

2016-2017

SVI YEAR

SVI 
ST VINCENT'S INSTITUTE
MEDICAL RESEARCH

Forging Links

**THIS
IS SVI**

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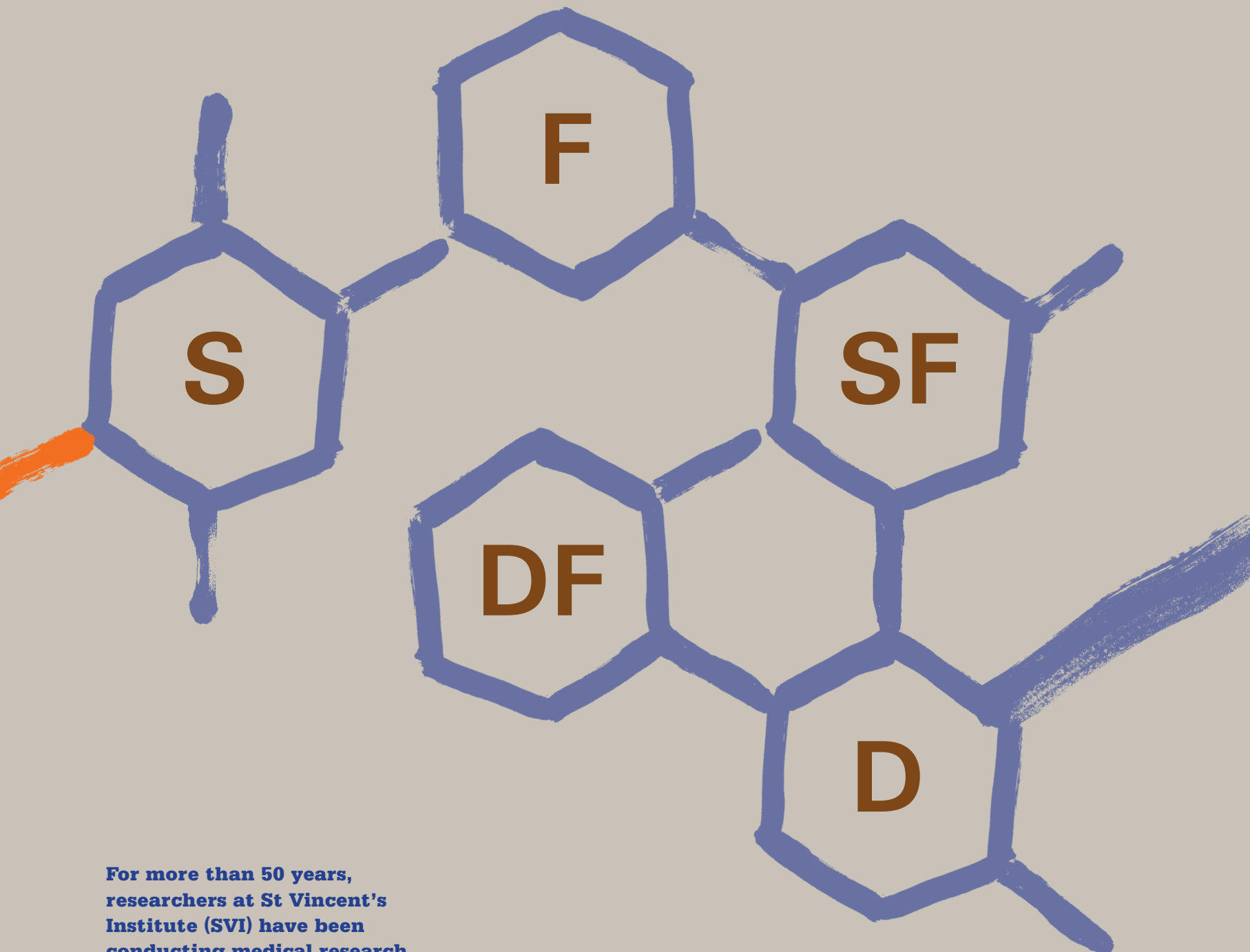
RM

1D

BD

H2D

3D



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**

SECTIONS

- R Director's Report**
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- 1D Type 1 Diabetes**
- H2D Heart Disease & Type 2 Diabetes**
- 3D Three-Dimensional Protein Structure**
- BD Bone Disease**
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COVER IMAGE

In the foyer of SVI sits a rather beautiful, if somewhat dusty, installation of Perspex and wire. It represents the architecture of the first protein structure 'solved' at the Institute – a protein called lysozyme from the egg of an Australian black swan.

In 1978, researcher Neil Isaacs gathered much of the information to reconstruct lysozyme's shape using a low-power X-ray generator and a single camera.

Today, we use the Australian synchrotron and high-powered computing to 'see' a protein's structure, allowing us to design drugs that can interact with specific disease-causing proteins.

It took Isaacs and his team an entire summer to painstakingly reconstruct their discovery by hand.

The results represent, in solid form, something that researchers at SVI are doing every day – forging links to help alleviate the effects of common diseases on Australian families.



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DIRECTOR'S REPORT



Forging collaborative links is more important than ever for our sector, especially in this time of constrained resources.

Collaboration is so central to what we do as scientists that it can almost seem unnecessary to mention, and being such a given, it may not receive the detailed consideration it deserves.

But there are many good reasons why we value collaboration. At SVI we welcome our staff's collaborative skills because willingness to collaborate suggests an openness that is a great cultural advantage. A successful institution is one where people exchange their data and thoughts openly, rather than being guarded, secretive or isolated. This leads to excellent people being attracted to work at SVI.

Collaboration also makes sense because of efficiency – sharing leads to greater access to funding, facilities and ideas, and two heads are better than

one in solving a problem. This is especially the case if those two heads come from different backgrounds and have complementary skills. And it is more likely that successful application of knowledge will occur with a multi-disciplinary team. Collaborative papers attract more attention and are cited more often than studies from just one group. Communication about our collaborative efforts also addresses community concerns about duplication of research effort.

Medical research is often described as extremely competitive and while we are often asked who our competitors are, we think a lot about our collaborators as well. These two might, for better or for worse, work inversely from a geographic point of view. It is easiest to collaborate with people you see every day, nearby. For us, this means researchers and clinicians from St. Vincent's Hospital, nearby universities, and our colleagues at

other independent medical research institutes. The path of least resistance to collaborating nearby is why we need excellent people at SVI and the Hospital. It is less easy to collaborate, though of course not impossible, with people far away, who might be more easily classed as competitors. But while there is little role for traditional business-style competitors in science, drive and hard work – usually parts of competitive instinct – are essential for success and we are all competing for a share of a very limited pool of funding.

The risks that come with collaboration are modest. Science battles the tension between team and individual just as business or sport do. A pointer here is that scientific publications can occasionally have over 1000 authors, but the Nobel Prize can only be awarded to three. The Australian NHMRC system is hopelessly confused between individual and team achievement.



Issues of recognition and attribution are common, but if discussed openly and generously, are manageable. Trust for each other and respect for diverse skills, the ability to compromise and give as well as take, are essential.

As well as wanting our scientists to work together, it is vital that the hospitals, universities and institutes also do so, despite being very different organisations with different scales and measures of success. That there are so many committees and joint ventures trying to achieve this is laudable, but just as when there are many treatments for a disease, this probably indicates that none work particularly well. Joint appointments between neighbouring institutions are likely to promote close collaboration, and SVI and the University of Melbourne have recently entered into such an arrangement. In early 2017, Michael Parker was appointed Director of the Bio21 Institute at the University and will have a

presence in the field of Structural Biology at both Bio21 and SVI. This is an experiment in collaboration and we are grateful to Professor Shitij Kapur, the Dean of Medicine at the University, for helping to facilitate it.

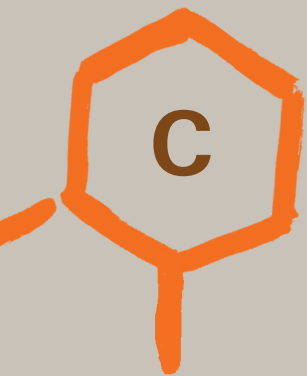
SVI had a successful year in 2016, with a very good outcome in research grants from the NHMRC. There were many outstanding achievements throughout the last year, some of which are highlighted in this Report. We continue to receive outstanding support from the SVI Foundation. Its inaugural Chair, Susan Alberti AC, has very kindly agreed to become Patron of the SVI Foundation, along with John Ralph AC. We are fortunate that Karen Inge has agreed to take over the role of Foundation Chair – these are big shoes to fill.

We would like to acknowledge the Victorian State Government for their Operational Infrastructure Support Scheme. We also thank the SVI Board

for the remarkable work it does and we acknowledge the support and guidance of the St Vincent's Health Australia Board and the Trustees of the Mary Aikenhead Ministries. Special thanks goes to all of our supporters for their help over the last year.

Tom Kay
Director

Brenda Shanahan
Chair, SVI Board



CANCER STEM CELL REGULATION, MOLECULAR GENETICS, GENOME STABILITY UNITS

Christina's story

Tania's daughter Christina was 6 weeks old when she was diagnosed with Fanconi Anemia.

"Christina was our first child and there was no family history of this horrid genetic mutation. Our four-pound baby had multiple life-threatening conditions such as a detached oesophagus and severe hydrocephalus (accumulation of fluid in the brain). Doctors said she would never walk or talk and would perhaps live for 2 years at most.

My husband, Roman and I made a promise to make Christina's life as full as possible. At day 3, doctors successfully completed a 12-hour surgery to reconstruct her oesophagus.

Christina spent most of her first year of life in hospital undergoing or recovering from major surgeries. One of us was always at her bedside. She eventually came home and with extensive therapy she began to walk and talk. She attended a Steiner school in Footscray and later moved to Ascot Vale Special School. At age 6, her bone marrow began dying and she was in desperate need of a transplant. Her brother,

Thomas, turned out to be a perfect match.

The transplant saved her life but did not cure the Fanconi mutation. Her cells continue to die at an alarming rate.

Specialists monitor her body for the development of cancer and so far her health has been good.

We have tried as a family to live as normal a life as possible. We go camping, fishing and take big road trips. Christina graduated Year 12 VCAL and spends her time volunteering at Brotherhood of St Lawrence, attending courses to become job ready. She enjoys listening to music, going to rock concerts and chatting with friends.

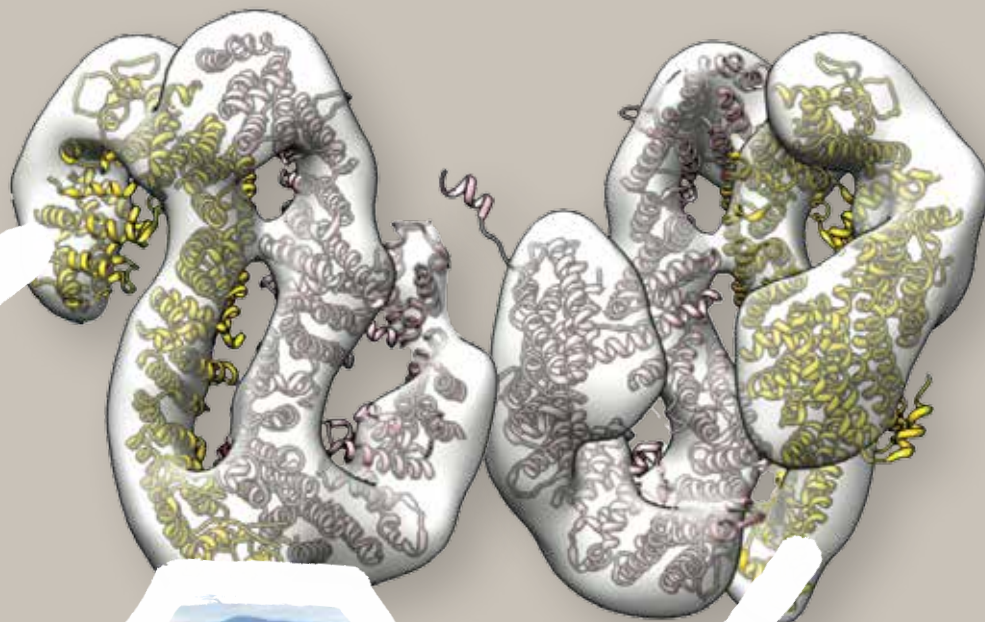
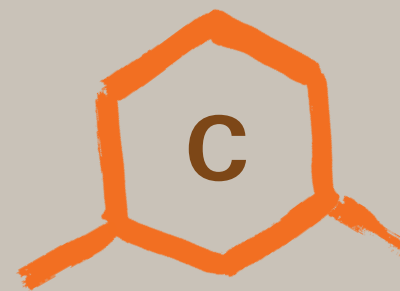
All her Fanconi friends have passed away. At 18, she is now among the oldest Fanconi Anaemia survivors in Australia.

Our hope is for research to find a cure to repair the mutated gene. St Vincent's Institute is leading the way in finding a cure for Fanconi and we are so proud and grateful of the work they do."



CANCER

Cancer is a complex and varied disease, which is why researchers at SVI approach it from different angles. The Stem Cell Regulation Unit researches the role of stem cells; the Molecular Genetics and Genome Stability Units focus on ways to protect our cells from cancer; and the O'Brien Institute Department focuses on complications of cancer survivorship.



THE RESEARCH Links with the Francis Crick Institute, U.K.



SVI's Andrew Deans began collaborating with Alessandro Costa when the two were relatively inexperienced postdocs on opposite sides of the Atlantic – Andrew was based at Cancer Research UK in London and Alessandro at the University of California in the US.

Andrew says that the pair recognised early on that their skills were complementary and their scientific interests remarkably similar. In fact, after their email introduction, they almost immediately started sending reagents and results back and forth – Andrew would ship packets of protein to California on dry ice, and Alessandro would reciprocate with electron microscopy images that pointed to the next experiment for Andrew. However, it was 3 years before they managed to meet face to face, at a conference in Canada.

In 2016, 6 years after their collaboration first started, the two published some significant results on their joint interest – the role of DNA repair in the

cancer predisposition syndrome, Fanconi Anaemia. They were also awarded a Project Grant from the NHMRC to further investigate the defects in proteins that cause the syndrome.

Fanconi Anaemia is a rare genetic disease that leads to blood disorders (such as aplastic anemia and acute myeloid leukemia) at an average age of 7 years old and an increased predisposition to cancer in later life.

The disease is caused by mutations in any one of a number of genes called the FANCD1 genes. These genes encode proteins that work together as a complex to repair the DNA damage that occurs throughout our daily life. When the FANCD1 protein complex is faulty, as in people with Fanconi Anemia, it greatly increases their risk of cancer.

In 2016, Andrew and his team, along with Alessandro's PhD student Paolo Swuec, published an article in the journal *Molecular Cell*, in which they describe a significant achievement – the first reconstitution of the FANCD1 protein complex in the test-tube.

With Alessandro, the team published a second article in the journal *Cell Reports*, giving further details on how the proteins work together.

Andrew says that there is a natural complementarity to their work.

"Alessandro needs to be able to produce a lot of protein to carry out his experiments and we need the insights into the way the protein work together that come from understanding their shape. It was exciting to receive funding from the NHMRC last year, which will allow our work to progress."

The two collaborators are now even further apart than ever – just after Andrew moved back to Australia from the UK, Alessandro moved to the UK to establish his new laboratory.

Luckily, distance has never formed any sort of impediment to their collaboration.



THE TALENT Louise and philanthropy

The year 2008 was a busy one for Louise Purton. With her husband, fellow researcher Carl Walkley and their 4 month old son, she moved back to Melbourne from Harvard, where she had spent 3 successful years researching the role of stem cells in blood disease.

The couple bought a house, established their research laboratories at St Vincent's Institute and spear-headed a successful fundraising drive to raise money for new equipment for their research.

Just 2 years later, Louise took a 12 week break from work to have her second son. This didn't slow her down for long. With Sam safely ensconced in the St Vincent's childcare facility, she jumped headfirst back into the lab, taking breaks in her busy day to breastfeed the baby.

In 2011, she was appointed a Senior Research Fellow of the National Health and Medical Research Council (NHMRC).

As for any couple with two small children, the following years were busy and tiring – coping with disturbed sleep, complications of childcare arrangements and childhood illnesses recycled between two small boys. For Louise, when combined with the relentless pressure to stay on top of the field and publish in world class journals, this led to difficulties in securing funding for her work.

In stepped SVI supporter Colin North. He pledged his financial (and moral) support to Louise and her research over a period of 3 years. The assistance paid off, with Louise awarded a grant of almost \$1million by the NHMRC in the 2016 Project Grant round.

The grant will fund her team's work into identifying new therapies for patients with a range of diseases that affect blood cell production.

Louise says, "At times it felt like climbing a mountain with a heavy pack on my back – but I believe that the

outcome of medical research is worth the sacrifice. The support from Colin during this very difficult time was just amazing, it made such a huge difference to both my research and to my morale. The interest he took in my work was motivating during the most challenging period of my career. I am very honoured to be funded by such a wonderful man."

Colin says, "In the current restricted and prescriptive funding environment for both private and government research grants, situations can arise where the funding discretion provided to the Institute by philanthropic support can make a significant difference. Louise's predicament was one such situation."

In typically understated fashion he adds, "I am pleased to have been of assistance to a great scientist and institute."

**THE SVI
FOUNDATION**
The SVI Support
Group celebrates
27 years of
giving



Since its inception 27 years ago, the SVI Support Group has raised almost \$500,000 to support SVI Student Top-up Scholarships.

At the Group's 2016 Annual Black Tie Dinner, SVI's Scholarship recipients joined a room of generous and enthusiastic supporters.

Top-up Scholarship recipient Jasmina Markulic spoke on the evening to acknowledge the fundraising efforts of the Group, which have supported 31 Honours and 41 PhD students to date.

"I cannot thank the Support Group enough for their contribution and the effect it has on us as students. The Top-Up Scholarships give us the financial security we need to focus on our research projects, bringing us one step closer to finding a cure."

SVI Support Group Chair, Claire O'Callaghan, said, "The Support Group is honoured to

invest in the Institute's young medical researchers, who we know will make great strides in improving the health of our community".

A special announcement was also made at the dinner – SVI's Dr Jess Holien was awarded the inaugural Christine Martin Fellowship.

The Fellowship, funded by 5point Foundation, is named in honour of Christine Martin, the late wife of former SVI Director, Professor Jack Martin.

Christine Martin was a vital member of the SVI family – together, she and Claire O'Callaghan first formed the idea of the SVI Support Group some 27 years ago. There were many fond memories of Christine exchanged on the evening, amongst which was a moving speech by her son, Simon Martin, now one of the Directors of the philanthropic 5point Foundation.

Earlier in the year, the SVI Support Group visited the

Institute to hear from the students that they have supported through SVI Foundation Top-up Scholarships. Recipients of the 2016 Scholarships, Toby Dite, Niloufar Ansari, Jasmina Markulic, Kiryu Yap and Fei Fei Gong presented a layman-friendly version of their projects to the ladies and were peppered with many pertinent questions.

SVI would like to acknowledge all those who have donated to scholarships at the Institute. Special thanks to the SVI Support Group for 27 years of support and to 5point Foundation for their ongoing support.

To support the Top-up Scholarship Program or name 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 Claire O'Callaghan, Chair

- 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 Genny Nunan
- Mrs Geraldine Peck
- Mrs Margaret Reeves
- Mrs Dawn Hill-Regan
- Mrs Judy Ryan
- Mrs Christine Westmore-Peyton
- Mrs Therese Whiting
- Mrs Thecla Xipell



TYPE 1 DIABETES IMMUNOLOGY & DIABETES UNIT

Penny's
Story

Penny Hilsman was 15 when she was diagnosed with type 1 diabetes.

“No one in my family had type 1 diabetes.

It took a while for everyone to get used to it – myself, my parents and my sister Glenda all had to adjust. There wasn't a lot of education about the disease at the time; we were provided a very strict diet sheet to follow and that was about it.

As I got older and my diabetes progressed my condition became quite unstable and I was losing my cognitive function. I lost my driver's license and had to quit my job at St Vincent's Hospital in Melbourne, where I was working as a dietitian.

I found out about the Islet Transplant Program from my endocrinologist, who said it was the only remaining option available to help manage my diabetes.

My father initially said no to my participation, however my mother said yes from the start – she would spend hours at night looking after me and my diabetes had had

a huge impact on her. My sister said when new things come along, it's worth giving them a try.

As I don't have many antibodies against islets, it was easier for them to find the right donor islets for me compared to some others on the waiting list, but it still took about a year. I've now had two islet transplant procedures and have been off insulin for 4 ½ years. I can actually feel my blood sugar drop now, whereas before I could never sense my change in blood sugar levels.

Suddenly my full-time focus has become all about diet and exercise. The transplants haven't been a cure, but there's no question I made the right decision in having them.

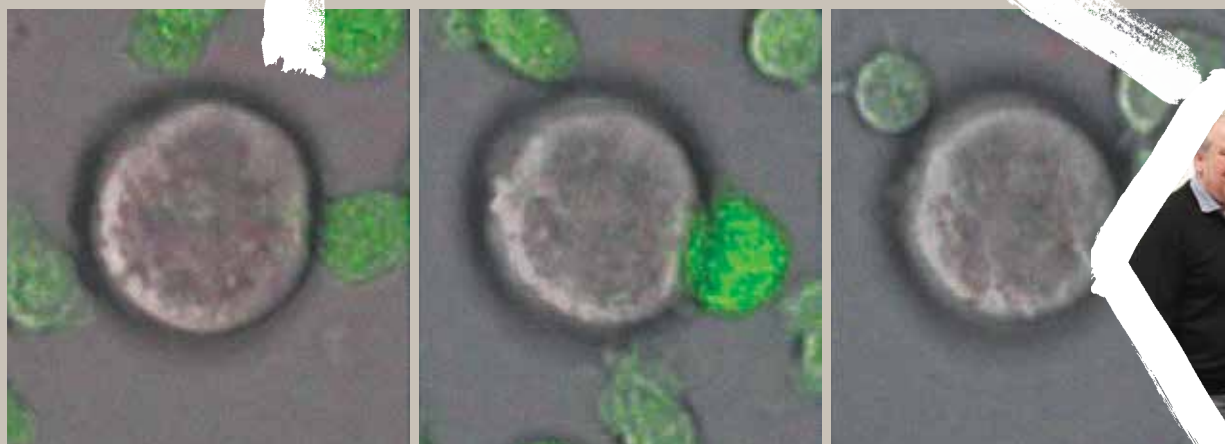
My hopes for the future of type 1 diabetes medical research would be a cure that doesn't involve side effects of medications – that would provide great emotional and financial peace of mind for the patient.”



TYPE 1 DIABETES

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

THE RESEARCH Links with the pharmaceutical industry



As the microscope field comes into focus, you see a corpulent cell, sitting in the middle of a grey background. Seconds pass, and smaller cells start energetically buzzing around the big cell. One makes contact and pauses, glows bright green, as if to convey its delight, and starts vibrating in place.

You can't see as the smaller cell injects a lethal bundle of proteins into its chosen victim. The big cell slowly turns red, indicating that its nucleus has been breached and its death is now inevitable.

Although the process takes place in a culture dish, it mimics the interactions that occur deep within the pancreas of someone who is developing type 1 diabetes. In these people, the smaller cells, aptly called killer T cells, attack and destroy the insulin-producing beta

cells. Consequently, people with the condition must inject insulin in order to regulate the levels of sugar in their blood.

For more than 20 years, SVI's Associate Professor Helen Thomas and Professor Tom Kay have worked together to understand type 1 diabetes and develop new ways to treat the disease. The two, along with their team in the Immunology and Diabetes Unit, have recently been able to reverse type 1 diabetes development in mice that are prone to the disease.

They did this using repurposed drugs, called JAK inhibitors, that are currently being trialled for the treatment of rheumatoid arthritis and alopecia areata – a rare form of spot baldness. These conditions, like type 1 diabetes, are caused by an aberrant immune system attacking and destroying cells of the body that it should normally ignore.

When the researchers administer the JAK inhibitor, called AZD1480, to newly diagnosed diabetic mice, the disease is reversed. Helen says that her group is now actively collaborating with the pharmaceutical industry to progress the work into human trials.


The effectiveness of the treatment can be seen vividly in Helen's cell cultures. When the drug is added to cultures of beta cells and T cells, the smaller cells sniff around the big beta cells, but they don't vibrate in place as they do in cultures without the drug treatment. After a short time, with nothing to pique their interest, they wander off in search of other jobs to do.



1D



THE TALENT Stuart and the Murdoch



In early 2015, a team headed by SVI's Associate Professor Stuart Mannering and his collaborator Professor Ed Stanley, from Murdoch Childrens Research Institute (MCRI), were awarded a \$1.5million Innovation Award from the Type 1 Diabetes Clinical Research Network (T1DCRN).

The funding will enable a multi-disciplinary group of researchers from SVI and MCRI to reconstruct the immune response that cause type 1 diabetes. Type 1 diabetes is an autoimmune disease that develops when the body's immune cells mistakenly destroy the insulin-producing cells contained within the pancreas.

The project derives from studies published in 2015, in which a team led by Stuart and SVI Director Professor Tom Kay pioneered techniques to isolate immune cells from the pancreas of organ donors who had suffered from type 1 diabetes.

This important breakthrough allowed them, for the first time, to analyse immune cells from the 'scene of the crime'.

Stuart and Ed plan to now take on the challenge of re-enacting the crime – that is, recreating in the test-tube the killing of the insulin-producing cells so that the disease-causing response can be dissected.

Stuart says that while the group have caught the 'culprits' – the immune cells – they have not yet been able to interrogate the 'victims' – the insulin-producing cells. This is because it is not possible to store in the long-term the insulin-producing cells derived from an organ donor. And because the events are specific to each person, it is necessary to 'match' immune cells with insulin-producing cells from the same individual in order to properly reproduce disease conditions.

To solve this problem, the collaboration with MCRI will allow the researchers to 'grow' insulin-producing cells from the stored blood of the original organ donor. These cells will be the 'victims' in the re-enactment, allowing the group to study the process of cell killing in type 1 diabetes in a powerful new way.

Stuart says, "Ultimately this work will reveal, for the first time, how and why the immune system kills the insulin-producing cells in people who develop type 1 diabetes. This will allow us to develop ways to measure this 'bad' immune response in healthy people who may be developing type 1 diabetes. Then, once we can see the crime unfolding, we hope to be able to step in and stop it before it is too late."

THE SVI FOUNDATION

SVI backstage



Tour SVI to hear about our most recent breakthroughs, learn about the impact of Australian medical research and discover how SVI researchers are working to improve the health of Australians.

Throughout the year we host students, politicians, disease charities and many members of the community, keen to learn about research at the Institute.

During the year, Nick Riewoldt visited the Institute with members of his family and representatives of their charity Maddie Riewoldt's Vision, to announce Dr Wayne Crismani as the inaugural Maddie's Vision Fellow.

Our researchers also pulled back the curtain on medical research for students who visited from Genazzano College, Scotch College and FCJ College Benalla.

Former SVI Director Professor Jack Martin, whose sister attended FCJ College Benalla, introduced their students to SVI's research.

Teacher Annabelle McBride said, "The visit to the St Vincent's Institute is always a highlight for our Year 11 FCJ College Biology students. It provides them with an amazing opportunity to see a medical research laboratory in action and sparks curiosity and interest in the number of careers and opportunities they can explore in Biology."

Year 11 student Jazzy Burke really enjoyed the day. "Touring SVI was an incredibly motivating experience for me. Of particular interest was an explanation of the effect of UV, smoking and radiation on DNA and how cancer is formed. This session sparked curiosity, and left me wondering if one day I could research this, and how to prevent, treat, or cure related diseases. Listening and watching how the Institute researched disease, as well as the opportunity to ask questions, revealed a new branch of careers I had not previously considered, and opened my eyes to the world of research and its limitless nature."

Other tours throughout the

year included employees from GS1 Australia, one of SVI's corporate sponsors, and students from Australian Catholic University. Guests donned 3D glasses to hear about drug discovery, examined the structure of DNA and heard about its role in cancer, and peered down the microscope to see pancreatic islets in culture.

Tours take about one hour and can be tailored to suit your interest.

If you would like to take part in a tour of SVI, contact the SVI Foundation on (03) 9231 2480 or email us at foundation@svi.edu.au



HEART DISEASE & TYPE 2 DIABETES PROTEIN CHEMISTRY & METABOLISM, MOLECULAR CARDIOLOGY UNITS

Jeremy Curtis was 50 years old when he was diagnosed with type 2 diabetes.

Jeremy's Story

"At my annual check-up with my GP, my blood sugar readings were high. There was no family history of type 2 diabetes in the family, so when I was diagnosed my family was surprised and concerned.

A diagnosis of diabetes was the furthest thing from my mind, in terms of what I might expect, particularly as it had not surfaced anywhere in my immediate family. In hindsight, symptoms that may have indicated an issue included more frequent trips to the bathroom through the night and night sweats.

Managing my type 2 diabetes is now just part of my lifestyle and doesn't overly restrict my daily routines and activities. I have found that three training sessions with a personal trainer each week has been beneficial in helping me keep my weight down and my head clear.

My knowledge of food and nutrition has increased exponentially, to the point where I have a very clear understanding of which food

can spike the blood sugar levels. I continue to test blood sugar levels twice a day which, even though it can be painful, does constantly maintain a subconscious check of what goes in the mouth.

I hope that I was diagnosed early enough to have prevented any major resultant complications. However, I understand the disease is progressive so I will always have to be mindful of the condition.

Due to the substantial number of people afflicted with diabetes, it represents a major cost to the health system because of complications that can occur. These include heart attacks and strokes, blindness, kidney failure, amputation and mental health issues such as depression, anxiety and stress.

In terms of my hopes for future medical research, simpler blood sugar testing techniques, and eventually drugs that reverse the diabetic condition, would be on my wish list."



TYPE 2 DIABETES & HEART DISEASE
Researchers in SVI's Protein Chemistry & Metabolism and Molecular Cardiology Units are working to develop therapies to benefit the many Australians who live with heart disease and type 2 diabetes.

THE RESEARCH Links with other disciplines

For many years, the existence of the enzyme AMP-activated protein kinase (AMPK) was divined only through its action upon other proteins. AMPK was named in 1988 and was first sequenced by SVI's Bruce Kemp in 1994.

With the advent of the first three-dimensional structures of AMPK, researchers began to understand the full complexity of the enzyme.

AMPK plays an essential role in regulating the cell's use of energy. It does this by sensing the cellular levels of a molecule called AMP. As energy is consumed, the levels of AMP build up in the cell and bind to three specific sites in the AMPK protein.

Bruce likens AMP to a key starting a car engine. AMP turns AMPK on, which

has the effect of slowing down the cell's energy use to conserve it for essential processes.

In keeping with this important role, AMPK has been implicated in a myriad of diseases, from type 2 diabetes and obesity, to cancer, sleep apnoea and depression.

In 2015, Bruce employed structural biologist Dr Chris Langendorf to look in detail at the structure of AMPK.

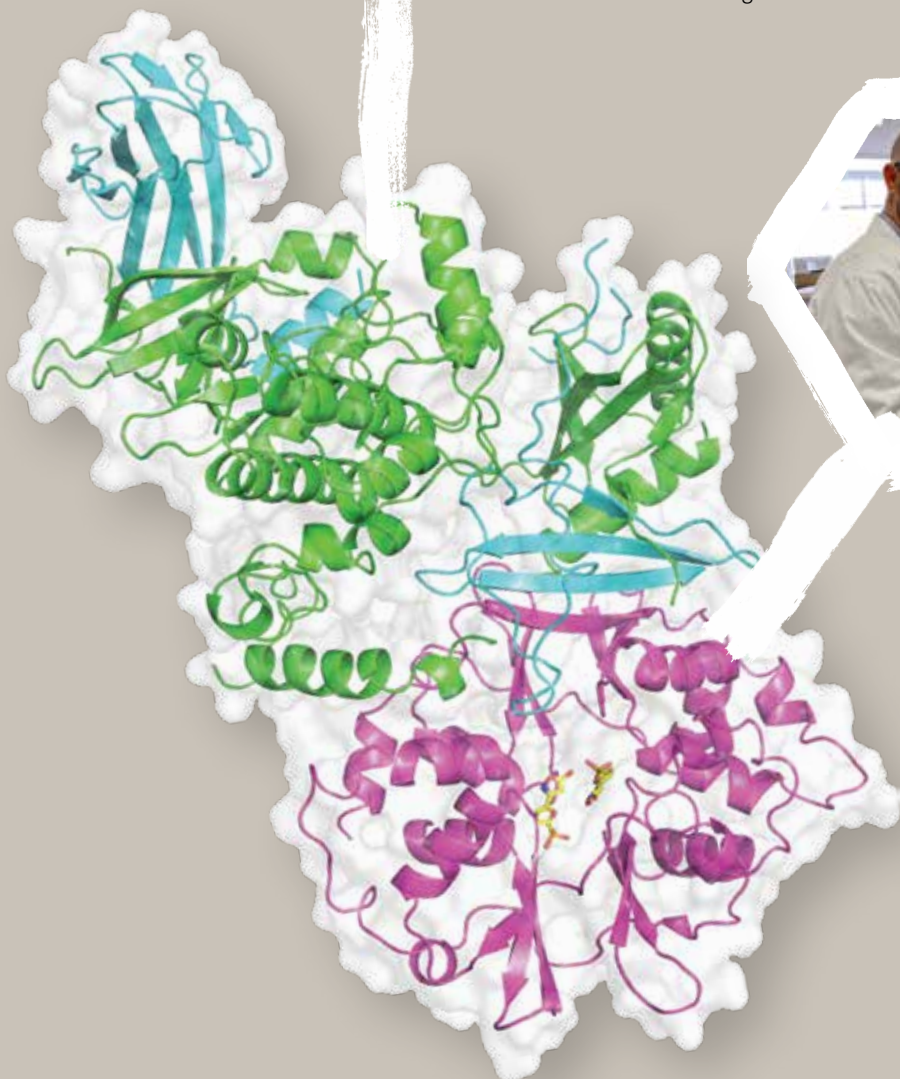
Chris explains that the holy grail for researchers and the pharmaceutical industry is the development of drugs to either activate or inhibit AMPK in a cell-specific manner. For example, targeting AMPK in cancer cells would reduce their ability to access the energy required to grow, without affecting other cells; while targeting AMPK in specific cells in the brain could reduce appetite and become an effective treatment for obesity.

Decades of effort from researchers and millions of dollars of investment from pharmaceutical companies have led to the development of chemical activators of AMPK. By understanding how these chemicals interact with AMPK, Bruce and Chris hope to be able to improve their properties for use in human trials.

In an article published in 2016 in the journal, *Nature Communications*, Chris determined the structure of one of the AMPK activators, called C2, which he had 'docked' into the AMPK protein. He was surprised to see two C2 molecules bound to AMPK at a location that was distinct from the sites where AMP is known to bind.

Using the analogy of AMP as the key that starts the AMPK engine, Chris likens the effect of C2 as hotwiring the engine, "Because C2 allows us to bypass the need for the AMP 'key', it shows us a new site that can be exploited to activate the protein."

The researchers hope to use this unexplored site to design new drugs with the potential to influence the outcome of diseases in which AMPK plays a role.





THE TALENT Jock and the community

have fewer small blood vessels in their heart muscle than people who had cardiac surgery for equivalent coronary disease, but hadn't had a heart attack.

"This suggests that people with fewer blood vessels may be more susceptible to having a heart attack, possibly because they have less pathways that the blood can use to detour around a blockage," says Jock.

Jock is validating these findings using heart tissue sourced from the Victorian Institute of Forensic Medicine.

Jock says that a third of people who have heart attacks die before they get to hospital. He is comparing the number of small vessels in the hearts of people who died in this way with people who had equivalent coronary disease, but who died suddenly of other causes.

By comparing these samples, Jock hopes to determine whether people with fewer blood vessels may be more susceptible to heart attack. In addition to providing a new factor to consider when assessing people of their risk of heart attack, it could also indicate a direction for the development of new therapies.

Jock says, "Without the willingness of the community to be involved – in this case, patients agreeing to provide the initial biopsies when they underwent heart surgery – it wouldn't have been possible for me to do this research."

Jock says that there is a mountain of analysis still to be done on the samples that he has collected. And despite the fact that this work is far from the kitchen experiments that Jock performed with his grandmother, the family tradition continues.

As a small boy, Jock Campbell remembers sitting in the kitchen as his grandmother unwrapped a skinned rabbit wrapped in brown paper that had been delivered by the butcher.

After gutting the rabbit, his grandmother would take out its heart and lungs. She would then insert a straw into the trachea, inflate the lungs and show her small grandson how they floated in a bowl of water.

Jock's grandmother was one of only six women to graduate from Melbourne Medical School in 1911. She had six children, three of whom became doctors and two, nurses.

It's no wonder that Jock followed in her footsteps.

Jock says that his grandmother's early experiments opened his eyes to the mechanical nature of the heart and

lungs. Inspired by this early exposure, he went on to complete a medical degree and a PhD.

After returning to Melbourne after postdoctoral studies in France and the US, Jock spent much of his early career interested in the factors in the bloodstream that can influence the cardiovascular system. However, more recently, he has been researching how the architecture of the blood vessels in an individual's heart might influence the risk of dying from a cardiac event.

Jock's current work derives from his detailed analyses of biopsies from people who agreed to provide a bit of extra heart tissue for research when they had cardiac surgery.

Thanks to these generous people, Jock published research showing that people who had had heart attacks and subsequent cardiac surgery tended to

THE SVI FOUNDATION SVI's events



We hold a range of events throughout the year to share our breakthroughs, thank our supporters and to raise additional funds for our research. Thanks to everyone who supported SVI during the last year.

In May last year, guests at SVI's 2016 Forum were treated to an informative lecture from Professor Sir Philip Cohen, the architect of Europe's largest collaboration between academia and the pharmaceutical industry.

Professor Cohen has studied protein phosphorylation as a cellular control mechanism for more than 45 years. During his career, he has discovered enzymes which

have been subsequently used to develop improved drugs for the treatment of cancer and arthritis.

In November, with our sponsor Treasury Wines, we held our annual Penfolds Collection Masterclass. Guests heard about some of our current medical research projects while participating in wine tasting. Reports indicate both the wine and the presentations went down very well!

In early 2017, dietician Karen Inge, our new SVI Foundation Board Chair, facilitated our annual Food Matters Event: Getting to the gut of it. The night was a sold-out success.

After a tour of the Institute,

Professor Michael Kamm, a leading gastroenterologist from St Vincent's Hospital Melbourne spoke about 'Our Gut Ecology – The Cause and Cure of Gut Disorders'. In his talk, he touched on the emergence of faecal transplants as a treatment for gastrointestinal conditions. Professor Joe Proietto, endocrinologist and expert on the management of obesity asked the question, 'Can Gut Bacteria explain Obesity?' His talk focused on the role which factors such as gut bacteria, the built environment and genetics play in obesity.

Thanks to the participants, hosts and sponsors of SVI's events in the past year.

If you would like to be kept informed of our upcoming events, please contact the SVI Foundation on (03) 9231 2480, or email us at foundation@svi.edu.au

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3D

THREE-DIMENSIONAL PROTEIN STRUCTURE STRUCTURAL BIOLOGY UNIT

Ronald's Story

Levy's husband, Ronald, was diagnosed with Alzheimer's disease when he was 85.

"I first noticed symptoms of Ronald's memory loss when we moved from our home into a retirement village.

Ronald used to go for a walk outside the village, and once he took a long time to get home. When he finally did, he said he had been lost.

I gave it my best shot and helped him as best as I could, but it got to the point where I decided to take him to a geriatrician, who diagnosed him with Alzheimer's.

His symptoms continued to get more serious. His bedroom had the bathroom next to it, but he couldn't find it. He couldn't find the cutlery in the kitchen. He couldn't remember much and he kept asking the same questions. It was getting really bad.

It took me a while to make the decision to move him to respite care. He was there for 2 months but didn't have his own room. He needed help with showering, bathing, toileting and shaving. I got sick as well, so it was then that I moved him

into a nursing home. Since he's been there his memory has gotten even worse. For example, he recognised his sister and niece when they came to visit, but didn't know their names.

His older sister is almost 93, and her mind is as good as any. Our daughter Blessing and her husband would say that sadly, Alzheimer's can be part of the ageing process for some people. These days people know that this kind of thing comes and they just accept it and do what they can to help the person.

Sometimes Ronald copes very well, and sometimes he doesn't. He says things like, "Am I coming home with you? Are you going to sleep here? Will I be here until I die?"

It is a very frustrating and debilitating disease; we hope that medical research will determine how to prevent it, and that more research can be done to determine the cause. Medical researchers need more funding though if they are ever going to do so."

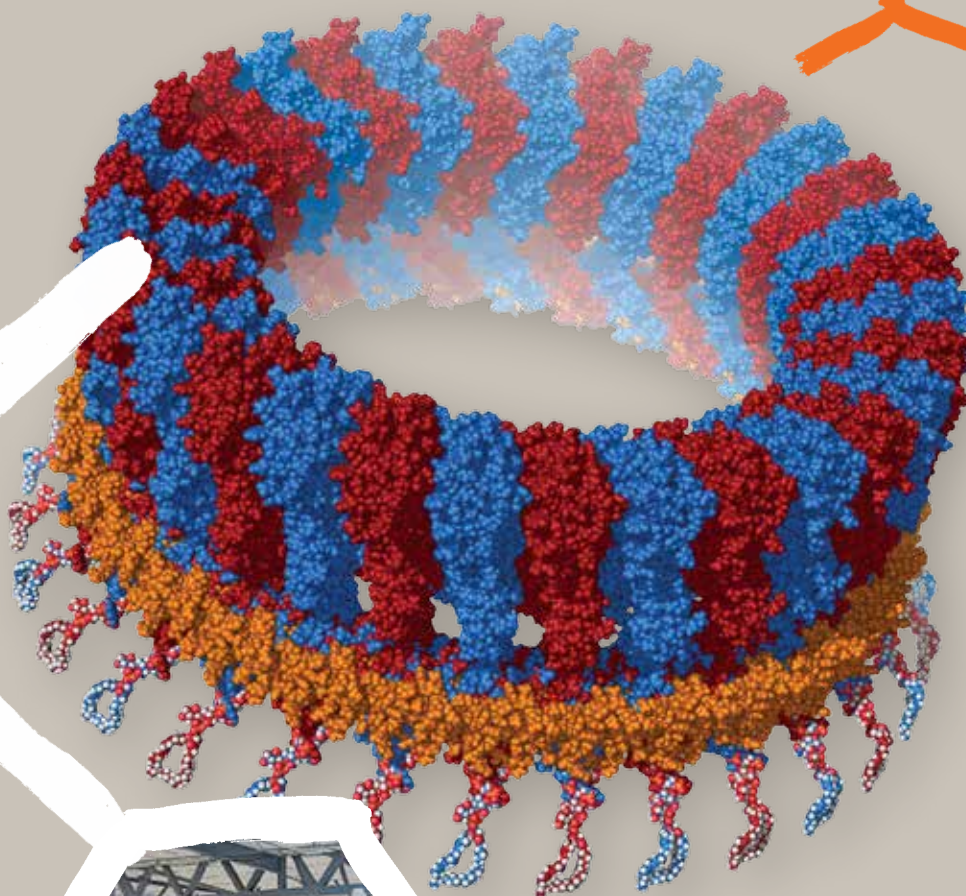


STRUCTURAL BIOLOGY

Understanding a protein's three-dimensional 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.

3D

THE RESEARCH Links with other institutions



In 2016, researchers in SVI's Structural Biology Unit published an article in the journal *Structure*, that showed how the bacteria *Gardnerella vaginalis* targets cells and causes infection. The work was done in collaboration with scientists at the Bio21 Institute, the Victorian Life Sciences Computation Initiative of the University of Melbourne, the New York School of Medicine and the University of Oklahoma in the USA.

Gardnerella vaginalis is the bacteria primarily responsible for bacterial vaginosis (BV), the most common vaginal infection worldwide. About 21 million women under the age of 49 suffer from an outbreak of BV at least once a year. One of the bacteria's tools for establishing infection is a protein toxin, vaginolysin.

Using advanced X-ray techniques at the Australian Synchrotron, the

researchers tracked the journey from toxin to infection.

"We found that the toxin vaginolysin – which unlike many other common toxins only targets human tissues – is attracted to cells that have the receptor protein CD59 on their surface. The normal role of CD59 is to 'turn down' the body's immune system so that it doesn't attack cells that don't pose a threat. Vaginolysin has hijacked this activity, allowing the bacteria to use this protective mechanism to single out human cells," says SVI's Dr Craig Morton.

"Once vaginolysin starts aggregating on CD59, it forms rings and punches holes in the cell membrane. This allows the cell's essential nutrients to leak out. The bacteria then feed off the nutrients, and infect the epithelial layers, causing bacterial vaginosis."

Professor Michael Parker says, "We consider this to be a significant discovery, because it provides us with not one, but three areas of potential research that could have far-reaching impact in human health. For example, identifying how the toxin works may lead to the development of a vaccine to prevent the infection."

"This research also has the potential to help us develop therapeutic approaches to 'control' how the toxin works, and cause the *Gardnerella* bacteria to become less virulent. By blocking the toxin the bacteria would still be there, but unable to cause significant disease."

"Another exciting way we can use this knowledge is to attempt to 'engineer' this toxin, so that it becomes specific for markers other than CD59 such as those found on tumours, and could potentially be used to destroy the cancer cells."

3D

THE TALENT Michael and The University of Melbourne



In early 2017, SVI's Professor Michael Parker was appointed as the new Director of the University of Melbourne's Bio21 Molecular Science and Biotechnology Institute.

The joint appointment sees Michael, one of Australia's leading structural biologists, become Director of Bio21 in addition to his appointment as Head of SVI's Structural Biology Unit.

For more than 30 years, the focus of Michael's work has been discovering and defining the 3D shape of proteins that are involved in disease processes.

"For the first part of my career, I was very interested in the details of the structure of proteins and using this knowledge to understand how proteins

work. In the last 10 years, I have focused on developing drugs based on our structures with the hope that we can get these molecules into human trials and out into the clinic."

"My lab has been based at SVI for more than 25 years and in that time, one of the most important aspects of my work has been collaboration. We are working increasingly with national and international collaborators, both academic and in the pharmaceutical industry, to make an impact. I see this joint appointment as a way of deepening the contact between SVI and the University and helping those interactions flourish."

In making the announcement, Dean of the Faculty of Science Professor Karen

Day said the joint arrangement would help facilitate further scholarly activities between the two organisations in the field of structural biology.

"Michael is exceptionally well placed to take on this role and further promote the vibrant, multidisciplinary research culture and industry partnership with CSL that has been established in the Bio21 precinct."

Professor Tom Kay, SVI Director, said, "This significant University appointment indicates Michael's prominent scientific reputation and standing. We look forward to continuing our close relationship with Michael and to the opportunities that will arise from his group spanning SVI and the University."



THE SVI FOUNDATION A night at Raheen



Jeanne Pratt AC hosted a dinner for 96 guests at her historic mansion Raheen on August the 4th, 2016. More than \$100,000 was raised on the night to support Professor Michael Parker's Alzheimer's research at SVI. Below is an excerpt from Michael's speech.

"In 1906, Dr Alois Alzheimer gave a lecture in which he described for the first time a form of dementia that subsequently became known as Alzheimer's disease. In the 110 years that have passed since that lecture, medicine has advanced in great strides, but there is still no effective treatment for Alzheimer's.

My team has been working for over 15 years to find new treatments for

Alzheimer's. There have been many recent advances in understanding the disease. We know that it is linked to accumulation of toxic plaques and tangles in the brain, which are made up of proteins called amyloid-beta and tau. These protein clusters are believed to cause the loss of brain cells that results in cognitive decline.

Imagine the brain is a city, and like any city, it needs garbage collectors to keep the streets free of garbage. Similarly, the brain has cells that are charged with removing protein clusters that would otherwise build up. If we could enhance this process in the brain of people with Alzheimer's, we may be able to help prevent the disease from occurring. However, there is some evidence that there are

proteins in the cell that act like a handbrake and stop the garbage – the toxic protein clusters – from being cleared.

My team is designing drugs to fit into the nooks and crannies of these 'handbrakes' in order to stop them from working. This will essentially improve the efficiency of garbage disposal in the brain, and hopefully impact on the outcome of the disease.

Currently, one in ten Australians over 65 live with dementia, of which Alzheimer's is the most common form. The World Health Organization predicts that the number of people with Alzheimer's will almost double over the next 20 years.

However, despite the huge burden of dementia, throughout the developed world far less money is spent

on researching a cure for Alzheimer's than on cancer. Without a medical breakthrough, the cost of dementia is set to outstrip that of any other health condition.

And this is why philanthropy is so important. It helps us to respond nimbly to new knowledge, keeping us at the cutting edge of research; it helps fund equipment that is necessary for us to do our experiments; and it helps us to recruit the most talented researchers."

Our thanks to Jeanne Pratt AC for her generosity and to Susan Alberti AC for facilitating the evening.

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



BD

**BONE DISEASE
BONE CELL BIOLOGY & DISEASE UNIT**

Helen's story

Helen was 71 when she was diagnosed with osteoporosis.

"It was December 2015; I had suddenly developed severe pain in my back.

I went to my GP who sent me off for an x-ray after which two spinal crush fractures were revealed, with a possibility of osteoporosis.

Twice I asked for information on how to help myself get better and for education on the condition but my doctor more or less brushed me off, saying, 'Go home and get better!' I had to ask for referrals to an endocrinologist and for a DEXA scan.

I decided to change to a new GP and by this time, February 2016, I had new, very raw pain. Another x-ray revealed four more crush fractures. Later in 2016 I developed shocking pain, particularly in my shoulder joints, and following blood tests, polymyalgia rheumatica, then giant cell arteritis, were diagnosed.

I was prescribed a medication that unfortunately exacerbated the osteoporosis, as in December two more fractures were revealed.

I knew I was genetically predisposed to osteoporosis as my mother had this

disease, so I had been having precautionary DEXA scans for many years.

Family and friends really don't understand the nature and chronicity of this disease – you look all right and don't seem sick. The psychological aspects of osteoporosis can be distressing.

Despite that, I see my daughter and grandchildren as often as possible and I get on with life; for example, I play a musical instrument, am learning a new language, belong to three committees, do some limited gardening and catch up with friends.

I have come to terms with osteoporosis as a chronic condition and I am supported and managed magnificently by my three doctors – my GP, endocrinologist and rheumatologist. Years ago I chose not to take preventative medication as I was afraid of developing 'osteonecrosis', a disease caused by reduced blood flow to bones in the joints. Though I'm now on medication, it still scares me!

My hope for medical research would be for a medication that can prevent or halt the disease without creating severe side effects."



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.



THE RESEARCH Links with the Australian Synchrotron

In 2016, Associate Professor Natalie Sims and her then-PhD student Christina Vrahnas used the Australian Synchrotron to peer deep into the underlying structure of bone.

In an article subsequently published in the journal *Bone*, the researchers showed that bone made in people taking hormone treatment for advanced osteoporosis is likely to be stronger and more durable than previously thought. This research offers new insights into

skeletal diseases and ways of predicting who may be at risk of fractures and breaks.

The study used infrared synchrotron light to monitor tiny sections of newly-formed bone at different times, in conditions mimicking human bone influenced by treatments for osteoporosis, parathyroid hormone treatment (PTH) or teriparatide.

Natalie says that PTH is one of very few recommended second-line treatments for people with serious bone diseases, including osteoporosis.

“PTH stimulates the production of new bone when bone fragility persists after first-line treatments fail, but previous studies suggested this replacement bone was not as strong as existing bone. It was thought that this might cause ongoing fractures if patients were treated with this therapy.”

She says that their analysis has shown that replacement bone has exactly the composition and structure that it should, and that the technique opens the door to previously impossible bone examination, which could shed new light on other skeletal diseases, including osteogenesis imperfecta and osteomalacia.

Natalie says that the Australian Synchrotron, landmark research infrastructure of the Australian Nuclear Science and Technology Organisation (ANSTO), gave the research team new appreciation of how bones regrow, with unprecedented detail and accuracy.

“When bone forms, collagen is laid down in a matrix, in which calcium builds over time in a process called mineralisation – it is crucial that we can probe deep into the bone matrix because on the surface, just like wood, both weak and strong bone can look exactly the same.”

“Moreover, the ability to analyse tiny bone sections only 15 microns across – about half the thickness of human hair – meant we could go deeper and deeper into older and older bone in tiny increments, to identify structural differences: clues as to which bone was truly strong and which was truly weak.”





BD

THE TALENT Yao and SVI



Yao Sun says that her mother felt nervous about sending off her only daughter from Changchun Airport in China's north-east. It wasn't just because Yao had never travelled overseas before – she was leaving for a 3-year stint in Melbourne to complete her PhD.

“I had always lived at home with my parents – I did primary school, high school, my University and Masters studies in Changchun. My parents and I had never lived apart. They were really worried about how far away Australia is and were concerned about how I would cope on my own.”

But the idea didn't intimidate Yao. After completing her Masters and

gaining experience working in a hospital lab at Jilin University, her supervisor had encouraged her to apply for PhD positions overseas.

“He had studied in France and told me that it was a fantastic experience. So I was very excited to get the position in Melbourne because I knew that it was an amazing opportunity. I almost couldn't believe it – in fact, when I got the first email offer, I thought it might be a scam!”

She was eventually offered three postings – in Hong Kong, Germany and Melbourne – and carefully examined the University rankings in order to decide on the best place to get her training. She eventually ended up at SVI, working in SVI's Bone Cell Biology and Disease Unit,

supervised by Associate Professor Natalie Sims and Emeritus Professor Jack Martin.

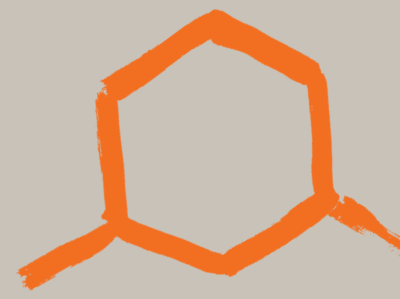
Yao says, “I am looking at the role of a protein called parathyroid hormone-related protein (PTHrP) in breast cancer. We are trying to establish what role the protein plays in helping breast cancer cells grow in bone.”

Her supervisor, Natalie, says that it's great to have a mixture of local students and international students working together in the lab.

“Yao was one of the top ranked students in her University class – it's easy to see why. When you get a student as keen and intelligent as Yao, it can make a real difference to the productivity of the lab,” Natalie says.

“I think it's very important for Australia to continue to train people from overseas. We have a fantastic reputation in medical research: many senior researchers around the world are justified in being proud of their Australian research training, whether they were born here, or came here as an international student. High quality research training is one of our best exports.”

Yao's parents also now feel confident that their daughter is in the right place. They even plan to make their first trip to Australia this year to visit her.



THE SVI FOUNDATION
The 2016 Charity
Golf Day



The 2016 Charity Golf Day was one of our most successful ever, raising more than \$95,000 for SVI. This brings the fundraising total for this annual event to almost \$800,000.

Melbourne's unpredictable weather cooperated and produced a beautiful, sunny day for all participants.

Thanks to Macquarie Leasing, our Platinum Sponsor, and Andrew Sidery for his ongoing enthusiasm and generous support of the day.

We would also like to acknowledge our three silver sponsors – Maxxia, AGL and Bertocchi Smallgoods – and 10 bronze sponsors.

The weather seemed to bode well for the golfers out on

the course; congratulations to the AGL team, who won the Jack Holt Trophy for finishing first on the day with a score of 52.125. The Bertocchi Smallgoods team wasn't far behind, with a score of 52.625.

Congratulations also to the winners of the longest drive on the 15th hole: Dexter Prack (mens) and Margaret Batrouney (ladies), and to the successful bidders of the verbal and silent auctions.

At the Golf Day dinner, SVI Director Tom Kay said, "Government funding does not cover the full cost of research, so we rely on support from individual and organisational donors to ensure we can continue to make life-changing discoveries. Thanks again to everyone for their

support; we look forward to seeing you all next year for another fantastic day."

Thanks to our corporate sponsors, participants and the organisations and individuals who donated items for our door prize, raffle and auctions.

Our special thanks go to our loyal SVI Golf Day Committee for their ongoing support – Michael Kay (Chair), Mark Kerr (Deputy Chair), Jeni Coutts, Barry Holbrook, Geoff Kruyt and Sunny Soon.

If you would like to sponsor or participate in our 2017 Charity Golf Day, please contact the SVI Foundation on (03) 9231 2480, or email us at foundation@svi.edu.au



REGENERATIVE MEDICINE O'BRIEN INSTITUTE DEPARTMENT

Carmel is affected by lymphoedema of her left arm – a consequence of breast cancer treatment.

"I was diagnosed with breast cancer in 1989. A biopsy revealed that the cancer cells had spread to three of the lymph nodes under my left arm, so I had a mastectomy and removal of the nodes.

The cancer diagnosis was, to me, quite shocking as none of my family had ever had any form of cancer. Why I thought this I don't know, especially as I worked in a Pathology lab, as the trainer of all our blood collectors and saw cancer patients daily. I was working full time and was also a local government councillor, so I just had to get on with it!

I had time off work for the chemo, some of which I had in Mildura and some in Melbourne. I also had 5 weeks of radiation treatment.

Five years later, having had an all clear, I had a breast reconstruction. Everything was fine until I travelled to Europe later that year. I didn't use an arm compression garment and by the time I got back home, my upper arm was quite swollen. I just accepted it at the time and didn't seek any treatment.

In 2015 I had a left shoulder replacement and after that my arm got worse – to the point that the whole limb was affected.

I was eventually

diagnosed with lymphoedema by a physiotherapist in 2015. The condition is caused by damage to the lymphatic system that stops it from being able to effectively drain fluid from the affected area.

My arm now almost always feels very heavy and uncomfortable and I have numbness and tingling in my fingers, which is especially bad when I wake up.

The treatment to date has been lymphatic drainage and use of a compression garment. I have monthly laser therapy and manual drainage by a lymphoedema therapist.

Apart from the discomfort, my arm is quite unsightly. Its size means that I have to buy clothing a size larger than I actually need, and I almost always wear stretch fabrics to accommodate it.

I was aware that lymphoedema could be a consequence of cancer treatment, but there was very little information available at that time on breast cancer and further complications.

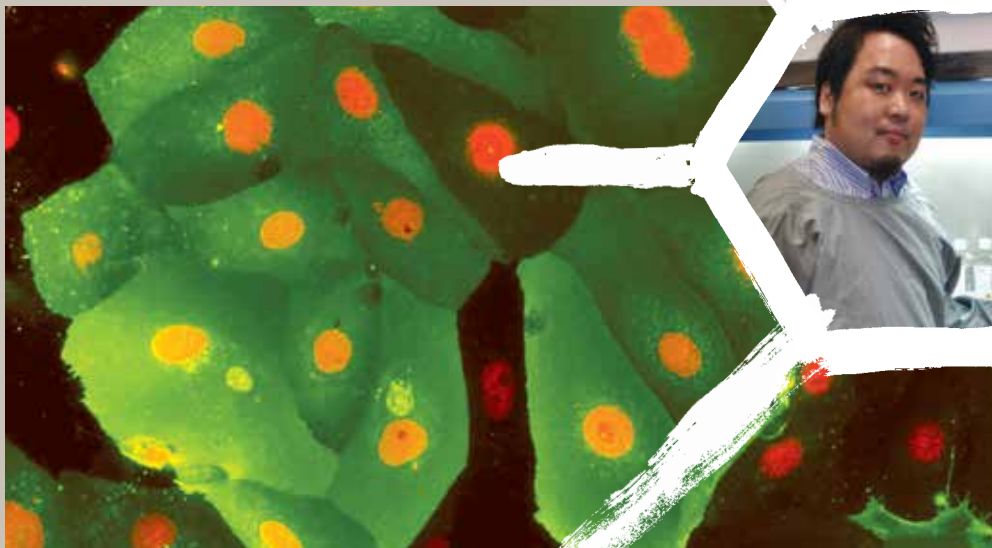
I would very much like to see more research on lymphoedema, as the present treatment seems to be very primitive. Lymphoedema is a constant uncomfortable companion."

Carmel's story



REGENERATIVE MEDICINE

Researchers in the O'Brien Institute Department are harnessing the power of regenerative medicine to fight cancer, diseases of cancer survivorship, liver and heart disease. They are using their close clinical connections to develop new treatments for these intractable conditions.



THE RESEARCH Links with St Vincent's Hospital

The 1982 classic film 'Blade Runner', set in Los Angeles in 2019, brought to life a world in which artificial humans could be engineered entirely in a lab.

While the real world hasn't quite caught up with Ridley Scott's imagination, researchers in SVI's O'Brien Institute Department are working to develop lab-grown liver 'organoids' to help those affected by liver disease.

In 2016, Associate Professor Geraldine Mitchell and her long-time colleague Professor Wayne Morrison were awarded an NHMRC Project Grant to fund the development of what they call a 'liver in a dish.' The ultimate aim of their work is to grow an 'organoid' derived from a patient's own cells, to be used as a source of tissue for liver transplantation.

Geraldine says that liver disease is more common than is generally recognised in Australia. It is associated with common conditions such as obesity, diabetes, viral hepatitis, excessive alcohol intake and cancer.

"The only current treatment for advanced liver disease is transplantation and because there are not enough organs to meet demand, many patients die before they can get a transplant," says Geraldine.

Geraldine's research involves a multi-disciplinary team, including researchers and surgeons, whose focus is on using human cells to 'grow' a liver that could be up-scaled in the future to be used for transplantation, or as a platform on which to test drugs to treat the disease.

Geraldine explains that without the involvement of surgeons at St Vincent's Hospital, and in particular, her PhD student, Surgical Fellow, Dr Kiryu Yap, the project would not be viable.

"Kiryu is often called, both in and out of hours, to collect liver tissue from patients having surgery who have agreed to us using very small segments of their liver for our experiments. For this project, access to human cells is paramount."

Kiryu says that one of the major hurdles is the need for cells in the organoid to get enough oxygen. The team are approaching this problem by engineering a vascular system for the tissue, derived from human support cells that can form blood vessels and secrete growth factors to help liver development. Other components include a porous scaffold that provides a physical support upon which the cells can grow and a special gel, which provides other factors that promote the cells' survival.

Ultimately, the team intend to use stem cells from a person with liver disease to grow liver tissue for transplantation. Geraldine says that this is the most clinically feasible method to generate the millions of liver cells that would be required for personalised organoid generation.

Even though the promise of genetically identical replacement body parts remains the stuff of science fiction, the way is being paved by Geraldine and her team.



RM

THE TALENT Tara and clinical expertise

For the first time, in 2016 the number of Australians living with cancer or having survived a cancer diagnosis exceeded 1 million.

It is this group of people who motivate biochemist, Dr Tara Karnezis.

Tara explains that after completing her postdoctoral studies at Stanford in the US, she spent 10 years working on cancer metastasis – trying to unravel the molecular mechanisms behind the spread of cancer cells. She also knows the impact of the disease at its worst – her father died from cancer at the age of 57.

But it is the people affected by a disease of cancer survivorship who inspire her current work.

Tara explains that her research is focused on lymphoedema – a condition caused by cancer-related treatments such as radiation and surgery, which are designed to stop cancer cells from spreading. Unfortunately, for some people these therapies can result in damage to

the lymphatic system, causing swelling of the adjacent limb. Tara says that the condition affects about 20% of people diagnosed and treated for breast cancer.

She credits her clinician-colleagues, Dr Ramin Shayan and Professor Wayne Morrison, with her understanding of the effects of the condition.

“Thanks to medical advances, if you catch breast cancer early enough, most women will survive. However, through my collaboration with clinicians, particularly with Ramin, I have now met many women with lymphoedema. Some of these women have arms that weigh many kilos more than their unaffected limb.”

Tara says that lymphoedema can have a huge impact on life post-cancer.

“These people have a constant reminder of what they went through and it can really affect their ability to enjoy their lives. Our research is aimed at getting these people to a point where

they are rid of the problem and they can do what they really want to do – go back to work, be present in their marriage and for their families.”

Tara explains that her motivated group of researchers, based in SVI’s O’Brien Institute Department, is focused on two main areas of research.

“The first area involves trying to understand the molecular changes which occur to the lymphatics during radiation therapy and which underlie the problem. The other area is looking at the use of stem cell therapy to reverse the changes that occur after radiotherapy.”

Tara says that more than 65% of people diagnosed with cancer today will survive for at least 5 years and some will go into complete remission.

“These statistics are only going to improve, so we really have to think now about what we can do to make sure that the quality of life of these people is as good as it can be.”



THE SVI FOUNDATION
The 2016
Women in
Research Award



The Women in Research Award supports an outstanding female researcher at SVI balancing career and motherhood.

SVI's Dr Urmi Dhagat was awarded the 'Susan Alberti Women in Research Award' at the fourth annual Susan Alberti Medical Research Foundation Mother's Day Luncheon, held on Thursday May 5 2016, at Leonda by the Yarra.

Urmi's second child, Japna, was born soon after the Luncheon.

Urmi says, "I love what I do. I work in the field of cancer biology and my role is to study proteins that cause the disease. Knowing that you are playing a key role in

solving the mysteries of human health is very rewarding.

"The Award provides female researchers with the financial support required to ensure their research can continue while they are on maternity leave, or working part-time. Moreover, this Award recognises and celebrates the women who successfully manage to balance work and family life.

"I felt reassured that while I was at home caring for my newborn, my projects did not have to be put on hold. Very few scientists have the kind of support that I have received here at SVI; I would like to thank my lab head, colleagues and particularly the Susan Alberti Medical Research Foundation for creating and

funding the Women in Research Award.

"Medical research is extremely competitive and to stay in the game it is vital to publish research outcomes in good quality publications in order to obtain research funding. Career disruptions due to maternity leave or part-time work hinder research progress, which affects productivity and grant success. The environment at SVI is extremely supportive for young scientists.

"I stay motivated by participating in career development, and I am lucky to have supportive parents and the flexibility at SVI to be able to return to work 4 days a week. However, reduced working hours means that I

have to work more efficiently to stay on track with my project goals.

"In 2015, I received an international award for my achievements as a young scientist and an invitation to present my work at the Federation of Asian and Oceanian Biochemists and Molecular Biologists Congress."

Executive**Prof Thomas WH Kay (Director)**

Prof Michael W Parker (Deputy Director)
A/Prof Jörg Heierhorst (Associate Director)
A/Prof Louise Purton (Associate Director)
A/Prof Natalie Sims (Associate Director)
A/Prof Helen Thomas (Associate Director)
Prof Bruce E Kemp (Pehr Edman Fellow)
Prof Jack Martin (John Holt Fellow)
Dr Mark Chong
Dr Ramin Shayan
A/Prof Carl Walkley

Research units**Structural Biology Unit****Prof Michael Parker**

Dr Brett Bennetts
Dr Sophie Broughton
Karen Steffi Cheung Tung Shing (PhD Student)
Gabiella Crespi
Dr Urmi Dhagat
Larissa Doughty (PhD student)
Dr Michael Gorman
Nancy Hancock
Dr Stefan Hermans
Dr Jessica Holien
Dr Jacinta Holmes
Dr Sara Lawrence
Jasmina Markulic (PhD Student)
Dr Belinda Michell
Dr Luke Miles
Maryam Molakarimi (International PhD Student)
Dr Craig Morton
Dr Tracy Nero
Dr Lorien Parker
Dr Claire Weekley
Michelle Zheng (U/Grad Student)

Immunology and Diabetes Unit**A/Prof Helen Thomas****Dr Tom Brodnicki****Dr Mark Chong****Prof Thomas Kay****A/Prof Stuart Mannering**

May Abdulaziz Alsayb (PhD student)
Dr Satoru Akazawa
Elena Batleska
Tara Catterall
Edward Chu (PhD student)
Brydie Clark (U/Grad Student)
Megan Dharma (Scholarly Selective

Medical Student)
Cheryl Ding (U/Grad Student)
Dr Colleen Elso
Stacey Fynch
Jingjing Ge (PhD Student)
Peter Glover (Masters Student)
Dr Kate Graham
Karen Gu (Masters Student)
Dr Esteban Gurzov
Jeffrey Hamilton (U/Grad Student)
Becky Harris (International U/Grad Student)
Kenneth Ho (Masters Student)
Allison Irvin
Gaurang Jhala
Alexandra Kay
Tim Kay
Katrina Kiburg
Cameron Kos
Dr Bala Krishnamurthy
Nitesh Kumar (Scholarly Selective Medical Student)
Justin Kwong
Dr Sara Litwak
Xin (Adrianna) Liu (Masters Student)
Dr Thomas Loudovaris
Catharine McKay
Jacinta McMahon
Leanne Mackin
Lina Mariana
Dr Zia Mollah
Peter Nguyen (U/Grad Student)
Sean Oh (U/Grad Student)
Lockman Pang (Honours Student)
Evan Pappas
Dr Vimukthi Pathiraja (PhD student)
Elicia Pettiroso
Emilia Robakowski (International Masters Student)
Naresh Sachdeva (Visiting Academic)
Hong Sheng Quah
Nick Scott (PhD Student)
Claudia Selck (PhD Student)
Devin Simpkins (International BSc student)
Jarrod Skinner
Dr Michelle So (PhD Student)
Meg Smith
William Stanley (PhD student)
Dr Andrew Sutherland
Dr Robyn Sutherland
Dr Christina Tan
Erwin Tanuwidjaya
Michael Thomson
Eleonora Tresoldi
Prerak Trivedi
Dr Michaela Waibel
Alicia Ware
Eleanor Watson (Honours Student)

Emily Wilson
Alice Yu (U/Grad Student)

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Toby Dite (PhD student)
Dr Sandra Galic
Vy Hoang (PhD student)
Dr Ashfaquul Hogue
Samah Issa
Frosa Katsis
Dr Christopher Langendorf
Dr Naomi Ling
Dr Kim Loh
Lisa Murray-Segal
Dr Kevin Ngoei
Matthew O'Brien (PhD Student)
Ashley Ovens (U/Grad Student)
Dr John W. Scott

Molecular Cardiology Unit**A/Prof Duncan Campbell**

Fei Fei Gong (PhD Student)
Robyn Kelly

Bone Cell Biology and Disease Unit**A/Prof Natalie A Sims****Prof Jack Martin**

Niloufar Ansari (PhD student)
Blessing Crimeen-Irwin
Jeevithan Elango (International PhD Student)
Pat Ho
Leah Lazzarro (Honours Student)
Yolanda Luo (U/Grad Student)
Emma McGowan
Narelle McGregor
Thomas Pearson
Ingrid Poulton
Brett Tonkin
Christina Vrahnas (PhD student)

Stem Cell Regulation Unit**A/Prof Louise Purton****Dr Carl Walkley**

Dana Alhuzaimi (Masters Student)
Shreya Bhattacharya (PhD student)
Dr Alistair Chalk
Harvey Chong (U/Grad Student)
Ankita Goradia
Alanna (Leni) Green (PhD Student)
Dr Jacki Heraud-Farlow
Dr Davis McCarthy
Dr Monique Smeets
Lenny Straszowski
Dr Shuh Ying Tan (PhD student)
Scott Taylor

Dr Mannu Walia
Joshua White (Honours Student)
Jiala (Jane) Xu (Honours Student)

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

Kimberly Gleeson
Gabriele Hayman (U/Grad Student)
Pauline Heckmann (International Masters Student)
Ashleigh King (PhD Student)
Lingli Li (PhD student)
Dr Rui Lui
Nora Tenis

Genome Stability Unit**Dr Andrew Deans**

Dr Wayne Crismani
Dr Charlotte Hodson
Vince Murphy
Julienne O'Rourke (PhD Student)
Winnie Tan (PhD Student)
Sylvie van Twest

O'Brien Institute Department**Dr Ramin Shayan****Dr Tara Karnezis****Dr Shiang Yong (Max) Lim****A/Prof Geraldine Mitchell****Prof Wayne Morrison**

Katie Ardipradja
Dr Azar (Zara) Asgari (PhD Student)
Dr Guillaume Bacle (Visiting Surgical Fellow, France)
Nadeeka Bandara (PhD Student)
Dr Charlotte Bendon (Masters Student & Surgical Fellow)
Sholeh Boodhun (PhD Student)
Shi Chen (Honours Student)
Jordan Clarke (Masters Student)
Yi-Wen Gerrard
Dr Yusuke Hamamoto (Visiting Surgical Fellow, Japan)
Xiao-Lian Han
Dr Nicole Harris
Prad Herle (PhD Student)
Damian Hernandez de Santiago (PhD Student)
Dr Musarat Ishaq
Dr Anne Kong
Dr Diego Medina Marre (Visiting Surgical Fellow, Spain)
Jason Palmer
Dr Chris Poon
Ayesha Rosdah (Masters Student)
Lipi Shukla (PhD Student)
Priyadarshini Sivakumaran
Beryl Tan (Masters Student)
Dr Shaun Tan (Masters Student &



Surgical Fellow)
Dr Caroline Taylor
Natalie Thorne (U/Grad Student)
Kam Truong (PhD Student)
Dr Kiryu Yap (PhD student)
Dr Weiqing Zhan (International PhD Student)
Mr Stephen Tham (Honorary Research Fellow)
Mr Eugene Ek (Honorary Research Fellow)
Mr David McCombe (Honorary Research Fellow)

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
A/Prof Duncan Campbell
Prof Peter Cowan
Dr Barry Dixon
Prof Michael Henderson
Prof Darren Kelly
A/Prof John Slavin
A/Prof Gregory Steinberg

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)

Katie Maynes (Events Coordinator)
Stefanie Page (Events Assistant)
Pauline Diomides (Donor Relations Officer)
Lara Yachou-Wos (Donor Relations Officer)

SVI Administration

Dr Anne Johnston (Head of Research Strategy)

Maria Pineda-Haufe (Head of Finance; Company Secretary)

Dr Anne Thorburn (Head of Operations)

Steven Boz (Administrative Officer)
Theresa Clarke (Administrative

Officer)
Metta Clarissa (Finance Officer)
Amanda Cumberbatch (Snr Finance Officer)
Christophe Demaison (Head of Business Development)
Kate Gaebele (Administration Officer)
Reece Geraghty (IT Officer)
Aaron Jackson (IT Officer)
Pam Jones (Administrative Officer)
Lisa Kuspira (PR & Media Advisor)
Virginia Leopold (WHS Coordinator)
Lisna Wirrawan Liauw (Payroll Officer)
Julie Malyon (Administrative Officer)
Dr Rachel Mudge (Grants Manager)
David Murfitt (Laboratory and Technical Services Manager)
Kathryn O'Connell (Administrative Officer)
Bryan Pliatsios (IT Officer)
Jon Rhoades (IT Manager)
Helen Ritchie (Human Resources Manager)
Christopher Ryan (IT Officer)
Dimitra Samaras (Administrative Officer)
Dan Thomas (Facilities & Safety Manager)
Tiffany Tran (Administration Officer)
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
Jenny Catimel
Roderick Chappel
Shannon Curley
Stirling Dick
Wayne Dimech
Cathryn Dunkley
Stephen Gilmour
Helen Hasler
Swati Jalota (Masters Student)
Marina Karakaltsas
Geraldine Kong
Sally Land
Nilukshi Malawa-Arachchi
Tamara McDonald
Sadaf Mohiuddin
Alison Natoli
Louie Opasinov

Thu-Anh Pham
Jaya Prada Chaparala
Kim Richards
Claire Ryan
Dr Derya Sahin
Kathy Smeh
Anna Swierc-Lech
Roseena Taqi
John Tomosov
Frank Torzillo
Rosanna Torzillo
Marlene Tschaepe
Guiseppe Vincini
Sandra Walker
Dr Kim Wilson

Higher Degrees Conferred 2016

May Alsayb, PhD University of Melbourne
Shreya Bhattacharya, PhD University of Melbourne
Edward Chu, PhD University of Melbourne
Leni Green, PhD University of Melbourne
Damian Hernandez De Santiago, PhD University of Melbourne
Brian Liddicoat, PhD University of Melbourne
Vimukthi Pathiraja, PhD University of Melbourne
Hong Quah, PhD University of Melbourne
Ain Siti Roesley, PhD University of Melbourne
Farzin Takyar, PhD University of Melbourne
Prerak Trivedi, PhD University of Melbourne

SVI Board

Ms Brenda M Shanahan
Ms Susan Alberti AC (to 02/17)
Prof Richard Fox
Prof Mark Hargreaves (to 10/16)
Mr Paul Holyoake
Prof Shitij Kapur (from 10/16)
Ms Karen Inge
Prof Thomas WH Kay
Mr John T Macfarlane
Mr Stephen Marks
Dr Virginia McNamee (to 09/16)
Ms Susan O'Neill (from 02/16)
Prof Patricia O'Rourke
Mr Peter Riley (to 12/16)
Mr Tony Reeves (from 03/17)
Ms Fiona Rowland (from 03/17)
Dr Marcus Tierney
Mr Michael Wachtel

SVI Foundation Board

Ms Karen Inge (from 02/17)
Ms Susan Alberti AC (to 02/17)
Mr Benni Aroni (to 02/17)
Ms Kallie Blauhorn (from 02/17)
Ms Simone Carson
Ms Jeni Coutts
Ms Bernadette Dennis
Mrs Maria Foti (to 02/17)
Mr James Hatzimoisis
Prof Thomas WH Kay
Mrs Claire O'Callaghan
Ms Maria Palazzolo
Mrs Karen Plant (to 02/17)
Ms Brenda M Shanahan
Mr Mark Sullivan (to 02/17)
Mrs Christine Tarascio
Ms Yan Li Wang



FINANCIAL SNAPSHOT

Income

58%

Competitive Research Grants

14%

Government Infrastructure Support

15%

Legacies, Bequests & Donations

8%

Contracts and other income

5%

Investment income

Expenditure

60%

Research

11%

Laboratory support services

9%

Transfers to Collaborators

9%

Building Operations

8%

Administration

2%

Foundation

1%

Commercial Development



Statement of Financial Position as at 31 December 2016

	2016 (\$)	2015 (\$)
ASSETS		
Current assets	15,343,925	12,828,303
Non-current assets	16,777,736	17,046,998
TOTAL ASSETS	32,121,661	29,875,301
LIABILITIES		
Current liabilities	7,045,571	5,298,741
Non-current liabilities	141,900	85,746
TOTAL LIABILITIES	7,187,471	5,384,487
NET ASSETS	24,934,190	24,490,815
EQUITY		
– Retained surplus	24,021,076	23,999,116
– Reserves	913,114	491,699
TOTAL EQUITY	24,934,190	24,490,815

STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME FOR THE YEAR ENDED 31 DECEMBER 2016

	2016 (\$)	2015 (\$)
Revenue	14,462,724	14,927,220
Other income	7,802,432	5,854,164
TOTAL REVENUE	22,265,156	20,781,384
Consumables and general research expenses	(4,084,747)	(3,853,706)
Employee benefits expense	(12,403,021)	(11,592,018)
Depreciation and amortisation	(2,192,558)	(2,309,329)
Administration expenses	(1,603,381)	(1,627,519)
Transfers to collaborators	(1,959,489)	(1,959,620)
TOTAL EXPENSES	(22,243,196)	(21,342,192)
Surplus/(Deficit) for the year	21,960	(560,808)
Other Comprehensive income (loss):		
Transfer of retained surplus from the O'Brien Institute		2,783,199
Net gain/(loss) on revaluation of financial assets	421,415	(290,955)
Total Comprehensive income for the year	443,375	1,931,436
Total Comprehensive income attributable to members of the entity	443,375	1,931,436

NOTE 1: GOVERNMENT GRANTS

National Health and Medical Research Council:

– Independent Research Institutes Infrastructure Support Scheme	1,118,987	1,307,987
– Research grants	7,050,242	7,223,716
Australian Research Council	608,703	727,595
Victorian State Government – Operational Infrastructure Support Program	1,608,868	1,537,917

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 Financial Officer. The Statutory Financial Statements comply with the Australian Accounting Standards and an unqualified audit opinion was issued by the auditors, William Buck Audit (Vic) Pty Ltd.

SF

Susan Alberti AC appointed as Patron of the SVI Foundation



In late 2016, Susan Alberti AC resigned as Chair of the SVI Foundation Board, after more than 10 years at its helm. In acknowledgment of her contribution and ongoing interest in the Institute, Sue was invited to join John Ralph AC as Patron of the SVI Foundation. SVI Board member, Karen Inge, has graciously agreed to take on the role as the next Foundation Board Chair. At an intimate dinner to mark the occasion, Sue gave an inspirational speech about the motivation behind her support of SVI.

I was the inaugural Chair of the SVI Foundation when it was established back in 2004 – nearly 13 years ago. Since that time we have raised more than \$20million to support the work of the team at SVI who are doing a remarkable job in the world of medical research discovery.

I know many of you have heard the story of my beautiful daughter Danielle and her journey in this world which ended so tragically due to the curse of type 1 diabetes.

I was surprised and quite

ill prepared to discover when Danielle was first diagnosed that type 1 diabetes represented one of the major unknowns of medical science. I also learned that its incidence was increasing each year at a rapid rate and that it is a demanding health issue that places significant pressures on all family members.

My own personal experience set me on a quest to raise public knowledge and funding for type 1 diabetes and brought me into contact with outstanding researchers.

My only daughter's death drives me every day, to help support the work of medical researchers at SVI – and other institutions – help develop better treatments, work toward the prevention and hopefully a cure of type 1 diabetes.

One of the most exciting developments in the search for a cure is SVI's role in the Australian Islet Transplant Program, in which people with uncontrollable diabetes are transplanted with human islets.

The Victorian arm of the Program, led by SVI, has resulted in ten patients having received transplants to date.

These recipients suffered from a particularly brutal form of type 1 diabetes and, in part-

icular, low and unpredictable blood sugar levels. Known as 'brittle' diabetes many sufferers have been unable to drive a car, cook over a stove or even look after their grandchildren, for fear of rapidly falling blood sugars rendering them unconscious. The quality of life for sufferers of type 1 diabetes who have benefited from this program has improved out of sight.

And of course it is not just in the area of type 1 diabetes that SVI is making groundbreaking medical research discoveries. There would not be many families that have not been personally impacted by disease studied at SVI.

I am pleased that my time with SVI has also coincided with a remarkable shift in Australian society toward gender equality.

Over the last decade I have come across a range of really talented female researchers, who face their own unique challenges of competing in a world that until recent years was heavily male dominated.

There is nothing more important than providing a work environment that encourages both men and women to be at their best.

At SVI we have tackled this head on by developing a career path for our best and brightest female researchers which also allows them to take time off to have a baby along the way.

Rather than in the usual way, which is to ask the government to help out, we decided that we would do it ourselves – we would help break down the barriers for women in medical research. What we established was an annual 'award' to a scientist and mother-to-be working at SVI.

The Award takes the form of a grant to help pay for a Research Assistant to carry out important work while the award recipient is on maternity leave.

This has been a long-standing impediment to many female scientists working in medical research institutes – the ability to have a baby and take time away from the workplace to spend those important early weeks and months with a newborn, without impacting on experiments, research and ultimately careers.

I often reflect on how far support for women in the workplace has come since the

Bequests & The Jack Holt Society

Every Bequest gives hope.

Jack Holt, the fourth son of Irish immigrants, became one of the most successful Australian racehorse trainers of the early 20th century. Despite his success, he lived modestly until his death with his two sisters, in a small cottage that he had constructed in Mordialloc.

By all accounts, Jack considered himself an ordinary man. However, in 1951 he made an extraordinary gesture. He bequeathed £200,000 (an enormous sum in those days) to establish a school of medical research, which is known today as St Vincent's Institute of Medical Research (SVI).

Jack lived in an era when infectious diseases such as polio and tuberculosis still posed major health risks. More than 60 years later, thanks to Jack's legacy, researchers at SVI bring hope to Australians suffering from cancer, heart disease, arthritis, diabetes and Alzheimer's. By supporting medical research at SVI today, your Bequest can provide hope for decades to come.

The Patron of the Jack Holt Society, Gerald Snowden, graciously opened the doors of his home at the Jack Holt Society's annual morning tea in November 2016.

Guests were treated to traditional finger sandwiches, scones with jam and cream, and tempting sweets on one of Melbourne's notorious cool spring days.

SVI's Associate Professor Jock Campbell spoke about the passion of SVI's researchers, and how much of their work would not be possible without philanthropic support.

It was a wonderful opportunity to acknowledge and thank those who have made a commitment to financially support SVI in their Will, learn more about the history of SVI and hear about our research.

For information on joining the Jack Holt Society, please contact the SVI Foundation on (03) 9231 2480 or email us at bequest@svi.edu.au

early days when the tragic death of my first husband Angelo meant I had to go to 'school' to obtain the qualifications needed to keep our building and construction business operating.

That is why the changing community mindset which applauds and encourages more women in the workplace and family friendly environments is so important – the opportunities available to women today just weren't available when I was growing up.

In finishing I would like to reflect on philanthropy in Australia because without philanthropy there would be no SVI.

The original £200,000 bequest founded this organisation. Not only was John 'Jack' Holt a famous Melbourne racehorse trainer, he was also one of the great philanthropists of his time. Jack Holt's foresight has left a wonderful legacy.

I am proud to have followed in his footsteps, in a small way, and been a part of a dedicated group of people who have raised more than \$20 million toward making sure SVI can still claim that 'Hope begins here'.





Jack & Judy Gutman



Barry & Karen Plant, Sam Tarascio



Amelia Chia & Mark Sullivan



Tim & Kristin Richardson



Michael & Chandrika Lanteri



Justin & Sally O'Day



Ed & Meg Farquharson



Maria & Ian Cootes



Tony Schiavello, Jill & Julian Barson



Peter & Kristine Anastasiou



Jeni Coutts & Anthony Crichton-Brown

SVI \$10,000 DISCOVERY FUND

The push to \$5 million is on the home straight

DF



The SVI \$10,000 Discovery Fund was set up to support SVI's medical research with the future income aimed at improving the health of Australians. The Fund has a capital target of \$5 million and is currently valued at \$3,254,739, with further membership pledges of \$1,310,500, making a total of over \$4,565,239. The push to \$5 million is on the home straight! This is a testament to the philanthropic generosity of its members and supporters.

Christine Tarascio is the Chair of the Fund, which has 49 members, with many other supporters who have made contributions over the years. We are looking forward to the first distribution to SVI scientists when \$5 million is reached, realizing Christine's dream and foresight in her establishment of the fund.

Christine says, "We are very pleased to welcome five new members this year: Jill and Julian Barson, Jeni Coutts, Karen Inge and George Janko, Chandrika and Michael Lanteri and Ted and Mandy Yencken.

We also welcome new

junior memberships from Tim and Kristin Richardson and Mark Sullivan.

We are very grateful that, along with the Tarascios, Susan Alberti, Karen and Barry Plant, Tony Schiavello and Brenda Shanahan have all committed to a third cycle of giving for another 5 years.

Thank you also for the generous donations from Rosemary and Simon Campi, Judy and Jack Gutman along with Tai Fiong Yang and PS Lee, Sally and Justin O'Day, Assunta and Nunzio Pellicano, Yan Li Wang and Toni and Vic Zagame. Thank you also to Michael and Helen Gannon for their extremely generous donation."

We have welcomed another corporate partner to the Discovery Fund in 2016, Moda Corp. SVI and Christine extend a big thank you to their director Ed Farquharson, non-executive director David Tarascio and their assistant development manager Nick Inge for their generosity. Moda Corp have pledged \$1000 per apartment sold on their sold out 'Paxton' development.

Thank you also to Maria Palazzolo from GS1 who has

encouraged her staff to support SVI as their charity of choice, consequently GS1 have become our first workplace giving partner.

In March 2017, Sam and Christine Tarascio hosted the highly anticipated annual \$10,000 Discovery Fund lunch at GG followed by dessert, cheese and entertainment in their home. This year, the lunch celebrated 10 years since the inception of the \$10,000 Discovery Fund.

The lunch was dedicated to the loving memory of Christine's friend Elda Schiavello who passed away in November 2016. Elda, together with her husband Tony, were inaugural members of the Discovery Fund.

The event brought together members and supporters of the Fund, and provided an opportunity to hear more about the groundbreaking medical research being undertaken at SVI. Professor Tom Kay and Dr Wayne Crismani highlighted the vital role philanthropy continues to play in medical research and thanked the Tarascio family and guests for their generous support.

Christine also rallied the

guests in her speech with her passionate support for SVI's research. She encouraged new memberships and donations and expressed how fortunate the members are to be in a position to help support the scientists in their endeavours.

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

DONATIONS 2016

Karen Inge, SVI Foundation Chair

“On behalf of SVI, I would like to thank our donors for their generosity and continued support for the work we do at SVI. We appreciate your help and assure you that we are doing our best to find cures and improved treatments so that all Australians can enjoy better health outcomes now and in the future.”

\$100,000 Plus

Nicholls Bequest
Shanahan, B
The Stuart Leslie
Foundation

\$50,000-\$99,999

Michelmores, J & A
Schiavello Foundation

\$20,000-\$49,999

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Bertocchi Smallgoods
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Holyoake, P & M
Janko Inge Foundation
Pty Ltd
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Research Foundation
Yencken, T & M
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Cicero, J & R
Cootes, I & M
Crichton-Brown, A
Dingle, M

Eacott, L
Gillam, J & H
GS1 Australia
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Tarascio, S & C
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Barro, R
Besen Family
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Bowen, J & M
Bowness, B
Callinan, N & L
Carson, I & S
Cator, H & K
Chalker, V
Chappell, J
Clerici, G
Clifton, S
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Costa Family
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Iacobucci, M
Johnston, G & S
Johnston, P
Kay, C
Kay, M & S
Kay, T
Keene, G & R
Kelly, A
Kelly, M
Kiefel, C & K
Knowles, J
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Corporation
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Power, T & D
Ralph, J & B
Randall, B
Reeves, T & M
Reid, I
Riley, P & C
Rizzo, F
Robinson, G & C
Romanes, R
Romanovski, B
Scott, P & O
Smith, C
Smith, J
Tabak, L
Tarascio, D
Tarascio, S & C
The Calvert-Jones
Foundation
Tierney, M
Turner, A

Wachtel, M
Walters, E
Wang, YL
Waters, M
Webb, J
White, J
Wickham, R
Wilson, E
Wizel, M
Woods, M
WTFN Entertainment
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Wulff, A
Xipell, J & T
YLC

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Anderson, D
Clarke, T
Curtain, M
Daniel Allison &
Associates
Ellett, D
Grant, A
Graysonline
Grocon
Hansen, J
Hatzopoulos, C
Iseli, A & C
Jellis Craig Armadale
Johnston, A
Johnston, B
Karvela, B
Kenyon-Smith, A & J
Larkins, R & C
Marks, S & M
McCorkell, G
McKeage, C
McNaughton, B & M
North, A
Nossal, G
O'Mahony, D
Sakell, T
Valdichiesa Foundation
Walpole, D & M
Whitehorse Community
Chest
Whittington, N

Thank you to our loyal supporter groups & their members.

Trusts and Foundations

5point Foundation
Australian Rotary Health
Bethlehem Griffiths Research Foundation
Cancer Council Victoria
Diabetes Australia Research Program
JDRF
Leukaemia Foundation
Maddie Riewoldt's Vision
National Breast Cancer Foundation
The Angior Family Foundation
The Jack Brockhoff Foundation
The Margaret Walkom Bequest
The Marian & E.H. Flack Trust
The Mason Foundation – managed by Equity Trustees
The Yulgilbar Foundation
Zig Inge Foundation
Anonymous

SVI Charity Golf Day Sponsors Platinum

Macquarie Leasing Pty Ltd

Silver

AGL
Bertocchi
Maxxia

Bronze

BMW Melbourne
BW Equities
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Contango
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Pedders
Wainscott Financial

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:

George Menzies Carson Bequest
The Roslyn Smorgon Memorial Fund

Funds raised by our supporter groups are used to purchase new equipment or materials, to support our young researchers and to fund research in specific areas. If you would like to join any of our supporter groups, please contact the SVI Foundation on (03) 9231 2480 or at foundation@svi.edu.au

SVI Support Group

The SVI Support Group was 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 Scholarship Program.

\$10,000 Discovery Fund

The SVI \$10,000 Discovery Fund was established 10 years ago by SVI Foundation Board member Christine Tarascio. Members pledge \$10,000 per year for 5 years, with the aim of accumulating a minimum of \$5 million of capital, the income from which will be used to support vital research at SVI. Members of the Fund are kept abreast of SVI's research achievements and meet each other at exclusive events throughout the year.

Friends of SVI

The Friends of SVI was established to recognise and acknowledge our wonderful supporters and to encourage new friends to embrace SVI. The Group organises the popular annual Food Matters event series, which focuses on the role of food and diet in our society and its impact on disease.

The 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, and bring us closer to breakthroughs and improved health. 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.