SOLVING THE PUZZLE

OF BLOOD CANCER

THE RIGHT FIT
For many Australians, philanthropy is about the underprivileged or about disaster relief and there is no doubt that these are important causes. But there is another critical role for philanthropy in important community enterprises where there is a shortfall in government support.

In this era of increasing costs and decreasing taxes there are many calls on government resources – and while we continue to receive good support from both state and federal governments, the gap between what they can provide and what we need grows wider.

There is no better illustration of this than the success rate for National Health and Medical Research Council Project Grants last year falling to 16.9%. This means that on average only about 1 in 6 grants was successful and this significant decrease has unfortunately led to several experienced scientists and their teams leaving SVI because of lack of funding.

In the past we relied on philanthropy at SVI to fund the latest equipment or to recruit young Australian scientists returning from overseas. Over the next few years we will need to use philanthropic support to sustain the careers of excellent scientists struggling with flat government spending. This situation will get worse before it gets better and it will require significant improvement in government finances before much needed growth occurs.

On the flipside of the importance of philanthropy for supporting research endeavors is the great benefit that medical research can provide.

All of us, except perhaps the invincible young, have concerns about the ageing population and the burden of healthcare, as well as more personal concerns about our own health and the health of close family members. What we fear are the diseases that medicine currently cannot adequately control.

This is exactly what we do at SVI – we work on improvements to medicine. One of the great unexpected shocks of life is how much the world changes in a lifetime and this is absolutely true in our sector. Many of us will know people who have had diseases that would have been fatal in previous generations. In the last few years there have been remarkable advances in diseases like chronic myeloid leukemia, melanoma and viral hepatitis.

The best way to understand what our researchers do is to come in and take a tour of SVI and meet them personally. Upon visiting you will find there is a 7 day commitment at the Institute, a commitment to find very practical outcomes to benefit all Australians.

Leukaemia is a cancer that affects the blood and the bone marrow. There are four main types: acute lymphoblastic leukaemia (ALL), acute myeloid leukaemia (AML), chronic lymphocytic leukaemia (CLL) and chronic myeloid leukaemia (CML). The most common leukaemias in adults are CLL and AML, children are most commonly affected by ALL.

Lymphoma occurs when developing lymphocytes (a type of white blood cell) multiply in an uncontrolled way. Over time, the abnormal lymphocytes accumulate and form tumours in lymph nodes and other parts of the body. These cells replace normal lymphocytes, weakening the ability to fight infection.

In myeloma, large numbers of abnormal plasma cells are made in the bone marrow. Eventually these cells form tumours that accumulate especially in the bone marrow and on the surfaces of bones. As a result, bones can become weaker, more brittle and prone to breakage. The cells also collect in the bone marrow, preventing it from making normal blood cells.

Other types of blood cancer called myeloproliferative neoplasms and myelodysplastic syndromes affect blood cell production in the bone marrow.
THE RIGHT FIT

Like many procrastinating students, at university Jess Holien found herself spending hours in front of tetris, the strangely addictive block stacking game. She went on to forge a career that uses some of the same concepts: Jess says working as a structure-based computational molecular modeler is a bit like playing tetris with proteins.

“My job involves designing chemical compounds to fit into the spaces between proteins, a bit like maneuvering a block to fit into a space in tetris. By stopping two proteins from fitting together, we aim to block a disease process from occurring.”

Today Jess is a Postdoctoral Fellow in SVI’s Structural Biology Unit. She became inspired by the power of computation to solve health problems while she was studying third year science at The University of Melbourne.

In 2014, Jess was awarded a Postdoctoral Fellowship co-funded by The Leukaemia Foundation and Cure Cancer Australia. Her work focuses on finding new treatments for leukaemia.

“More than 3200 Australians will be diagnosed with leukaemia this year. While huge strides have been made with treatment of specific types of leukaemia, more than 1000 Australians still die of the disease every year.”

She goes on to explain that her project is focused on two protein families, known as homeobox proteins and 14-3-3. “My Postdoctoral Fellowship will fund me to design compounds that can specifically interfere with the interactions between these proteins and their binding partners. We already know that these interactions play a role in leukaemia but up to this point no-one has been able to design drugs to interfere with their function. I aim to develop new tools that will allow us to do this. In the long-term, we hope that these approaches could be extended to other types of cancers.”

Jess says that the Fellowship gives her job security for 3 years. She is happy to be entering the next phase of her career, and returning to full-time employment, having worked part-time for 4 years to care for her two small children, Lila and Sam.

“Although I love every moment I spend with my kids, I also love my work. It fulfils me as a person and makes the time I spend with my family even more precious and enjoyable. I certainly have no spare time for tetris these days!”

NEW BLOOD

Blood cancers can affect anyone, of any age, at any time. Every day, 31 Australians are given the news that they have leukaemia, lymphoma, myeloma or a related blood disorder.

SVI’s newest PhD students Julienne O’Rourke, LingLi Li and Dr ShuhYing Tan are doing research to try to help improve outcomes for those diagnosed with blood cancer. The three are recent recipients of PhD scholarships from the Leukaemia Foundation.

Investing more than $3 million into medical research each year, The Leukaemia Foundation is Australia’s peak body for blood cancer. Julienne O’Rourke, from the Genome Stability Unit, and Lingli Li from Molecular Genetics received PhD Scholarships to support the next 3 years of their research training. Julienne, supervised by Dr Andrew Deans, will focus on understanding the mechanisms behind the development of Fanconi Anaemia, a rare inherited syndrome that carries a high risk of blood cancer. LingLi, supervised by Associate Professor Jörg Heierhorst, will study the role of a protein called dynein light chain in the development of lymphoma.

Dr ShuhYing Tan was awarded the Leukaemia Foundation’s Andrew Cadigan Clinical PhD Scholarship.

Shuh’s PhD project will focus specifically on myelodysplastic syndrome (MDS), a group of diseases that affect the production of blood cells in the bone marrow and can progress to acute leukaemia. After finishing her medical specialist training last year, Shuh decided to embark upon a PhD supervised by Dr Meaghan Wall from St Vincent’s Hospital and SVI’s Associate Professor Louise Purton. She says, “This is a great opportunity, and I hope it will be a platform to launch my career ambition of being an academic haematologist, where I can combine translational research with my day-to-day clinical management of patients with this disease. In the next few years, I hope we will have a better understanding of the molecular biology underpinning MDS, and ultimately, pave the way to discover new efficacious therapies which can change the natural course of the disease and improve patients’ outcomes.”

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Image: Dr Jess Holien

Image: SVI’s newest PhD recruits, Dr ShuhYing Tan, Julienne O’Rourke and LingLi Li (l-r)
LEUKAEMIA RESEARCH RECEIVES $6.7 MILLION FUNDING BOOST

Professor Michael Parker, with collaborators Professors Angel Lopez and Tim Hughes from South Australia’s Centre for Cancer Biology, has been awarded more than $6 million in federal funding to help find new ways of treating leukaemia.

The team was awarded a highly competitive Program Grant from the National Health and Medical Research Council (NHMRC) to fund their research for the next 5 years. The grant is among 11 grants awarded nationally, announced by the Federal Health Minister the Hon. Peter Dutton in February.

Michael says: “There have been some major improvements in the management of leukaemia with the advent of new drugs. However, progression of the disease and relapse due to drug resistance remain major challenges”.

The team will address these issues using their unique mix of expertise, combining studies of normal blood and leukaemia cell function, drug design and clinical trials. Through their research, the group aims to open up new therapeutic avenues for the disease.

“Over the next 5 years, our team will study the role of a particular type of receptor that is at the core of leukaemia development, progression and relapse. By understanding in detail what the receptor does, at both a molecular and functional level, we hope to be able to find new and more effective ways to treat leukaemia,” Michael says.

The research program initially started with a Program Grant awarded to Angel Lopez and Michael Parker in 2010. The team in 2014 has grown to include haematologist Professor Tim Hughes, who brings valuable clinical expertise.

“As medical researchers, it is critical we find every opportunity to translate our discoveries – so-called bench-to-bedside. Equally important is the bed-to-benchside approach, where medical researchers work closely with clinicians so that the most pressing medical needs are given priority. We are very fortunate to have Professor Tim Hughes, a world leading leukaemia clinician, join our team,” says Michael.

2 MINUTES WITH CHARLOTTE

Dr Charlotte Hodson recently joined the Genome Stability Unit as a postdoctoral scientist. Charlotte completed her PhD in protein crystallography at Cancer Research UK, London Research Institute in 2013.

My childhood ambition was to... become a forensic scientist (I clearly watched too many detective shows like The Bill!).

My first job was... at a drycleaners.

My worst job was... working in the pie van for football matches.

I got into research because... I’m always curious and have lots of questions, so it was a natural progression from undergraduate training, to PhD, to postdoc.

The hardest thing I have ever done was... leaving my family in the UK.

I am inspired by... those who stand up for what they believe in, particularly people like Malala Yousafzai.

My scientific role model is... Dorothy Hodgkin [credited with the development of protein crystallography].

If I could live anywhere... I would choose a villa situated between the beach and mountains in Italy.
David Mann succumbed to chronic myeloid leukaemia just 2 months after his wedding to Wendy in 1991. Since that time, 5-year survival rates for this type of leukaemia have increased to around 90% thanks to the development of new therapies. Wendy tells David’s story below.

“It was May. David had been feeling ill, losing weight and had a sore shoulder and stomach. When I visited him in Hospital, he was in a room on his own, and I realised that it must be serious. The doctor told us that David had chronic myeloid leukaemia and a 20% chance of survival, but because he was only 27 they would do everything they could.

It was decided that his best chance was a bone marrow transplant, but this was a new procedure in New Zealand at the time and the new Bone Marrow Transplant Unit was still under construction at Christchurch Hospital. After undergoing chemo, by November David was feeling really good, and he proposed. We organised the wedding in 10 days. It was a wonderful day, with lots of friends, and when you look at the photos you can see that David was really happy and pleased with himself. He was in remission and feeling good.

Just after our honeymoon we heard that the transplant had been scheduled. The weekend before we went away bike-riding with all his mates. He really wanted to wring everything he could out of life.

He went in to have the transplant on the 4th of January 1992, and didn’t recover. He had multiple organ failure, was in a coma for 10 days, and then died.

He was only 27, I was 25. When I look at the photos of the wedding now, I can’t believe that I am in my forties, but he is still only 27.

David’s mother Grace is a great friend of mine. Sometimes we reflect on health outcomes and timing. David was a wonderful young man and was simply unlucky to become ill when he did. At the time we were all enthusiastically involved in fundraising for the Bone Marrow Transplant Unit and the fact that it was under construction gave us a positive focus and a great sense of hope. David was the first adult to have a bone marrow transplant in the new Unit.

Over the past 20 years huge strides have been made in the diagnosis and treatment of leukemia. For young men diagnosed in 2014 the outcomes are much more positive. Throughout David’s illness and following his death we agreed that we would do anything for our medical team to contribute to knowledge about the disease. I feel satisfied that maybe David contributed in some small part to the positive outcomes of the people who are diagnosed today.”

**IMPROVING TREATMENT FOR CANCER OF THE BLOOD**

SVI’s Associate Professor Louise Purton has been awarded the 2013 Adult Stem Cell Research Grant from the Sydney Catholic Archdiocese.

The grant, worth $100,000 over 2 years will help Louise and her team develop methods of increasing relevant stem cell numbers to improve human stem cell transplant outcomes.

Louise explains that up to 50% of the people in need of a blood stem cell transplant cannot be matched with a donor.

“Transplant offers the best hope of a cure for most people with blood cell diseases such as leukaemia. But if you can’t find a donor, there are limited options.”

One option is transplantation of stem cells derived from umbilical cord blood. While a bone marrow donor must be a perfect match with the recipient, cord blood does not require a perfect match, says Louise.

She goes on to say there are a number of significant hurdles to overcome before umbilical cord blood cell transplants can be offered as a standard clinical option to patients. These include the number of stem cells and the time it takes them to mature into functional blood cells.

“This puts the patients at risk of bleeding and infection, which can result in death,” Louise explains.

Louise’s research aims to increase the numbers of relevant cells for transplantation: such a procedure would be a highly significant advance and could save many lives.

The group can successfully carry out the procedure in experimental models, and with help from the Catholic Archdiocese, aims to translate this to human cells and eventually, help patients with blood disorders.
It may be based in Melbourne, but SVI has many strong connections on the Bellarine Peninsula. For this reason, SVI decided to celebrate Australia Day at an event with local residents and holidaymakers.

Over 130 guests attended the evening cocktail function on the lawns of Oak Hill farm in Marcus Hill. With the afternoon sun, light sea breezes and a breathtaking view of the coastline serving as the perfect backdrop, guests heard from Director, Tom Kay, about SVI’s medical research into diseases such as type 1 diabetes, cancer, heart disease and Alzheimer’s disease.

Guests were also fortunate to hear from former SVI Director, Professor Jack Martin. Jack, who holidays in Point Lonsdale, travelled from Yea in country Victoria that morning where he was attending an Australia Day event in his role as 2013 Victorian Senior Australian of the Year. Donations on the day and since the event have now amounted to $15,000. “We are extremely grateful to have had the opportunity to spread the word and promote our Institute to residents on the Bellarine Peninsula. We really appreciate their generosity and support on the day,” said Tom.

SVI thanks Louise Gourlay OAM who kindly opened up her beautiful property for the occasion and Terindah Estate winery who sponsored the event with head winemaker Chris Sargeant in attendance.

Society Gathers for tea at The Windsor

The Jack Holt Society Morning Tea was held at the end of November 2013 in the Bourke Room of Melbourne’s iconic landmark, The Hotel Windsor. Over 50 guests attended the intimate event.

The Society was launched in December 2012, and was established to recognise those who have included SVI in their will and to encourage others to do the same.

The Society honours and recognises Jack Holt, whose bequest of £200,000 in 1951 led to the establishment of SVI. Advances in medical treatment have been made possible by Jack Holt’s generosity, proof that a bequest can make a real difference.

Chair of the SVI Foundation and a long-term supporter of SVI, Susan Alberti, shared her story of how she first became involved with SVI and type 1 diabetes research following the death of her daughter.

SVI’s Associate Professor Jock Campbell spoke about his research into heart disease at the Institute. He highlighted the importance of philanthropy, focusing on the difference that the George Carson Bequest has made to his work.

Simon Trumble, a lawyer from Donaldson Trumble Chambers, addressed the basic steps of including a charity in your will and highlighted how easy it was. In particular, he emphasised the importance of checking that you have used the correct ABN number on your bequest to ensure your money is donated to SVI and not another organisation.

The Patron of the Jack Holt Society, Gerald Snowden, acknowledged members of the Society, including John and Barbara Ralph, Susan Alberti, Brenda Shanahan and Pamela Beech. However, leaving a bequest is a personal and private decision and there are others who wish to remain anonymous.

More information on SVI’s bequest program can be found in the enclosed brochure. If you are interested in leaving a bequest to SVI and joining The Jack Holt Society please contact Director of Development, Madeleine Whiting, on (03) 9288 2480 for a confidential discussion.
SVI $10,000 DISCOVERY FUND LUNCH

SVI $10,000 Discovery Fund founders Sam and Christine Tarascio hosted another hugely successful lunch on Sunday 2 March. Guests lunched at GG’s Restaurant & Bar before moving upstairs to Sam and Christine’s home for coffee, dessert and entertainment.

The lunch was attended by 32 Discovery Fund members. Many of the other guests had supported the Fund with donations over the last 7 years.

Christine welcomed guests and talked from the heart about what SVI means to her, the importance of medical discovery and its impact on her family.

Sam Tarascio Jr was a terrific MC and spoke about his personal experience of medical research.

The lunch provided an opportunity for members and supporters to hear more about the vital medical research being undertaken at SVI. Tom Kay and newly graduated PhD student David Ascher told the guests about their areas of research and explained why philanthropy is so important to its continuation.

As a result of the lunch, SVI welcomes five new members and a further two who have chosen to renew their memberships for another 5 years. In addition, we received donations totalling $19,500.

Including investment income and membership commitments since the lunch, the total value of the Fund is currently $2,427,141 - nearly halfway towards the target of $5 million. When it reaches its goal, income from the Fund will support SVI projects and research programs, helping to recruit the best scientists and provide them with the essential tools for their careers.

SVI owes a great debt of gratitude to the Tarascio family for their continued support, passion, determination and energy.

2014 EVENTS DIARY

May 8
SAMRF Mother’s Day Luncheon at Leonda, guest speaker Professor Fiona Wood AM

May 19
‘Friends of SVI’ Food Matters Event

June 21
Annual Gala Dinner, Italian Chamber of Commerce and Industry, in support of SVI

August 23
SAMRF Signature Black Tie Ball at Palladium Crown

October 16
SVI Support Group Black Tie Dinner

October 20
Macquarie Leasing SVI Charity Golf Day

November 16
Team SVI run the City2Sea

November
Jack Holt Society Bequest Morning Tea
Last year’s ‘Susan Alberti Women in Research Award’ recipient, Dr Kate Graham, is the proud mother of two young boys, Hamish, 2 and Harrison, 10 months. The Award was introduced last year to help alleviate the adverse impact caused by maternity leave on an outstanding female researcher’s work. We sat down with Kate to discuss what receiving the Women in Research Award meant to her.

Why is the Women in Research Award unique?
The award is innovative, as instead of giving the money to me as the researcher, the funds were directed to the laboratory to pay a Research Assistant to carry out work while I was on leave.

What did receiving the award mean to you?
One of the main problems with maternity leave is the decrease in your output, whether that be your experiments, publications or attending and speaking at conferences. The award enabled me to maintain my laboratory presence, even though I wasn’t physically there.

What are the challenges of working in medical research and how do you overcome them?
The job of a mother and the role of a researcher are not ‘9 to 5’ jobs. In order to succeed at both you have to be really organised, you have to set your priorities and you need a good team of people around you. I have been incredibly lucky to have the support of senior scientists, both women and men, throughout my career and supportive colleagues who have been able to step in while I’ve been on leave. It is equally important to have support at home. My husband is my number one supporter and he is very engaged with looking after our children, although a little less engaged with housework!

What keeps you motivated in your role as a researcher?
The reason I became a scientist was to discover something new and something about the human body no one else had ever understood and then use this to help understand, prevent or treat disease. As a working mother and scientist this is still what drives me today, however I have the added benefit of having little people at home who, at the end of a long day, make me laugh and smile in a way only children can.

My most recent highlight would be my first senior author publication which was accepted last year when I was on maternity leave. This would not have happened as easily if we didn’t have the funding to pay a Research Assistant to work while I was absent, so it was a direct result of the award.

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The reason I became a scientist was to discover something new and something about the human body no one else had ever understood and then use this to help understand, prevent or treat disease. As a working mother and scientist this is still what drives me today, however I have the added benefit of having little people at home who, at the end of a long day, make me laugh and smile in a way only children can.

Kate will present the Susan Alberti Women in Research Award to the 2014 recipient at the SAMRF Mother’s Day Luncheon on Thursday, 8th May at Leonda by the Yarra in Hawthorn. Former Australian of the Year, Professor Fiona Wood, is guest speaker at the event. All proceeds from the event go to the Women in Research Award.
DONATING TO SVI

By supporting SVI’s medical research, you can make a difference.

1. Donate now to SVI
   I want to make a single donation of:
   ☐ $25 ☐ $50 ☐ $100 ☐ $250 ☐ $500 ☐ $1000
   ☐ Other $

2. Become a Friend of SVI
   I want to make an annual donation of $1000 for:
   ☐ 3 years ☐ 5 years ☐ Other

3. Join the SVI $10,000 Discovery Fund
   An investment in the $10,000 Discovery Fund is an investment in the future needs of the Institute.
   For more information contact the SVI Foundation on (03) 9288 2480

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

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

Donation payment details
☐ Cheque (please make payable to St Vincent’s Institute)
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SVI is endorsed as a tax deductible gift recipient. All donations over $2 are tax deductible. SVIMR ABN: 52 004 705 640.

Please return to:
St Vincent’s Institute of Medical Research, 9 Princes St, Fitzroy, VIC 3065 Tel: 03 9288 2480 Fax: 03 9416 2676 Email: foundation@svi.edu.au Web: www.svi.edu.au
Mother’s Day Luncheon

With special guest speaker, Professor Fiona Wood FRACS AM, Australian of the Year 2005 and mother of six.

DATE: Thursday May 8th, 2014
VENUE: The Ballroom, Leonda by the Yarra
        2 Wallen Road Hawthorn
TIME: 12:00noon – 2:30pm
DRESS: Lounge Suit
TICKETS: $130 per person
        For tickets, telephone (03) 9560 1595,
        or visit susanalbertifoundation.org.au
        Funds raised support the SVI Women in Research Appeal