

2014-2015

SVI YEAR

SVI 
ST VINCENT'S INSTITUTE
MEDICAL RESEARCH



TALENT

HOPE



SUPPORT



THIS IS SVI

For more than 50 years, researchers at St Vincent's Institute (SVI) have been conducting medical research into the cause, prevention and treatment of common diseases. SVI is committed to improving the health and life expectancy of Australians through medical research.

RESEARCHING

Type 1 diabetes
Cancer
Obesity & type 2 diabetes
Heart disease
Arthritis & osteoporosis
Infectious disease
Alzheimer's disease

DIRECTOR'S REPORT

CANCER RESEARCH
STEM CELL REGULATION,
MOLECULAR GENETICS,
GENOME STABILITY UNITS

IMMUNOLOGY &
DIABETES UNIT

PROTEIN CHEMISTRY &
METABOLISM UNIT

STRUCTURAL BIOLOGY UNIT

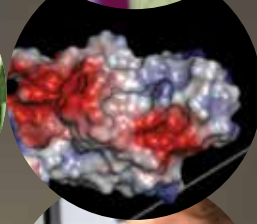
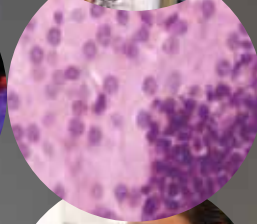
R

C

1D

2D

SB



BONE CELL BIOLOGY & DISEASE UNIT

MOLECULAR CARDIOLOGY UNIT

STAFF

FINANCE

BEQUESTS

DISCOVERY FUND

DONORS

BD

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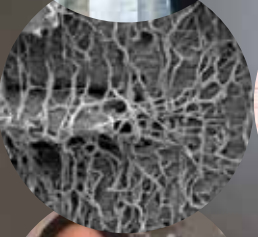
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THE RESEARCH REPORT IS A GOOD OPPORTUNITY TO SAY THANK-YOU.

The largest share of our income comes from the National Health and Medical Research Council – so thanks to all past and present tax-payers reading this. Our future support received a needed boost with the announcement of the Medical Research Future Fund in the 2014 Federal Budget. The Fund will grow to \$20billion and income from it will be used for future increases in medical research spending. The details of how it will be allocated have not been announced (and it would be premature to do so without the Fund being established), but it is likely to be spent to achieve impact on the health of Australians or on economic wellbeing through Research and Development investment. SVI warmly welcomes this visionary initiative and we have been very pleased to see ongoing support for the Fund in recent interviews with the Health Minister.

Another very welcome piece of news was the commitment of the Victorian Labor Party in the 2014 State Election to provide funding for the Aikenhead Centre for Medical Discovery (ACMD) on the St. Vincent's campus. This will be a bioengineering research and education

hub that will provide jobs for many scientists and engineers and train even more for jobs in advanced industries such as medical devices. SVI has been an enthusiastic partner in the project since its beginning, along with several other research institutes and universities. The focus will be on improving the lives of people with chronic diseases through innovation. As well as a theme of bioengineering, another major focus is collaboration between individuals from different backgrounds, disciplines and at the institutional level.

Collaboration is a very important skill in modern science and it occurs at many levels. National and international collaboration has become the norm rather than the exception for specific projects. Geographically local collaborations that come from long-standing relationships or chance encounters are very potent and it is our job to ensure these encounters occur frequently and have productive results. At SVI, our principal local collaborations are with our partners in the ACMD.

Slightly further afield, we are part of a larger collaborative effort in association with other hospitals affiliated with The

University of Melbourne to form an academic health science centre. This was established as the 'Melbourne Academic Centre for Health' (MACH) under the guidance of Chairs Patricia O'Rourke from St. Vincent's Health and then Stephen Smith from The University of Melbourne, both of whom are SVI Board members. The goal of the MACH is to bring greater coordination and clinical relevance to the massive biomedicine enterprise that it represents. The University is ranked 13th in The Times Higher Education Supplement rankings for Medicine – a remarkable effort, as it is the highest ranked University outside North America and England. This ranking is recognition for the collaborative team effort to which SVI contributes. This grouping also applied through the involved hospitals to become accredited by the NHMRC as an 'Advanced Health Research and Translation Centre'. An international panel reviewed the applications and four centres across Australia, including ours, were successful.

The benefits of collaboration and formation of hubs has also been the focus of a 'Review to Strengthen Medical



Research Institutes', set up by the Federal Department of Health and chaired by Graeme Samuel. While yet to finalise its report, the Review has signaled strong endorsement for formation of hubs similar to ACMD and also has stimulated discussion about optimal size of institutes. The trend has been for small institutes to merge to ensure their sustainability.

SVI is joining with the O'Brien Institute (OBI) to form a larger and stronger organisation. OBI is a research institute at St. Vincent's that works on reconstructive surgery and related fields, including tissue engineering, vascular biology and more recently, work on lymphatics that is applied to some of the problems encountered after treatment for cancer. The merger will take effect from April 30, 2015. We welcome OBI and look forward to working closely together to build new and exciting links between our teams in the future.

The future of SVI and OBI is in the hands of our young scientists – I hope you will enjoy reading about these very important people in this Report. It is great to see that young people recognise the value of a strong scientific education

as the basis for a career, not only in medical research, but also in many other parts of the enormously broad Health sector. Nurturing their careers is a top priority for all at SVI.

In 2014 Professor James Best retired from the SVI Board after many years of service, in order to take up his new appointment as Dean of the Lee Kong Chian School of Medicine in Singapore. Mr Greg Robinson stepped down after ten years on our Board, as did Mr Chris Page. We thank them all for the tremendous work that they did on our behalf.

And we also thank our many other supporters and stakeholders. These include the Victorian State Government for their Operational Infrastructure Support Scheme, the Federal Government, the Trustees of the Mary Aikenhead Ministries, The University of Melbourne and St. Vincent's Hospital Melbourne. We are also grateful to our philanthropic donors, both individuals and Trusts and Foundations. Finally thank you to our Board, the SVI Foundation, our staff and of course, to you, our supporters.

Tom Kay
SVI Director

Brenda Shanahan
Chair, SVI Board

Helen



Helen was first diagnosed with osteosarcoma in 1995 when she was 12. “One night I had a sleepover and we were jumping around in sleeping bags. A friend fell on my knee and I almost passed out from the pain, so we went to the doctor’s right away.

Thankfully my GP was very proactive and organised an X-ray; that’s when I got my diagnosis.

We don’t have a family history of osteosarcoma so it came out of left field. My parents were devastated, but reacted by learning everything they could about the disease.

My treatment included a few rounds of chemotherapy, then a full knee replacement (apart from my kneecap) with a titanium prosthetic, then more chemotherapy. Initially the mobility of my joint wasn’t great so they reopened the knee and found scar tissue had formed, so they cut it out.

Against very high odds, at 14 I was diagnosed with a second primary osteosarcoma, which was unrelated to my first primary tumour. I started experiencing pain in my right shoulder and I knew right away what it was.

Because we knew what was ahead, it was harder for us to deal with the second diagnosis. There’s only so much chemotherapy your body can take, so we were all worried about the treatment, and that this might keep happening.

This time, I underwent surgery before chemotherapy started. I had a shoulder replacement, then participated in a clinical trial involving high dose chemotherapy for children with solid tumours and poor prognosis. At the end of each treatment my own stem cells were re-infused into my system and I had treatment to promote the production of white blood cells, which fight off infection.

I ended up having one less round of treatment than initially

planned, as my clinicians didn’t think I could tolerate any more. My hearing, heart, liver and kidneys were all closely monitored to determine if there were any side-effects.

I still have regular check-ups and probably worry more than the average person about the issue of health. It’s not something I think about every day but I’m very aware of how quickly things can change. I know that I’m very lucky to have the two children that I have – Benjamin is almost 4 and Joshua is 16 months. I haven’t had any testing done to see if they’re more likely to get osteosarcoma, but I am very aware of the symptoms to watch for.

I’m lucky to have benefited from medical research, and think it’s really important that there is adequate funding for researchers. My biggest wish for medical research would be to find a way to prevent cancer occurring in the first place. However, finding other ways to treat cancer that aren’t as harsh as chemotherapy would also be amazing.”

Cancer

Cancer is a complex and varied disease, which is why SVI’s researchers approach it from different angles. The Stem Cell Regulation Unit focuses on the role of stem cells in cancer; the Molecular Genetics Unit works on understanding how the DNA damage that underlies cancer develops; while the Genome Stability Unit investigates how our cells protect us from cancer-causing mutations.

THE RESEARCH STEM CELL REGULATION UNIT

In rare form

Red shows the location of
a protein involved in the growth
of osteosarcoma cells.

cell nucleus
stained blue

Doing research into a rare disease is not for the faint-hearted. From convincing peer-review panels that the research will have enough impact to justify the investment of taxpayer dollars, to the challenges of recruiting enough patients for a clinical trial into a potential drug treatment, scientists who embark upon research into rare diseases face many difficulties.

If a disorder affects less than 1 in 2,000 people, it is generally categorised as a rare disease. SVI's Carl Walkley says that around 80% of rare diseases are caused by a genetic mutation, and this is what piques his interest.

"Understanding how a change in a single gene can affect someone's health helps to reveal the role of that gene in normal conditions," says Carl. "In a way, when a single gene is mutated in a rare disease, nature has done the hard work for us, and it is up to us to make the most of that: to try and use that knowledge to

develop new treatments."

Carl's recent work has focused on two rare diseases: osteosarcoma, an aggressive tumour of bone that most commonly affects teenagers, and Rothmund-Thomson syndrome, a cancer condition so rare that it affects only one Australian family.

In a paper published in the prestigious *Journal of Clinical Investigation* in 2014, Carl and his team explained how the gene *Recq14*, which causes Rothmund-Thomson Syndrome in humans, is involved in normal blood cell development and maturation.

Knowledge about the essential role of *Recq14* in blood development may help understand the progress of other diseases where blood cell development is disrupted, such as aplastic anemia and

myelodysplastic syndrome.

In 2014 the team also published an article in the journal *Oncogene*, partly funded by Cancer Council Victoria, in which they showed that they were able to influence the ability of osteosarcoma tumour cells to multiply by manipulating a signaling pathway initiated by the parathyroid hormone receptor.

Carl says that while much is known about the genetics and cell biology of many diseases, research to this point has not always resulted in improved patient outcomes.

"Our work aims not only to understand the signaling pathways involved in development of diseases such as osteosarcoma and Rothmund-Thomson Syndrome to find new treatments for the conditions, but also to harness and extend that knowledge to the treatment of other, more common, diseases."

WHEN A SINGLE
GENE IS MUTATED
IN A RARE DISEASE,
NATURE HAS DONE
THE HARD WORK
FOR US



THE TALENT LENI GREEN STEM CELL REGULATION UNIT

PhD student Leni Green understands the effects of cancer more than most people. Soon after she started high school, her father was diagnosed with breast cancer. He sadly passed away while she was sitting her year 12 exams.

Motivated to help others affected by life-threatening diseases, Leni studied Biomedical Science at uni and embarked upon a PhD in 2013 with supervisor Associate Professor Louise Purton. Her project focuses on the potential of vitamin A and its derivatives as a treatment for certain cancers and diseases of the bone.

Leni explains that her recent work, carried out during 4 months in the UK with

the Sheffield Myeloma Research Team at the University of Sheffield, focuses on multiple myeloma.

“Multiple myeloma accounts for 10% of all blood cancers. The cancer starts in plasma cells within the bone marrow. A common symptom of the disease is severe bone pain and fractures, which occur because of holes that form throughout the skeleton of those affected,” Leni says.

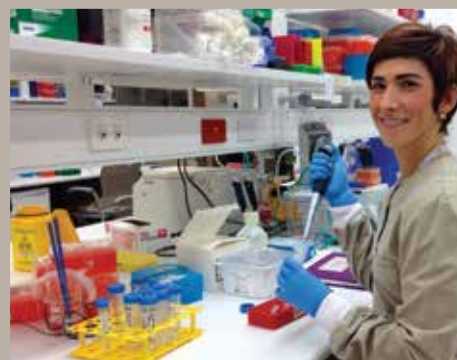
In the past year, Leni showed that inhibiting vitamin A has potential as a treatment for multiple myeloma, both because it may help repair bone damage, and also because it may have anti-tumour properties in some cases.

Leni counts herself as lucky on two counts: to have had the opportunity to spend 4 months of her PhD overseas, and because she is the recipient of a SVI Foundation Top-up Scholarship. SVI supporters Margaret and Tony Reeves donated her Scholarship in memory of Margaret’s mother, Margaret Mocatta, who died after a battle with lung cancer.

For Leni, who knows the damage that cancer can cause, both at a personal and physiological level, this support means that she can focus on her goal of making a difference through medical research.

TOP-UP SCHOLARSHIPS SUPPORTING TOP STUDENTS

SVI's students are trained by expert researchers to learn the skills to combat common diseases such as cancer, Alzheimer's, bone disease and diabetes.



*Images (left to right):
The 2015 SVI Student Scholars, past recipient Dr Michelle Ashton in Dresden, past recipient Dr Hayley O'Neill, the SVI Support Group at their annual dinner, past recipient Dr David Ascher in Cambridge.*

Since its inception, the SVI Support Group has raised close to \$350,000, and seven members have remained with the Group since its first event at the Regent Hotel a quarter of a century ago. While this is an impressive record, the Group is more interested in celebrating the achievements of the 35 PhD and 30 Honours students who they have been able to help support through the SVI Foundation Top-up Scholarship Program.

The Group celebrated 25 years of support for SVI at their Annual Black Tie Dinner on October 16 at The Athenaeum Club.

SVI PhD student, Alvin Ng, spoke on the night about the difference that the SVI

Scholarships make to students at the Institute.

"Although most PhD students receive a scholarship from the Australian Government, the living allowance is only equal to about three quarters of minimum wage. Also, as an Honours or PhD student, most of our time is devoted to working on our projects. This means that if we need to get paid work, we eat into precious research time.

"This is why the SVI Foundation Top-up Scholarships are a lifesaver. With an additional \$5000 per year, I do not have to worry about maintaining the roof over my head or putting food on the table.

"Most importantly, I can focus my time on my research projects, which means getting closer to the answers that our research aims to resolve."

SVI would like to thank SVI Foundation Board member Claire O'Callaghan, acknowledge her dedicated Group for their support of SVI, and recognise all those who have donated to scholarships at the Institute.

If you are interested in supporting the Top-up Scholarship Program or naming a Scholarship in honour of a loved one, contact the SVI Foundation on (03) 9231 2480 or email us at foundation@svi.edu.au

SVI Support Group members:

Mrs Margaret Batrouney
Mrs Colleen Bolton
Mrs Maureen Breheny
Mrs Cathy Clancy
Ms Bernadette Dennis
Mrs Cathy Gilbert
Mrs Angela Griss
Mrs Barbara Handley
Mrs Carole Hart
Mrs Jo Lonergan
Mrs Gail McHale
Mrs Claire O'Callaghan
Mrs Geraldine Peck
Mrs Margaret Reeves
Mrs Dawn Hill-Regan
Mrs Judy Ryan
Mrs Christina Westmore-Peyton
Mrs Therese Whiting
Mrs Thecla Xipell



Dane

Rosina's son Dane was 5 years old when he was diagnosed with type 1 diabetes. "There was no clear indication that Dane was unwell, which fortunately was because he was diagnosed quite quickly after onset.

Some of the signs, upon reflection, included falling asleep (with difficulty waking) while attending kinder, and periods of high emotion that were not associated with specific incidents.

The stand-out symptom was bedwetting; he hadn't had problems before. This continued for about 2 weeks, with all of the normal strategies put into place including reduced drinking prior to bed and increased comfort around bedtime rituals.

When we thought that Dane might have a bladder infection he was taken to our local GP who immediately investigated urine samples and swiftly diagnosed diabetes due to the levels of sugar present.

We have no family history of type 1 diabetes, however type 2 diabetes is present in my family. Dane's reaction to his newly diagnosed condition was in line with his personality—laid back with an increased interest in the level of additional attention he was receiving from all!

His initial shock to injections and blood glucose monitoring was short-lived because of the immense support that was provided by his care team at the Royal Children's Hospital. The same cannot be said however for us, his parents. Dane is now 9, and while diabetes is just part of our life, we still silently grieve and experience significant worry about the potential future impact on his life.

Dane is very active in the management of his diabetes, constantly educating his school as a whole and having a very good understanding of the management of his insulin pump. He

is conscious of the role of exercise and carbohydrates in his daily routine. While he attends regular appointments to assess the health of his eyes, teeth, circulation (podiatry) and endocrinology, the real future worry for us as parents is his emotional wellbeing and mental health.

Type 1 diabetes can easily become taxing on a person's wellbeing with them developing resentment at the constant monitoring, planning and difference to others. We worry about how Dane will cope during his adolescent years, with him having to deal with the "normal" age appropriate development of increased hormones, alcohol experimentation and times away from home.

Islet transplantation is now an area of research that we know a great deal about; our hope for the next 5 years is in the development of an effective and accessible pump that will independently manage blood glucose levels by recognising hypo/hyperglycaemia with reduced finger pricking. Our long-term hope is that a cure is found, and that type 1 diabetes will become a past memory for Dane, and non-existent in other children's futures."

Type 1 diabetes

Researchers at SVI are dedicated to finding effective prevention and treatment strategies for type 1 diabetes. They use both mouse and human cells to study the causes and mechanisms of the disease, as well as exploring new treatment options.

Pancreatic islet
containing
insulin-secreting cells

Infiltrating
immune cells

THE RESEARCH IMMUNOLOGY & DIABETES UNIT

Looking for the Holy Grail

Six new cases of type 1 diabetes are diagnosed each day in Australia, many of them in children. The disease occurs when the body's immune system attacks and kills insulin-producing beta cells found in the pancreas.

Without the ability to produce insulin, people with type 1 diabetes are dependent on insulin injections to regulate their blood sugar levels. Complete restoration of normal blood glucose is difficult to achieve and as a result those with the disease may suffer devastating consequences, including accelerated heart disease, kidney and eye problems, and even premature death.

A lot of effort, both at SVI and beyond, goes into finding new and more effective ways to treat the disease, in order to stop the wild fluctuations in blood glucose that cause so much damage.

However, the Holy Grail for type 1 diabetes researchers is to find a way to stop the destruction of the insulin-

producing cells from occurring in the first place. One promising avenue involves a particular type of immune cell called a regulatory T cell. Regulatory T cells normally maintain order in the immune system, preventing it from over-responding and destroying healthy cells.

Researcher-clinician Dr Bala Krishnamurthy explains, "What we ultimately aim to do is restore the immune balance in people prone to type 1 diabetes, by using a brake on the immune system in order to stop it destroying the cells that produce insulin. We think that by increasing the number of regulatory T cells in the body we may be able to thwart the aggressive immune response."

Bala and his colleagues recently published a paper in the journal *Diabetes* in which they did exactly that. They showed that they could prevent diabetes

in a type of mouse that was genetically prone to diabetes by increasing the number of regulatory T cells. They did this by prolonging the survival of the cells and causing them to develop differently. They were able to skew the system towards the development of regulatory T cells that specifically targeted the immune response to insulin-producing cells.

Bala says this is exciting because it is the first time that researchers have been able to produce regulatory T cells that are able to specifically prevent diabetes. As a treatment this is much more likely to be effective than regulatory T cells produced in other ways.

While for the moment these results come from experiments carried out in the lab, it is a promising step towards the researchers' Holy Grail: the eradication of type 1 diabetes altogether.

FOR SOME PEOPLE
WITH TYPE 1
DIABETES, ISLET
TRANSPLANTATION
IS A LIFE-CHANGING
PROCEDURE.

THE TALENT JIBRAN WALI IMMUNOLOGY & DIABETES UNIT

At the end of last year, PhD student Jibran Wali was awarded the SVI Director's Award for the student with the most outstanding publication record in 2014. This was the fitting end to a successful candidature: Jibran submitted his PhD in September 2014, with an impressive nine publications to his name.

Jibran arrived at SVI in 2010 to work in Associate Professor Helen Thomas' Islet Biology Laboratory. He came via Islamabad in Pakistan where he was raised and medically trained and then New Zealand, where he did a Masters of Health Sciences by research at the University of Auckland.

It was while working as a medical intern in the eastern city of Lahore in Pakistan that Jibran first appreciated the serious effects of diabetes on his patients. "At the same time, my father,

who had always been very supportive of my career aspirations, was diagnosed with type 2 diabetes and this made me observe the effect of the disease even more closely."

Jibran's interest in diabetes eventually led him to SVI, where his PhD project focused on the life (and death) of the beta cells in the pancreas. "Beta cells are found in clumps of cells called islets, where they produce the hormone insulin. The main role of insulin is to promote uptake of sugar in tissues such as the muscle and liver. My research showed that high sugar levels seen in diabetes puts the beta cells under stress, which eventually leads to their death."

His studies also identified molecular targets that might be used for drug development to treat metabolic disorders such as type 2 diabetes.

Sadly, Jibran's father passed away from complications of diabetes just a few months before he completed his PhD. "My father took a lot of interest in the progress of my research and he always got excited when I told him about my new publications or a conference presentation going well. Although I was able to visit him twice during his serious illness, it saddens me that he wasn't around to witness the completion of my PhD."

Now employed as a postdoctoral researcher in the lab, Jibran has the opportunity to pass on some of his knowledge and experience to the next wave of PhD students. He intends to continue his research career the same way he has started it: full of passion and productivity. Jibran's father would surely be proud of his son's achievements.

COMMUNITY SUPPORT

Thanks to those generous members of the community who support our research activities through fundraising events.



Images (left to right):
 Guests at the Jack Holt
 Charity Breakfast,
 Susan Alberti, The
 SAMRF Gala Ball, Prof
 Tom Kay with Prof Peter
 Doherty and PhD
 student Jessica Martin,
 Benni Aroni with
 Deborah Hutton at the
 SAMRF Gala Ball,
 the Jack Holt Charity
 Breakfast

The Italian Chamber of Commerce and Industry selected SVI as charity of choice for its annual Gala Ball held at Crown's Palladium Ballroom on June 21st 2014. Guests were treated to coffee cocktails, gelato and other delicious Italian delicacies. The event raised \$4,000 for the Institute.

Point Lonsdale locals and SVI supporters joined Director Professor Tom Kay on the Bellarine Peninsula in August to hear from Nobel Laureate Peter Doherty about his Nobel Prize-winning research. The evening, organised by local supporter Marylou Gilbert, proprietor of The Bookshop at Queenscliff, raised \$1,975 in support of

SVI research. Thanks to Louise Gourlay for hosting the evening and to Terindah Estate Winery for their sponsorship of the event.

The Susan Alberti Medical Research Foundation's Gala Ball celebrated its 29th consecutive year on August 23rd. The room sparkled with glitz and glamour in support of Melbourne's three oldest medical research institutes: SVI, The Walter and Eliza Hall Institute and Baker IDI. Benni Aroni, Vice Chair of the SVI Foundation, was presented an award on the night for his outstanding contribution to medical research. The evening was a huge success, with funds raised supporting research

into type 1 diabetes.

The Inaugural Jack Holt Charity Breakfast on Friday 24 October at the RACV Club in Melbourne was, by all definitions, a great success. The \$23,000 raised at the event, organised by Rotary Club of Brighton and the Susan Alberti Medical Research Foundation, was shared by SVI's Alzheimer's research program and the Ardoch Youth Foundation.

Now into its second year, the Breakthrough Group continued building their membership and creating awareness of SVI with themed dinners, such as the Annual Spring Racing Carnival Dinner held at the Archer Room in the Botanical Hotel in South Yarra, and

the SVI Champagne Night, where the wines of Champagne Jacquart were featured.

If you would like to know more about how you could support SVI, contact the SVI Foundation on (03) 9231 2480 or email us at foundation@svi.edu.au

Don



Don was diagnosed with type 2 diabetes the year he turned 70.

“I was very active in my younger days, playing various sports all year round. My diet had always been reasonably healthy, apart from the odd pie and fish and chips.

I was therefore rather surprised when at the age of 70, results of a routine blood test proved me to be diabetic. I had no symptoms at all and there is no history of diabetes on either side of my family.

Both my parents died from heart disease, my mother at the age of 65 and my father 9 months later at the age of 69. My mother's death was unexpected. She had been hospitalised for a few days and appeared to be quite well, but less than 24 hours after being discharged died from a heart attack.

My father had been on medication for some years and tests showed him to have had several mini strokes. However, at the time of his death he appeared to be the healthiest he'd been for some time, and was returning from a holiday down at Westernport Bay when he suffered a massive heart attack at a friend's place. Because neither of them reached 70, it's hard to say whether or not they would have developed diabetes.

I was about 40 when my parents passed away, and began having regular health checks. My very first results showed a high reading for cholesterol and I began treatment immediately. Regular medical tests and medication have kept my health under control, although several years ago I required surgery to

clear a blocked artery.

Originally, with the support of a dietician, I managed type 2 diabetes through diet and exercise, but more recently I have been on medication. I have no problems coping with diabetes and live a very normal life.

As I am soon to reach the age of 79, I consider myself very lucky not only to have reached the age of 70 before being diagnosed with type 2 diabetes, but also to have lived to this age, thanks to the results of research being done in all fields of health management. Research has made it much easier to live with diabetes than in years gone by. Hopefully, in the future we will be able to eradicate the disease altogether.”

Type 2 diabetes

The major focus of research in SVI's Protein Chemistry and Metabolism Unit is an enzyme called AMP activated protein kinase (AMPK). AMPK acts as the body's fuel gauge, controlling fat synthesis, glucose uptake, cholesterol synthesis and cell division. SVI researchers are investigating the effects of AMPK at the whole body and single cell level to develop therapies that may benefit the many Australians living with type 2 diabetes.

THE RESEARCH PROTEIN CHEMISTRY & METABOLISM UNIT

Evolving research

SVI's first Director
Pehr Edman

Geoff Begg

The automated
sequencer

Bruce Kemp is SVI's closest scientific descendent to our first director, Pehr Edman. Edman was recruited to the relative isolation of Melbourne in 1958, having worked in Europe and America where he developed the method for sequencing the order of amino acids within proteins; a finding that made him famous.

While at SVI, Edman designed and built a machine that sequenced proteins automatically, which was a forerunner to the technology that enabled the DNA revolution.

When Bruce arrived at SVI in 1988, he was well aware of Edman's legacy. In fact, in a world first, in 1993 he used one of Edman's machines to sequence the amino acids of the enzyme AMP-activated protein kinase. The results of that work have kept Bruce busy for the next 22 years (and counting).

Bruce says that modern day research on proteins and metabolites is carried out using technology called mass spectrometry. "Edman was one of the giants of protein chemistry: his work allowed a huge explosion in our understanding of how proteins worked. But eventually the technology that Edman developed was superseded by mass spectrometry."

Bruce's group purchased the Institute's first mass spectrometer in 1995. Bruce says, "Mass spectrometers measure the mass of molecules, they are essentially extremely sensitive scales. They are able to measure differences in mass, to the point that they can detect minute protein modifications. These modifications control

the function of proteins and their detection allows us to understand how, and in what circumstances, proteins are switched on and off."

The mass spectrometers that Bruce and his group currently use were purchased in 2010 thanks to grants of more than \$1million from philanthropic foundations, St Vincent's Hospital and Melbourne University. The two machines have been used continuously since that

time to show how proteins are regulated, including the enzyme CaMKK2, which plays a role in anxiety and schizophrenia.

Bruce says that despite the fact that Edman's technology has now been relegated to a museum piece, it paved the way towards the understanding we have of the workings of the cell today.

EDMAN'S
TECHNOLOGY
PAVED THE WAY
TOWARDS WHAT
WE KNOW ABOUT
THE CELL TODAY



THE TALENT CHRIS LANGENDORF PROTEIN CHEMISTRY & METABOLISM UNIT

For as long as he can remember, Chris Langendorf has been interested in understanding how things work. He embarked on an engineering degree after finishing school, but quickly realised he was more interested in biological processes - understanding how all the complex parts of the cell worked together as a whole.

After completing his university degree he worked as a research assistant on a project focused on *Sarcoptes scabiei*, a parasitic mite that burrows into the skin, causing the skin condition scabies. Chris used skills that he had garnered during his Honours year to try and produce a three-dimensional structure of the proteins that allowed the mite to cleverly evade the human immune system as they went through their life cycle.

He eventually used these skills to complete a PhD and arrived to work with Bruce Kemp in SVI's Protein Chemistry and Metabolism Unit in early 2013.

Possibly formed by his exposure to engineering, Chris envisions the body as a collection of microscopic protein 'machines'. As a protein crystallographer, he says that his task is to work out the three-dimensional shape of the machines in order to divine how they work.

"Through protein crystallography we can effectively take a snapshot of a protein while it is at work, although unfortunately we can't visualise the whole process. I use these snapshots to form a hypothesis about how the protein functions. We then use traditional biochemical techniques to either confirm or refute the hypothesis."

Chris' current research focuses on the protein AMPK, which he says acts as the body's fuel gauge. "AMPK is a major drug target because it is involved in many bodily processes and has been implicated in diseases like diabetes, obesity and cancer. But because AMPK plays such an important role in regulating the energy in the cell, we need to be able to change its action in very precise ways in order to develop effective drugs. My job is to look at the way potential drug-like compounds interact with AMPK to try and find ways to improve their action."

Chris is tight-lipped on a recent major breakthrough, which the team hopes to publish in the near future and which, more importantly, may help us to understand more clearly the workings of one of Chris' 'molecular machines'.

SVI EVENTS

SVI holds a wide range of events throughout the year to share our success stories, thank supporters and raise additional funds for our research.



On the 19th of May, the third annual Friends of SVI Food Matters event 'The Great Sugar Debate' certainly got the audience talking. With Professors Rob Moodie from Melbourne University and Helen Truby from Monash University leading the animated discussion, the event was a great success.

We are hugely grateful to Michael and Janet Buxton for opening their home and their amazing art collection to us in May. Max Delany, Senior Curator of Contemporary Art at the National Gallery of Victoria was the Guest of Honour and spoke passionately about the Buxton collection.

We are equally grateful to Scott Pickett and the team at

Saint Crispin who hosted the 'Two Saints' Dinner' in August. The dinner allowed guests to enjoy world-class cuisine, and to help prepare and serve the food to fellow attendees. Wines were perfectly matched by sommelier Luke Skidmore.

In November, SVI and sponsor Treasury Wines held 'Just What the Doctor Ordered', a Penfolds Collection Masterclass. Jamie Sach, Penfolds Global Ambassador provided his expertise and insight, guiding guests as they sampled some of the best wines in the world, whilst hearing about SVI's pioneering medical research.

Thank you to all of the wonderful participants, hosts

and sponsors who attended SVI events in the past year.

If you would like to be informed of SVI events, please contact the SVI Foundation on (03) 9231 2480, or email us at foundation@svi.edu.au. You can also find out more by following us on Twitter, Facebook or LinkedIn, or visiting our website at svi.edu.au

 [facebook.com/SVIResearch](https://www.facebook.com/SVIResearch)

 [@SVIResearch](https://twitter.com/SVIResearch)

Images: Buxton's art exhibition, the Penfolds Collection Masterclass, The Great Sugar Debate, Two Saints Dinner

Edie



Anne's partner Edie was diagnosed with early onset Alzheimer's disease when she was 59. "Edie had been working as a driving instructor and she'd write down her client's address, appointment time, etc in her diary.

She was the type of person who would remember things after she'd been told once, but then we started noticing that if she hadn't written the details down she ended up going to the wrong address and getting the times wrong.

Edie wouldn't have been diagnosed if not for 2 years of insistent nagging from me. When she did finally go to the doctor she came home saying that the doctor said nothing was wrong. However, she had forgotten to mention memory problems!

I ended up going back to the GP with Edie, where they did some memory tests and determined she had memory problems. We initially saw a neuropsychologist and then a geriatrician, who thought Edie's forgetfulness might have been due to her being depressed, as she'd fallen and smashed her patella a few months after having her knee replaced. We ended up finding a neuropsychiatrist who specialised in Younger Onset Dementia. A PET scan and re-examination of an earlier MRI formalised the diagnosis.

Edie had no family history of any type of dementia, and her sister responded to the diagnosis with disbelief and denial, as Edie had always been so sharp. I wasn't surprised with the diagnosis however, as my mother had had Alzheimer's and I was familiar with the symptoms.

When it comes to coping with the disease, Edie just gets on with doing what she can. We don't deny it, but we don't need to be thinking about it every day. We know it's going to progress, but it is moving slowly, which is good. We just don't dwell on it.

The first few years were spent finding the right medication,

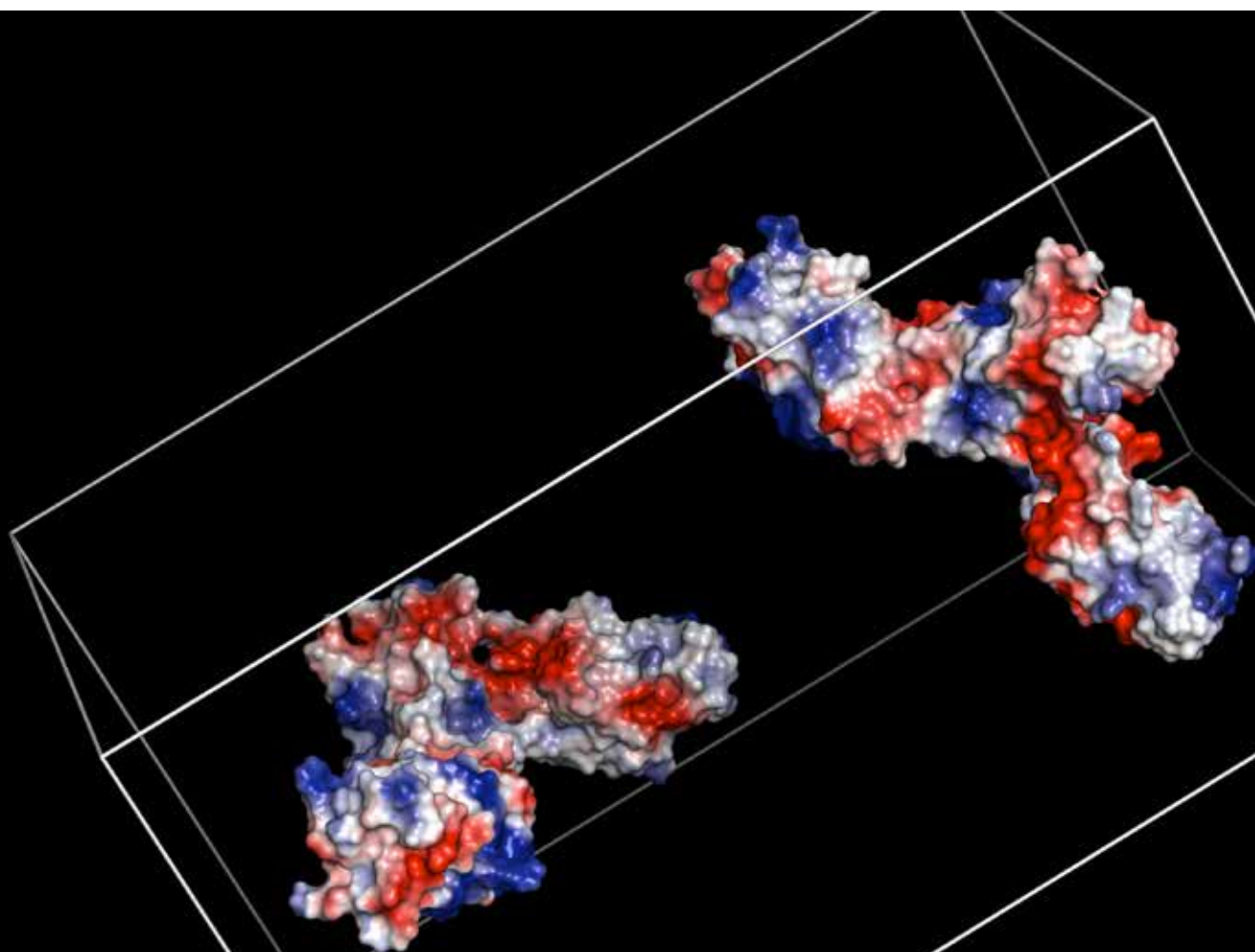
becoming part of the Alzheimer's Australia 'world' and getting good medical and emotional support. At first it was very hard for Edie, as she had to quit her job as soon as she was diagnosed. Now she just goes along with it and mood-wise is more consistent.

We were lucky. Even though it took 5 years from initial symptoms for Edie to be diagnosed, it was probably still at an earlier stage than many people experience. Being diagnosed early gives you time to get more information; to adjust, to plan how to manage things as things progress, to explore whether or not medication has any side effects, and to live your life as fully as possible. We have travelled to Botswana, China and Vietnam since Edie's diagnosis.

When it comes to medical research, we would both like to see first and foremost a cure. But in the shorter term, we would like to see the development of diagnostics such as a blood test, to help identify when someone is at risk of Alzheimer's before the symptoms start to show."

Structural biology

Understanding a protein's 3D structure allows researchers to 'see' biological processes at their most fundamental level. They use this knowledge to identify how proteins interact with each other, how drugs act, and how certain diseases such as Alzheimer's proceed at an atomic level. Researchers in the Structural Biology Unit focus on a variety of diseases including cancer, Alzheimer's and infectious diseases.



THE RESEARCH
STRUCTURAL BIOLOGY UNIT

Tackling leukaemia

Leading cancer researcher Professor Michael Parker, with colleagues Professors Angel Lopez and Timothy Hughes from South Australia's Centre for Cancer Biology (CCB), were honoured in 2014 with a National Health and Medical Research Council (NHMRC) Research Excellence Award. The Award was an acknowledgment of the team's top-ranked grant from NHMRC's 2014 Program Grant round.

Program Grants provide support for teams of high calibre researchers for their multi-disciplinary and collaborative research activities. Over the next 5 years, the team will use the \$6.67million of funding to investigate the mechanisms that cause leukaemia and help design strategies to prevent it.

The number of blood cells produced in the bone marrow each day is enormous -

in the order of 1,000,000,000,000. When the conditions that usually tightly control the production of the cells in the bone marrow are disrupted, diseases such as leukaemia result.

Large numbers of abnormal white blood cells are made in the bone marrow of people with leukaemia.

With so many abnormal cells crowded into the bone marrow, the marrow often can't make enough normal red blood cells, white blood cells and platelets. In addition, the cells crowd the bone marrow, spill into the blood and can spread into other organs.

While medical research has led to a number of very effective therapies for the treatment of some types of leukaemia,

there are other types for which there are few therapeutic options. Michael says that the advantage of funding from the NHMRC's Program Grant Scheme is that it encourages teams with different skill sets to work together to tackle difficult problems.

LARGE NUMBERS OF
ABNORMAL WHITE
BLOOD CELLS ARE
MADE IN THE BONE
MARROW OF PEOPLE
WITH LEUKAEMIA.

"In our case, we have leading experts in understanding how blood cells are produced, in the design of drugs based on our knowledge of the three-dimensional structure of proteins and in the clinical treatment of leukaemia. Together, we hope to make a difference to the more than 11,000 Australians diagnosed with blood cancer every year."



THE TALENT DR LUKE MILES STRUCTURAL BIOLOGY UNIT

Dr Luke Miles says that more than 300,000 Australians live with dementia today, and the number of people affected by Alzheimer's disease is expected to triple by 2050.

"The financial cost of the disease, currently estimated at AU\$3.6 billion per year, will continue to grow unless medical research can intervene with new therapies," he says.

With this pressing need in mind, in 2014 the Yulgilbar Foundation, founded by Sarah and Baillieu Myer, announced an initiative to support research aimed at combating Alzheimer's disease.

In October, the Foundation awarded a \$170,000, 2-year grant to SVU's Alzheimer's research team, led by Luke and Professor Michael Parker.

Luke says that their Alzheimer's

research is focused on the early stage discovery of drugs to stop the accumulation of toxic peptides that drive the disease.

"The brain of someone with Alzheimer's is characterised early on by deposits of protein pieces called beta-amyloid, and later by tangles of densely packed filaments made of a large protein called tau," he explains. "These are thought to be the 'trigger and bullet' of the disease – accumulation of beta-amyloid (the trigger) causes changes to tau (the bullet), which together result in the deterioration seen in Alzheimer's."

Luke explains that their project focuses on a protein called CD33, which is thought to inhibit the clearing of beta-amyloid accumulation in the brain. The team will use their expertise in

determining the 3D structure of proteins to guide the development of drugs to block CD33 and hopefully halt progress of the disease.

An Australian is diagnosed with Alzheimer's disease every 6 minutes. Baillieu Myer says that the Yulgilbar Foundation aims to assist in the discovery of drugs that will prevent, delay the onset, slow down the progress and ultimately, cure the disease.

The determination of medical researchers like Luke, combined with support from philanthropy and the government, give hope that we will be able to reduce the burden that the disease places on patients, their families and our society.

WOMEN IN RESEARCH

Medical research, future generations benefit from the Women in Research Award.



Since 2013, the Susan Alberti Medical Research Foundation's Mother's Day Luncheon has raised vital funds to support the careers of women in research at SVI.

The Susan Alberti Women in Research Award supports the work of an outstanding female scientist at SVI, by helping to alleviate the adverse impact on her research caused by the family responsibilities that come with having a baby. The Award provides funds to pay a research assistant or postdoctoral fellow to continue the recipient's work in the lab while she is on maternity leave or working part-time.

Dr Sophie Broughton, a structural biologist specialising in leukaemia research, was the recipient of the 2014 Women in Research Award. Sophie's son Alexander was born in late 2013.

Sophie says that the

Award gave her the opportunity to keep her research on track while she was on maternity leave.

"I was concerned that my career would suffer; maintaining momentum is so important during the early years of a postdoc.

"Generally speaking I think job security is a key issue. Most researchers are funded for only 1-5 years and there is constant effort required to secure funding for the future, and the competition for funding is fierce. This is why it is important for researchers to be consistently producing results and not have a significant gap in their productivity.

"This Award has given me an advantage in that my work was able to continue in my absence and when I returned I could just jump straight back in. It was great that I could spend those important first months with

my baby without it being to the detriment of my career. I was able to solve the three-dimensional structure of an antibody bound to an important protein involved in leukemia. This antibody is now in clinical trials and my structure gave important information on how the antibody was able to function.

"As a result of this work I have won three prizes - mainly while on maternity leave! - and have been invited to give two presentations. I'm proud that I might have contributed to treatments that will improve patient outcomes and grateful that the Award helped me to do so."

If you are interested in supporting Women in Research at SVI, contact the SVI Foundation on (03) 9231 2480 or email us at foundation@svi.edu.au

Images (left to right): Guest speaker from the 2014 Women in Research Luncheon, Dr Fiona Wood, Award recipient Dr Sophie Broughton and Susan Alberti with Sophie's son Alexander; guests at the 2014 Women in Research Luncheon, Dr Sophie Broughton

Christine



Christine was diagnosed with osteoporosis in 2009, just after her 61st birthday. “During an annual check-up with the doctor and whilst chatting about family I happened to mention that my 91 year old mother had a stooped back resulting from osteoporosis.

My doctor then encouraged me to do a bone density test called a DEXA, which is a type of x-ray. The next day, the results showed that I had osteoporosis.

I was shocked and horrified, as I'd always had plenty of calcium and thought of myself as reasonably healthy. My elder sister had been tested and her results were negative; I had thought that as she had a history of a few broken bones it would have been positive, but I guess it just goes to show that you can't make assumptions one way or the other.

I hadn't had any symptoms, and if I hadn't mentioned Mum's story to my doctor I may not have been tested. As a result of my diagnosis, one of my daughters has now been tested as well and her results have come back negative.

Once I was diagnosed I went to see an endocrinologist, who prescribed a drug that helps to slow down bone loss and to increase bone mass. She also suggested taking a daily calcium and vitamin D supplement. I initially took the drug once a week but now I take one that has been developed for monthly dosage.

My doctor had signed me up for an osteoporosis magazine, which I receive monthly. It contains stories, recipes and other information. I've found reading about other people's

osteoporosis experience has helped me manage my own.

As weight-bearing exercise is recommended, I do clinical Pilates twice per week and go for walks when I can. I have to remain upright and can't eat for 30 minutes after taking my medication, so during that time I take my walk. I'm aware that some people find it difficult to combine medication and physical activity. I consider myself fortunate that this is not a problem for me.

In terms of my future health, I don't have any particular worries. Having reached my mid 60s, I hope to live to a reasonable age. I don't want to get the stooped back my mother had, so I'm motivated to take my medication and do my exercise.

I hope that in the future, medical researchers discover ways of preventing osteoporosis from developing.”

Bone

By studying the cells that build bone, the cells that destroy bone, and the way these cells interact with each other and their environment, researchers in SVI's Bone Cell Biology and Disease Unit have identified new therapeutic targets that may be used to treat osteoporosis and arthritis.

osteocyte

osteocyte projections
used to communicate
between cells

bone surface

WD |
18.9

20 µm

THE RESEARCH
BONE CELL BIOLOGY &
DISEASE UNIT

Brainy bones

Bones are savvy. They are light, strong, and they can repair themselves when damaged. What's more, they are continually renewing themselves, replacing old bone for new. This is not unique - other tissues (most noticeably skin) are continually replaced. But bones adjust to the body's mechanical and physiological needs as they go.

How do bones manage such a remarkable feat? Recent advances in imaging technology are starting to reveal the brains buried deep within bone: a living cellular network composed of bone's most abundant cell, the osteocyte.

Like the neurons in the brain, osteocytes have long finger-like projections that burrow through the bone to interconnect with each another. Inspired by the complexity of this cellular network, SVI's Associate Professor Natalie Sims and her colleague, Monash mathematician Dr Pascal Buenzli, set out to quantify the osteocyte network in the human skeleton.

What they found exceeded all expectations, paralleling even the neural

network of the brain. The team estimated that the human skeleton contains 42 billion osteocytes. In comparison, the brain contains 86 billion neurons, packed in a volume (1.2 L) comparable with the volume of bone in the skeleton (1.75 L), although of course the skeleton is more spread out.

Adding together the length of the osteocytes' projections, the team estimated that the entire network is about 175,000km long: more than four times the earth's circumference. This is very similar to the total length of the pathways between brain cells.

They then used a mathematical model to calculate the total number of connections between the cells. How many? Twenty three trillion connections exist in the human osteocyte network.

So, in a way, our skeletons have a similar number of cells as the brain, interconnected in a similar sized space.

Why do our skeletons need such a complex network? The experts don't know exactly, but they do know that the cells exchange information, just like neurons do.

We know that osteocytes communicate with each other about where the skeleton is weak and needs to be strengthened, or where there is damage that needs to be fixed. These messages are transmitted to cells on the bone surface that are able to remove damaged bone (osteoclasts) and form new bone (osteoblasts).

The team at SVI will continue their research into these brainy cells, in order to find better treatments for skeletal disorders like osteoporosis or osteogenesis imperfecta, and explore ways to get people back in action more quickly after a fracture. In the meantime, the osteocytes will continue to keep our skeletons strong (and smart) enough to support us.

OUR SKELETONS
HAVE A SIMILAR
NUMBER OF CELLS
AS THE BRAIN,
INTERCONNECTED
IN A SIMILAR WAY.

A portrait of Christina Vrahnas, a young woman with long dark hair, smiling warmly. She is wearing a dark top with a floral pattern. The background is a laboratory with various pieces of equipment, including a microscope.

THE TALENT CHRISTINA VRAHNAS BONE CELL BIOLOGY & DISEASE UNIT

PhD student Christina Vrahnas has spent the last 2 years working to understand what it is within the molecular structure of bone that gives it strength. She recently harnessed the power of the strongest beam of light in the Southern hemisphere, focusing on thin sections of bone in order to reveal the secrets of this remarkable material.

Christina says that the ultimate aim of her research is to develop new therapies for osteoporosis. “Currently, the only treatment to increase bone mass in people with osteoporosis is a hormone called parathyroid hormone. I am trying to understand what the hormone does within the cell to encourage bone formation, and to examine the quality of

the bone that is formed.”

Christina was recently assigned a 72 hour window to use the beamline at the Australian Synchrotron. The beamline creates a light as bright as 10 billion suns, produced by sending electrons at close to the speed of light through a series of magnets around the football stadium-sized structure in Clayton.

One of the first in Australia to combine the Synchrotron with other techniques to examine the internal composition of bone, Christina compared very small regions (about half the thickness of a human hair) of new versus old bone from mice.

“We couldn’t do this using the equipment we have back in the lab,

because it simply isn’t powerful enough. It was an exciting experience working at the synchrotron because I knew that the work I was about to do was unique. Not many people get the opportunity to apply synchrotron light to their research!”

The team’s results showed that carbonate, a component of the mineral within bone, plays a significant role in determining the ultimate strength of bones in the mice they study. Christina was also able to identify how the composition of bone changes as it matures, which may give important clues to its strength.

Christina will spend the remaining year of her PhD studies shining more light onto the cells that make bone strong.

TEEING UP FOR MEDICAL RESEARCH

For the seventh year in a row, SVI's 2014 Charity Golf Day was a huge success.



The 2014 SVI/Macquarie Leasing Charity Golf Day, held on Monday 20 October, raised an incredible \$70,000 for research at SVI.

The event was held at Albert Park Golf Course on what turned out to be a beautiful spring day, with 19 teams taking full advantage of the sunny skies and soft breeze.

The Australian Reliance team of Matthew Kohler, Michael Roberts, Gareth Nicholls and Jarrod Watson won the Jack Holt trophy for finishing first on the day. Runners up were Carrie Pleasance, Chris Howord, Peter Benroison and Garrith Ridd from Garuda Indonesia.

The Michael Dwyer

Memorial Trophy was won by Chris Holroyd from Charter Keck Cramer, for the long drive on Hole 6.

"What a great turn out," said SVI Director, Prof Tom Kay. "We're really grateful to Macquarie Leasing, Platinum Sponsor for this year's event, and to all sponsors and players for the enthusiasm and sportsmanship shown on the day.

"The funds raised will help SVI continue its medical research in areas such as diabetes, cancer and heart disease. Our researchers, and those in Australia dealing with the challenge of some of these common diseases, will greatly benefit from the day's fundraising efforts."

Silver sponsors for this year's event included Garuda Indonesia, Maxxia, PanPacific and Jayco.

If you would like to sponsor or participate in the SVI/Macquarie Leasing 2015 Charity Golf Day on Monday October 26, please contact the SVI Foundation on (03) 9231 2480, or email us at foundation@svi.edu.au



Ron

Ron had a coronary artery bypass when he was 53. “In 1991 when I was 53 years old, chest pain led me to the GP who determined that urgent follow-up by a cardiologist was required.

Within a few days I'd had an angiogram and was admitted to hospital where five coronary bypass grafts were performed. Unfortunately, as a result I had to close my business.

I was in the printing industry most of my working life; first in a commercial plant, then at the Herald and Weekly Times for more than 20 years, followed by a 15-year stint in my own business. I currently work part-time, early in the morning, at a local news agency.

Having had this heart problem meant to some extent, I was in the same 'boat' as my parents: my father died one day after retirement at 67, although he had absorbed anginine tablets like 'sprinkles' since he was 47. My mother lived longer but simply put her head on a table where she had been playing bingo and died, aged 76 years. I was a smoker, but able to give up straight away.

When I had the call to go into a clinical trial (the SCREEN-HF Study), it was not a hard decision as I'd had a fair bit of experience with research foundations in the Lions Organisation, and my younger son had a feel for medical research, which is now his working life. Even without these two important influences I probably would have taken up the offer as a way of giving back to the community; I had benefited from research in a way that clearly wasn't available to my parents.

In 2014, due to back pain, I had a consultation with my GP

who again recommended a cardiologist. The cardiologist gave me a stress test and sent me for an angiogram, which showed blockages in three of the grafts. However they determined that the use of medication to increase blood flow through my heart muscle would give me the best chance possible at this time. It is still working!

Following my 1991 surgery, I walked for an hour a day for many years, which no doubt was of great benefit. Unfortunately, arthritis has caught up with me, so walking is now fairly restricted.

I've been very fortunate to have had a supportive wife, conscious of diet and 'generally just being there', and lived at a time when medical intervention was possible. Improved medication through research has given me time that I'm sure wouldn't have been possible in earlier times. As the years roll on even better opportunities, I'm sure, will become available through further research and advancement in this vital field.”

Heart disease

Research at SVI is directed towards understanding why heart disease occurs. Through clinical studies, such as SCREEN-HF, SVI researchers are investigating ways to help identify those at increased risk of heart disease so that they can be given treatment to prevent it from occurring.

THE RESEARCH MOLECULAR CARDIOLOGY UNIT

How can you mend a broken heart?

Cardiovascular disease, particularly heart attack, is the leading cause of mortality in Australia. It is responsible for 30% of all deaths, killing one Australian every 12 minutes. Yet many of these deaths are preventable.

Research has provided a lot of information about how to keep our hearts healthy and has also led to the development of effective drugs. However, in many cases, there is still much to learn about how these drugs work.

Associate Professor Jock Campbell explains, "Two of the most commonly prescribed classes of drugs for reducing blood pressure and preventing heart attack are ACE inhibitors and ARBs – both of these block the renin angiotensin system, a key hormonal system that controls blood pressure. In 2007, a new class of drug was added to the arsenal: aliskiren was approved for the treatment of high blood pressure."

ACE inhibitors and ARBs do more than just reduce blood pressure. They also help protect the heart from heart attack, and provide benefit to people with heart failure. Heart failure can occur after a heart attack, when damage to the heart muscle means that the heart cannot pump enough blood for normal daily activities. Jock and his team set out to see if, in addition to reducing blood pressure, aliskiren also had additional cardioprotective properties.

In 2014, Jock and his PhD student Suang Suang Koid published a paper in which they showed in an animal model that aliskiren did indeed protect heart muscle cells from dying during a heart attack. They showed that the drug acts by increasing the levels of a chemical in

the heart called bradykinin, which is part of the heart's normal defence against heart attack.

This was exciting because it showed that aliskiren has benefits beyond reducing blood pressure. It also showed how aliskiren interacts with other drugs. This new information will help understand how to obtain maximum benefit from aliskiren treatment, either alone, or in combination with other drugs.

The next step is to show whether aliskiren produces these same benefits in people, by improving the heart's pumping of blood in people with heart failure and by preventing heart attacks and the deaths they cause: by mending a broken heart, and by preventing the heart from breaking in the first place.

THE NEXT STEP IS
TO SHOW WHETHER
ALISKIREN
PRODUCES THESE
SAME BENEFITS IN
PEOPLE ...



THE TALENT
JENNIFER COLLER
MOLECULAR CARDIOLOGY UNIT

Jennifer Collier is one of a rare and precious breed: the clinician-researcher. This means that she is qualified as a clinical cardiologist, but has taken time out from the standard career path to undertake a PhD.

Jennifer says that her research training has informed her day-to-day practice. “Spending dedicated time amongst the heart failure research community has allowed me to gain a better understanding of both the investigation and medical treatment of patients with heart failure.”

Supervised by Associate Professor David Prior from St Vincent’s Hospital and SVI’s Associate Professor Jock Campbell, Jennifer’s PhD was focused on how to better identify people in the community with heart abnormalities that may lead to heart failure. These abnormalities were detected using ultrasound of the heart, a technique known as echocardiography.

Specifically, she set out to determine whether the level of a protein marker in blood can be used to identify people who are more likely to have these heart abnormalities.

She says, “Every year, 30,000 Australians are diagnosed with heart failure – we see many patients newly diagnosed with the condition come through the doors at St Vincent’s Hospital each year. There are many effective treatments to prevent heart damage, but by the time we see these people in the clinic, a lot of damage has already been done. What is needed is a test to show who is at risk so that we can intervene earlier to prevent the disease.”

Jennifer says that studies such as this require large groups of people in the community. “We studied a group of people aged 60 or more who had high blood pressure or diabetes, or had previous stroke, or heart or kidney disease and who

were willing to cooperate over a long period of time. Our group of volunteers was 3,994 strong and they have been followed since 2007.”

Jennifer says that her study showed that the marker was good at detecting some, but not all of the heart abnormalities that may lead to heart failure. This cast doubts on its ability to be an effective tool for selecting people to have echocardiography. However, she showed echocardiography was able to detect significant heart disease in approximately one quarter of the people in her study, and it may be a more useful screening tool than blood testing.

Jennifer will continue to see patients, with her treatment informed by the experience she has had over the last 4 years. “I hope to continue to be involved in medical research, and to see even more progress not only in treating, but also preventing, heart failure in the future.”

BEHIND THE SCENES AT SVI

Visit SVI to hear about the cutting edge of medical research, learn what it takes to make a breakthrough, and discover what researchers at SVI are doing to help Australians affected by disease.



We regularly host tours of the Institute. Our researchers relish the opportunity to explain their work and are always interested to hear from guests who often have a personal story to tell about the disease that they spend their time researching.

In 2014, SVI researchers welcomed secondary school groups from St Columba's College, FCJ Benalla and Genazzano College and interest groups from Probus Clubs, the RACV Bridge Club and the Rolls Royce Club. We also saw State and Federal politicians, some of our generous donors and members of the public through our doors.

Our guests had the chance to peer through the microscope

at pancreatic islets, watch the manipulation of protein structures on 3D TV, see how tumours grow and look into the middle of bones. They heard about the difference that philanthropic support can make early in a researcher's career, the importance of basic laboratory research for breakthroughs and how a finding can blossom into a clinical treatment.

Tours take about one hour and can be tailored to suit your availability and interest in a particular disease area. If you would like to take part, contact the SVI Foundation on (03) 9231 2480 or email us at foundation@svi.edu.au.

*Images (left to right):
Students from Genazzano College, visit from the Marian and E.H. Flack Trust, an evening tour of SVI, tour with the Hon Fiona Richardson MP, students tour the Structural Biology Unit*

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SVI STAFF 2014–2015

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A/Prof Jörg Heierhorst
(Associate Director)
A/Prof Natalie Sims
(Associate Director)
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Gabriella Crespi
Dr Urmi Dhagat
Larissa Doughty (PhD student)
Dr Susanne Feil
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Dr Stefan Hermans
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Jonathan Chee (PhD student)
Edward Chu (PhD student)
Bree Deschamps (student)
Dr Colleen Elso
Stacey Fynch
Kaneeka Gajendra (student)
Jingjing Ge (PhD Student)
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Dr Kate Graham
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Shreeya Patel (Scholarly selective
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Dr Vimukthi Pathiraja (PhD student)
Elicia Pettiroso (student)
Hong Sheng Quah (PhD student)
Hamdi Saadi (Honours student)
Nick Scott (PhD student)
Claudia Selck
Jarrod Skinner
William Stanley (Honours student)
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Erwin Tanuwidjaya
Michael Thomson
Dr Anne Thorburn
Sam Thorburn
Eleonora Tresoldi
Prerak Trivedi (PhD student)
Michael Valente (Scholarly selective
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Chitra Varanasi
Paul Vrazas
Regan Vryer (student)
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Frosa Katsis
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Naomi Ling
Lisa Murray-Segal
Dr Kevin Ngoei
Matthew O'Brien (PhD student)
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Francoise Campbell
Suang Suang Koid (PhD student)
A/Prof David Prior

Jodie-Anne Sibley
Edward Crendal

Bone Cell Biology and Disease Unit**A/Prof Natalie A Sims****Prof Jack Martin****Dr Nicole C Walsh**

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Holly Brennan
Ling Yeong Chia (PhD student)
Dr Dae-Chul Cho (Visiting academic)
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Leah Lazzaro (student)
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Dr Mannu Walia

Molecular Genetics Unit**A/Prof Jörg Heierhorst**

Becky Bamford (International
Masters student)
Nathan Giavasoglou (Honours
student)
Kimberly Gleeson
Ashleigh King (PhD student)
Lingli Li (PhD student)
Nora Tenis
Dr David Wong

Genome Stability Unit**Dr Andrew Deans**

Dr Charlotte Hodson
Harvinder Johal (student)
Vince Murphy
Julienne O'Rourke (PhD student)
Dr Fenil Shah
Sylvie van Twest

Cell Cycle and Cancer Unit**Dr Boris Sarcevic**

Ain Roesley (PhD student)

Invasion and Metastasis Unit**Prof Erik (Rik) Thompson**

Tony Blick
Vijani Dissanayake
Dexing Huang
Cletus Pinto (PhD student)
Eliza Soo (PhD student)
Edwin Widodo (PhD student)
Dr Bryce van Denderen

Senior Principal Research Associates

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

Principal Research Associates

A/Prof Ora Bernard
Prof Peter Cowan
Prof Michael Henderson
Prof Darren Kelly
A/Prof John Slavin
A/Prof Gregory Steinberg
Dr Mark Waltham
Dr David Izon

Senior Associates

Dr Lance Macaulay
Prof Harshal Nandurkar
A/Prof Evange Romas

Associates

Dr Julian Adams
Dr Renwick Dobson
Dr Nirupa Sachithanandan

SVI Foundation**Madeleine Whiting
(Development Director)**

Tracey Grant (Administrative Assistant)
Dan Mars (Philanthropic Relationship Manager)
Katie Maynes (PR & Events Coordinator)
Stephanie Page (PR & Events Assistant)
Lucy Rechnitzer (Events Officer)
Lara Yachou-Wos (Donor Relations Officer)

SVI Administration

Steven Boz (Administrative Officer)
Theresa Clarke (Administrative Officer)
Metta Clarissa (Finance Officer)
Deepanshu Duggal (Finance Officer)
Ryan Egan (IT Officer)
Mathew Eley (IT Officer)
Sally Emini (Technical Assistant)
Irene Esquivel (IT Officer)
Dr Anne Johnston (Grants & Communications Manager)
Amy Kilby (Finance Officer)
Lisa Kuspira (PR & Media Advisor)
Virginia Leopold (WHS Coordinator)
Lisna Wirrawan Liauw (Payroll Officer)
Julie Malyon (Administrative Officer)
Dr Anthony Mason (Commercialisation Development Manager)
Dr Rachel Mudge (Grants Officer)
David Murfitt (Laboratory & Technical Services Manager)
Kathryn O'Connell (Administrative Officer)
David Rees (Business Manager & Company Secretary)
Jon Rhoades (IT Officer)
Helen Ritchie (Human Resources Manager)
Christopher Ryan (IT Officer)
Dimitra Samaras (Administrative Officer)
Dr Anne Thorburn (Research & Administration Manager)
Peter Tonoli (IT Manager)
Jing Zhang (Finance Officer)

National Serology Reference Laboratory, Australia**Susan Best (Director)**

Lena Arvanitis
Dr Thein Thein Aye
Dr Susie-Jane Braniff
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
Nilukshi Malawa-Arachchi
Tamara McDonald
Alison Natoli
Louie Opasnov
Thu-Anh Pham
Kim Richards
Dr Derya Sahin
Kathy Smeh
Roseena Taqi
John Tomosov
Frank Torzillo
Rosanna Torzillo
Marlene Tschaepe
Guiseppe Vincini
Dr Kim Wilson

Higher Degrees Conferred 2014

David Ascher, PhD University of Melbourne
Michelle Ashton, PhD University of Melbourne
Hui En (Jonathan) Chee, PhD University of Melbourne
Cletus Pinto, PhD University of Melbourne
Walter Pfister, PhD University of Melbourne
Jibrán Wali, PhD University of Melbourne

SVI Board

Ms Brenda Shanahan (Chair)
Dr Susan Alberti AO
Prof James Best (to 06/14)
Mr Ben Fielding (from 02/14)
Professor Richard Fox
Mr Paul Holyoake
Ms Karen Inge
Professor Thomas WH Kay
Mr John T Macfarlane
Mr Anthony Mancini (from 12/14)
Mr Stephen Marks
Dr Virginia McNamee (from 12/14)
Professor Patricia O'Rourke
Mr Christopher Page (to 09/14)
Mr Peter Riley
Mr Gregory Robinson (to 03/15)
Professor Stephen Smith

SVI Foundation Board

Dr Susan Alberti AO (Chair)
Mr Benni Aroni
Ms Simone Carson
Ms Jeni Coutts
Ms Bernadette Dennis
Mrs Maria Foti
Mr James Hatzimoisis
Professor Thomas WH Kay
Mrs Claire O'Callaghan
Mrs Karen Plant
Ms Brenda Shanahan
Mr Mark Sullivan
Mrs Christine Tarascio

F

FINANCIAL SNAPSHOT

Income

62%

Competitive Research Grants

16%

Government Infrastructure Support

10%

Legacies, Bequests & Donations

6%

Investment Income

6%

Contracts & other Income

Expenditure

60%

Research

10%

Administration

10%

Transfers to Collaborators

9%

Laboratory Support Services

7%

Building Operations

3%

Foundation

1%

Commercial Development

Statement of Financial Position as at 31 December 2014

	Note	2014 (\$)	2013 (\$)
ASSETS			
Current assets		10,751,974	14,668,008
Non-current assets		16,745,902	13,979,401
TOTAL ASSETS		27,497,876	28,647,409
LIABILITIES			
Current liabilities		4,849,775	4,734,337
Non-current liabilities		88,722	177,048
TOTAL LIABILITIES		4,938,497	4,911,385
NET ASSETS		22,559,379	23,736,024
EQUITY			
– Retained surplus		21,776,725	23,007,833
– Reserves		782,654	728,191
TOTAL EQUITY		22,559,379	23,736,024

STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME FOR THE YEAR ENDED 31 DECEMBER 2014

	Note	2014 (\$)	2013 (\$)
Revenue	1	15,515,727	16,454,707
Other income		4,432,485	5,161,092
TOTAL REVENUE		19,948,212	21,615,799
Consumables and general research expenses		(3,470,962)	(3,810,110)
Employee benefits expense		(11,747,813)	(12,701,179)
Depreciation and amortisation		(2,227,706)	(2,099,035)
Administration expenses		(1,597,700)	(1,746,437)
Transfers to collaborators		(2,135,139)	(2,565,509)
TOTAL EXPENSES		(21,179,320)	(22,922,270)
Surplus/(Deficit) for the year		(1,231,108)	(1,306,471)
Other Comprehensive income:			
Net gain/(loss) on revaluation of financial assets		54,464	483,666
Total Comprehensive income for the year		(1,176,644)	(822,805)
Total Comprehensive income attributable to members of the entity		(1,176,644)	(822,805)

NOTE 1: GOVERNMENT GRANTS

National Health and Medical Research Council:

– Independent Research Institutes Infrastructure Support Scheme		1,586,253	1,775,746
– Research grants		8,164,195	9,136,002
Australian Research Council		651,811	282,779
Total Commonwealth grants		10,402,258	11,194,527
Victorian State Government, Department of Business and Innovation – Operational Infrastructure Support Program		1,483,492	1,419,207

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



B

BEQUESTS

“Choosing to do this has given me more meaning in my life than I could have imagined and upon my wife Pat’s death it has given me peace of mind, knowing that the vital work of SVI will continue after I die.”

The extraordinary difference your bequest could make.

GERALD SNOWDEN, PATRON OF SVI'S JACK HOLT SOCIETY, SHARES HIS STORY.

"As Patron of SVI's Jack Holt Society, which was established to honour those who have informed SVI that they are leaving a Bequest to the Institute, I would like tell you about my personal experience and ask you to consider the legacy you want to leave when you die.

My loving wife of 55 years, Patricia, who was mother to our 11 children, passed away 3 years ago after a long battle with cancer.

Death can be a morbid subject, but when Pat and I discussed how we wanted to leave this world, we looked at what impact we were going to have on the world with our passing.

Pat trained as a nurse at St Vincent's Hospital in the 1950s. Due to her affiliation with St Vincent's we decided back in 2009 to make a Bequest favouring St Vincent's Institute of Medical Research. We asked our family solicitor to

research the Institute on our behalf. He did this quietly, without SVI being aware, and he advised in their favour.

SVI focuses on everyday medical problems that all of us can identify with: heart disease, arthritis, Alzheimer's disease and cancer. My wife died of breast cancer and my daughter has not long ago been diagnosed with it.

All the diseases SVI research can, and will, affect you and me sooner or later.

SVI appealed to us because of its transparency, reliability, trustworthiness, low-key approach to fundraising, strict moral code and most importantly - SVI achieves results.

Just leaving a Bequest of 1% or 5% of your estate is not about decreasing your children's inheritance, but more about providing your children and grandchildren with something they can be proud of and a part of.

Choosing to do this has given me more meaning in my life than I could have imagined and upon my wife Pat's death it has given me peace of mind, knowing that the vital work of SVI will continue after I die.

As the patron of the Jack Holt Society I earnestly ask you to consider joining me by including SVI in your Will. Leave behind a legacy that will benefit others.

Give... so that others may live in hope.

Give... as an investment in your children's health.

Give... so that you leave the world a better place than you found it.

Is there room in your Will to include a bequest to SVI?"

For more information on leaving a Bequest to SVI please contact the SVI Foundation on (03) 9231 2480 or email us at bequest@svi.edu.au



DF

\$10,000 DISCOVERY FUND



SVI \$10,000 DISCOVERY FUND CONTINUES TO GROW

Launched in 2006, the SVI \$10,000 Discovery Fund was set up to support medical research at SVI aimed at improving the health of Australians. The Fund has a capital target of \$5 million and is currently valued at \$2.2 million, with further membership pledges of \$820,000. This is a testament to the philanthropic generosity of its members and supporters.

The Fund, headed by its chair Christine Tarascio, currently has 34 members, with many other supporters who have made contributions over the years. This year, John and Natasha Camuglia were welcomed as new members. Anthony and Janine Burgess, SI Capital, and Mario Salvo committed to a further 5 years of giving. Ian and Maria Cootes extended their membership to 2019, and Vic and Toni Zagame pledged another year's support.

Fund members and prospective members were welcomed to several functions in 2014. One event, a 'Property Developers' Dinner' held in October at SVI, incorporated a

tour of the Institute and provided guests with valuable insights into current research and an opportunity to speak with scientists.

Thank you to panel members Adrian Salmon, Department of Transport, Planning and Local Infrastructure; Ian Stevenson from Space Estate Agents; Karl Fender from architects Fender Katsalidis; and Sam Tarascio from Salta Properties who contributed to a fascinating discussion, focussed on apartment design guidelines in Melbourne. Thanks also to Benni Aroni (vice chair of SVI Foundation Board and co-developer of Eureka Tower and A108), who emceed the

evening and kept the discussion lively with contributions from the audience.

In March 2015, Sam and Christine Tarascio hosted the highly anticipated annual \$10,000 Discovery Fund lunch at their home. The function, attended by 80 guests, brought together members and supporters of the Fund, and provided an opportunity to hear more about the ground-breaking medical research being undertaken at SVI. Professor Tom Kay and Dr Lorien Parker were inspiring and spoke passionately about their research areas. They highlighted the vital role philanthropy continues to

play in medical research and thanked the Tarascio family and guests for their generous support.

An investment in the SVI \$10,000 Discovery Fund is an investment in our health, our family's health and the health of the whole community. Please call Christine Tarascio on 0418 318 627 if you would like to know more about the Fund or becoming a member.



D

DONORS, BEQUESTS AND FOUNDATIONS

On behalf of SVI, I would like to acknowledge all those who donated in 2014. We also thank those donors not listed here and those who wish to remain anonymous. Every donation, no matter how small, has the potential to save lives. Thank you for your support.

SUSAN ALBERTI AO, SVI FOUNDATION CHAIR

\$100,000 Plus

Susan Alberti Medical Research Foundation
Shanahan, B
The Stuart Leslie Foundation

\$50,000-\$99,999

North, C

\$10,000-\$49,999

Michelmores, J & A
Janko Inge Foundation Pty Ltd
Reece Australia Limited
Rotary Club of Brighton
Snowden, G
Alberti, S
Bell Charitable Fund
Pizzey, J & B
Foti, T & F
Hatzimoisis, J & G
Aroni, B & Kaldor-Aroni, R
Ceravolo, E & M
Harold Mitchell Foundation
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Anastasiou, P & K
Arcaro, J & G
Bertocchi, A & C
Bertocchi, J & D
Best, J
Briggs, G W
Cicero, J & R
Cootes, I & M
Gillam, J & H
Lamaro, P
Lasky, M & M
Macfarlane, J & M
Piedimonte, S & R
Plant, B & K
Rogers, B
Salvo, M
Saraceno, N & R
Schiavello, T & E
Signorino, J & F
Tarascio, S & C
Whittington, M & M
Bristol-Myers Squibb
SI Capital Pty Ltd

\$1000-\$9999

Robinson, G & C
F & J Ryan Foundation
Smith, K
Tarascio, S & C
Lowe, R & D
Banks Group Melbourne
Wilkie, R & E
Wang, Y L
Stutt, D
Ralph, J & B
Power, T & D
McCorkell, P
Little, P & Hansen, J
Gorr, L & J
Falkiner, N & J
Riley, P & C
Italian Chamber of Commerce and Industry in Australia
Owen, K & E
Knowles, J
Smith, J F M
O'Shannassy, M & R
O'Day, J & S
Whiting, J
Ray & Joyce Uebergang Foundation
The Noel and Carmel O'Brien Family Foundation
Xipell, J & T
Waters, M J
Spry-Bailey, P
McPhail, B
Laverty, E
Harries, H & A
Crothers, M
Watson, B
Thomas, C & C
Johnston, G
Clifton, S
Carson, I
Clarke, T
Nunan, T & G
D'Arcy, J
Chappell, J
Arthur, J & A
Borensztajn, J & J
Bowen, J & M
Commins, H
Edgar, R & D
Faulkner, AO P
Gourlay, L
Griss, C & A
Iseli, A & C
Kay, C
Kelly, A P
McCarthy, N
McClintock, P & E
McGinniss, M & L
McHugh, D
McNulty, M
Pellicano, N & A
Penington, D
Petrovic-Defteros, A
Pratt, I & E
Randall, B
Ryan, G

Sevior, E
Stephen, N & L
Stewart, R
Turner, R & J
Webb, B & M
Australian Home Brewing
All Souls' Opportunity Shop

\$500-\$999

McKeage, C
Whiting, M & M
Filinis, E
Johnston, B
Whiting, N & T
Lade, S & G
Marks, S & M
Macquarie Group Foundation
Barham, K & P
Bassat, A & N
Brancatisano, J & B
Estate of the late Mrs Doreen Merle Taylor
McCann, N & P
McFarlane, M & M
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Murphy, T
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Sakell, S
Santamaria, J & S
Thornton, C
Woods, M
Salta Properties Pty Ltd
Anderson, D

SVI Charity Golf Day Sponsors

Platinum

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Credit Suisse
Ernst & Young
Evans & Partners
Oakton
Ferntree Gully Motor Group
Pedders Suspension
PricewaterhouseCoopers

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

DJ & LM Fox Foundation – administered by Nicholas O'Donohue & Co
John Holt Medical Research Endowment – administered by Perpetual Trustees
K & A Bongiorno Research Endowment – administered by Perpetual Trustees
The Mary Jane Polinelli Foundation – administered by Perpetual Trustees

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
Laura Sampson Lamb Estate
Lorna M Miller Endowment
Mary T Porter Estate
Merna Dorothea Sheahan Estate
The Mary Potter Research Grant
The Roslyn Smorgon Memorial Fund

Trusts and Foundations The following Trusts and Foundations granted support based on scientific merit in 2014:

5point Foundation
Diabetes Australia
The Fanconi Anemia Research Fund
The Ian Potter Foundation
James and Vera Lawson Trust – managed by Equity Trustees
JDRF
L.E.W. Carty Charitable Fund
Leukaemia Foundation
The Norman, Mavis and Graeme Waters Perpetual Charitable Trust – managed by Perpetual
The Marian & EH Flack Trust
The Yuligilbar Foundation
Zig Inge Foundation

SVI IS LUCKY TO HAVE LOYAL SUPPORT GROUPS WHO RAISE FUNDS FOR OUR RESEARCH

Their funds are often directed towards specific fundraising goals to support research at the Institute. If you are interested in supporting SVI, or joining any of our groups, please contact the SVI Foundation on (03) 9231 2480 or at foundation@svi.edu.au

SVI Support Group

The SVI Support Group was originally set up over 25 years ago, and supports the SVI Foundation Top-up Scholarship Program, which provides \$5,000 to Honours students and boosts PhD stipends by \$5,000 per year. The SVI Support Group holds an annual dinner every year to raise funds for the Student Scholarship Fund.

\$10,000 Discovery Fund

The SVI \$10,000 Discovery Fund was established 9 years ago by SVI Foundation Board member Christine Tarascio. The Fund has a capital target of \$5 million and is currently valued at \$2.2 million, with further membership pledges of \$820,000. The Fund members come together at least twice a year.

Friends of SVI

In 2013, SVI developed a program called Friends of SVI. The Friends of SVI engages our loyal donors, and encourages new friends to embrace SVI. Each year, the popular Food Matters event series, which focuses on the role of food and diet in our society and its impact on disease, is organised for the group.

Breakthrough Committee

In 2012, a group of friends formed the SVI Breakthrough Committee with the aim of educating and engaging young professionals on the importance of medical research and its potential impact. They hold a number of events each year, such as wine tastings, Spring Racing Carnival lunches and new film screenings.

Jack Holt Society

Every Bequest, no matter the size, helps to strengthen SVI's future. Your enduring gift will help us continue our quest to understand the complexities of disease, bringing us closer to breakthroughs and improved health for future generations. The Jack Holt Society was established to honour the generosity of those individuals who have notified us of their intention to pledge a gift in their Will to SVI. The Society gets together annually to share stories and learn more about research at SVI.



St Vincent's Institute of Medical Research

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located 9 Princes Street Fitzroy Victoria 3065 Australia

post 41 Victoria Parade Fitzroy Victoria 3065 Australia

f +61 3 9416 2676 e enquiries@svi.edu.au



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Donation payment details

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

Credit card (please tick one of the following cards and complete details)

Card type (please tick)

Diners Visa Mastercard Amex

Expiry date

Amount being paid \$

Name on card

Signature

Please make my receipt out to:

Title

First Name

Surname

Position

Company

Address

Suburb

P/Code

State

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SVI is endorsed as a tax deductible gift recipient. All donations over \$2 are tax deductible. SVIMR ABN: 52 004 705 640.

Please return to:

St Vincent's Institute of Medical Research,
9 Princes St, Fitzroy, VIC 3065 Tel: 03 9231 2480 Fax: 03 9416 2676
Email: foundation@svi.edu.au Web: www.svi.edu.au