signorino Andrew & Glenda Simpson (Simpson Family Foundation) Gerald Snowden Rod Spooner Sam & Carmen Tarascio Sam & Christine Tarascio Vic & Toni Zagame Anonymous

Thanks also to those who have supported the Discovery Fund very generously over the last few years:

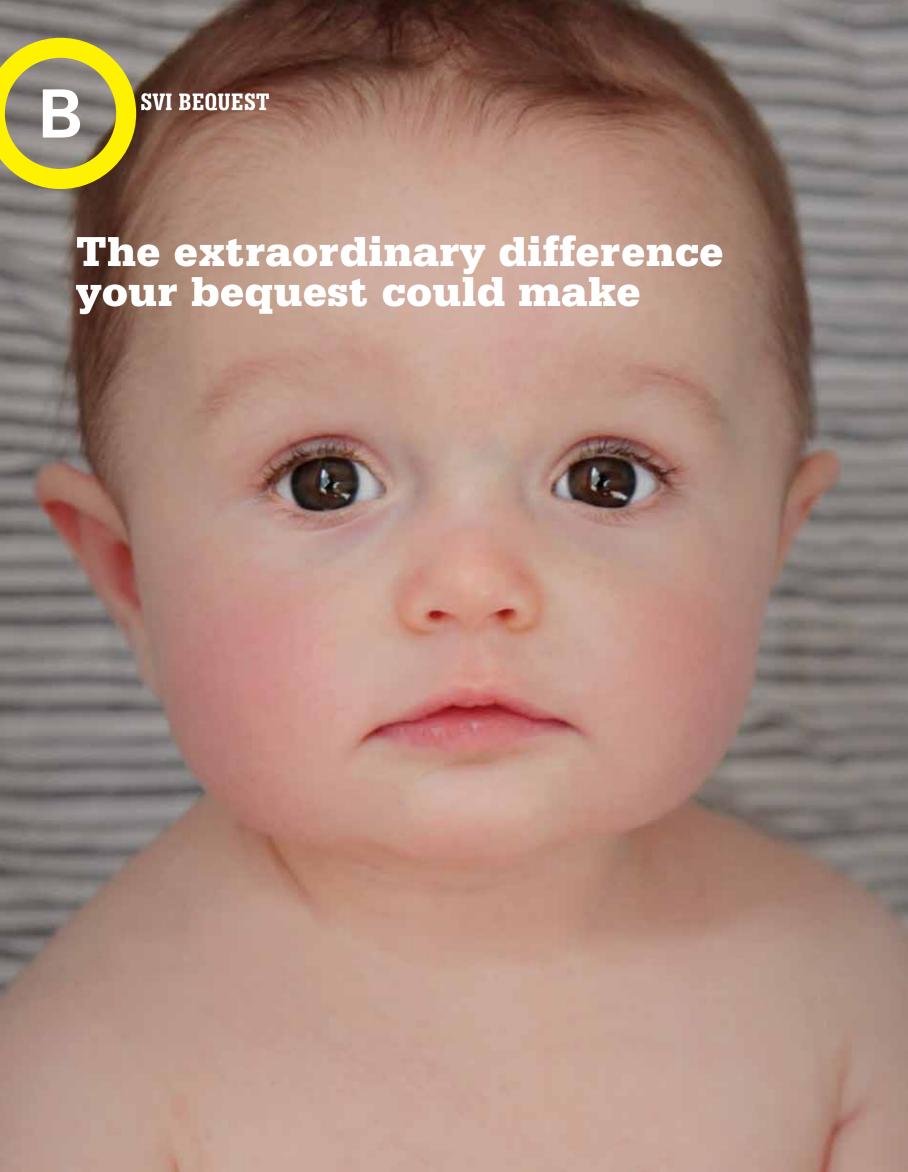
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Images:

Guests at the recent \$10,000 Discovery Fund luncheon (l-r): Sam & Rita Piedimonte, Christine Tarascio with Gerald Snowden (top row); Shirley & Frank Costa, Yan Li Wang with Professor Jack Martin, Mario & Melita Salvo with Professor Tom Kay (bottom row).







EVERY BEOUEST GIVES HOPE

I would like to thank you for your continued support and interest in our quest to understand the complexities of diseases, bringing us closer to breakthroughs and improved health.

St Vincent's Institute of Medical Research was established by a £200,000 bequest left by John 'Jack' Holt in 1951.

Advances in medical treatment which benefit us today were made possible by the generosity of Jack Holt and others who recognised the importance of medical research.

Once you have looked after your family and loved ones through your will I would ask you to consider leaving a bequest to SVI.

Your bequest would be used to fund research into common diseases, including type 1 and 2 diabetes, Alzheimer's and heart disease, which affect an everincreasing number of us in the community.

In December 2012, we launched the Jack Holt Society, with a morning tea at The Windsor Hotel. This intimate event was attended by over 65 people, who heard how a bequest can make a real difference. The patron of The Jack Holt Society, Gerald Snowden, spoke passionately at the event.

It doesn't matter how big or small your gift is, as each and every gift gives hope for the future.

Together, we can help realise a new vision for the health of the next generation.

After all, SVI is where hope begins.

Burda M. Shonahan

Brenda Shanahan Chair SVI





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SUSAN ALBERTI AO, SVI FOUNDATION CHAIR

On behalf of the SVI Foundation, I would like to thank everyone who donated to SVI in 2012. We also acknowledge those donors not listed here and those who wish to remain anonymous. All donations are important to us: please accept our gratitude for your donation and continued support.

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In memorial donations during the year were given in memory of:

Dr Marcello Rigoni Mr Michael Dwyer

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Trusts and Foundations Thank you to the following Trusts and Foundations that granted support based on scientific merit in 2012:

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If you would like to talk to someone about making a bequest to SVI please contact the SVI Bequest Officer on (03) 9288 2480

See our website, www.svi.edu.au if you would like to make periodic payments from your bank account

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