

RAH RESEARCHER



Fundraising for medical research at the Royal Adelaide Hospital and with our research partners – the Hanson Institute, SA Pathology and the Centre for Cancer Biology.

Edition 3

Three-Year Fellowship Enhancing Anti-Cancer Therapy Research

Joining Professor Stuart Pitson's Molecular Signalling Laboratory six years ago, Postdoctoral Researcher, Dr Melissa Pitman has been able to bring a valuable new skillset to the already successful team at the Centre for Cancer Biology.

After recent studies found a protein, known as sphingosine kinase, contributes to the growth and survival of cancer cells, Professor Pitson's team has been developing inhibitors in an attempt to capitalise on these findings to combat this disease.

With the addition of Dr Pitman, supported by a three-year Fellowship through the RAH Research Fund, a new inhibitor – called MP-A08, is currently in pre-clinical trial stage and is demonstrating excellent results in the laboratory.

"After finishing a Bachelor of Science in Molecular Biology and Bioinformatics I went into the lab to do some protein work during my PhD," Dr Pitman said.

"It was during my PhD that I got to look at protein structure and learning these skills helped me land the position I have now."

Dr Pitman's development of MP-A08

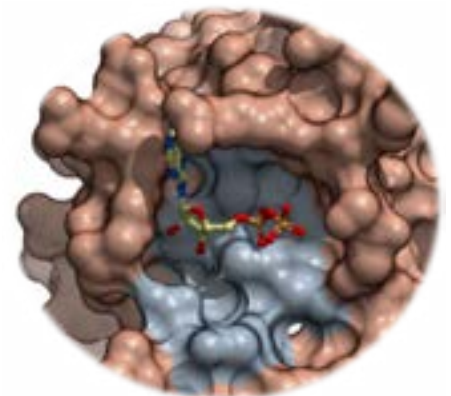
has used a different approach to ensure it does not have any side effects commonly associated with cancer therapies.

"We've currently tested its effectiveness on lung cancer, glioblastoma (an aggressive form of brain tumour) and also acute myeloid leukaemia," she said.

"We've recently published our first paper on this new discovery and are excited for the world to hear about this breakthrough research.

"With the support of the Fellowship and Professor Pitson, I have definitely expanded my skillset in using computer technology to develop inhibitors and we also have an excellent computer program and other advanced resources in house."

The first of its type, both Dr Pitman and Professor Pitson are hopeful this breakthrough research will reach the



The protein structure of MP-A08

clinical trial stage.

According to Professor Pitson, "the support for RAH medical research is vital to ensuring this work is ongoing.

"Peoples' support is actually one of the most important things for us because it's supported people like Dr Pitman who has been able to make an amazing contribution to the team."

While MP-A08 is showing impressive results, it has not yet been developed into a drug that can be administered to patients. This is the aim of the next stages of this research and Dr Pitman is looking forward to sharing further outcomes in the near future.



Professor Stuart Pitson (far left) and his team including Dr Melissa Pitman (fourth in from the right).

Latest News from the RAH Research Fund

A big hello to our Royal Adelaide Hospital (RAH) Research Fund supporters!

I would like to introduce myself Karen May; Senior Advisor working with the team here at RAH Research Fund, which includes our fundraising team as well as our service arm – the RAH volunteers, Newsagency and Kiosk.

The RAH Researcher provides you with the opportunity to read about some of the stories of medical breakthroughs



Karen May, Senior Advisor

and treatments for diseases like cancer, kidney disease and diabetes, which inspire our work here. We are very grateful to all of our donors and supporters who make this possible.

We have just enjoyed a week of celebrations for the 175th Birthday of the RAH with historical exhibitions, staff events and a High Tea at the iconic Ayers House.

We are also about to celebrate with the RAH Auxiliary at their AGM – their 90th Year. This is an amazing achievement for their Volunteers who have supported patients and families needing financial assistance due to illness via the Social Work Department of RAH and purchase of hospital equipment.

The RAH Research Fund is working on plans for the move to the new RAH. We will be prominent and visible in the Reception area to help raise vital funds for world leading medical research – some of which you will read about in this edition.

In another exciting announcement, the RAH Research Fund is collaborating with The Hospital Research Foundation. As the two charities in Central Adelaide Local Health Network, we will work together to ensure the best possible outcomes are achieved from the research funds allocated.

Enjoy this edition of the wonderful research you support!

25 Years of the RAH Research Fund Newsagency

Since opening in November 1990, all proceeds from the RAH Research Fund Newsagency have been directed to fund vital medical research at the hospital via the RAH Research Fund.

Offering 25 years of service to patients, families, staff and visitors, current manager, Cynthia Henderson, says the Newsagency has raised in excess of \$2.1 million since it began and continues to be a hub of activity at the RAH.

“I’ve been here since it all started 25 years ago and I’ve been the Manager for the past six years – I love meeting and serving the lovely customers we have,” Cynthia said.

“Many are here for difficult and challenging reasons, but their stories are always interesting.”

“I’m so incredibly proud that we raise money for such a worthy cause and provide a necessary and much appreciated service to the hospital.”

The RAH Newsagency provides traditional services such as papers, magazines, gifts and stationary.

It also offers a range of other services such as SA Lotteries, Adelaide Metro recharging, some Australia Post services, Dry Cleaning, Movie Tickets, Gift Cards and TV Vouchers for public hospital patients.

The team is excited to move to the new Royal Adelaide

Hospital and can’t wait to continue to deliver their services to staff, patients and their families and friends.

“We are very excited about a brand new shop and we are keen to continue to serve the people who work at and visit the RAH with the high level of customer service people have come to expect from our team.

“Finally, we’re looking forward to being able to continue to raise valuable funds for medical research and to promote this to our customers. Their purchase is appreciated and the profits will benefit the vital work being done in medical research.”



The team(L-R) Lyn, Sally, Graham, Angie and Cynthia.

Living Proof Medical Research Saves Lives

Matt Jackson from the RAH Research Fund was a carefree 19-year-old on the brink of beginning his adult life, when he was diagnosed with Acute Myeloid Leukaemia.

“For a few weeks in early 2008 I thought I had just caught a bad cold. I knew things were probably getting a bit strange when I couldn’t make it through a shift without needing to go out the back and have a lay down on the only surface that wasn’t the floor,” Matt recounts.

“But I always had the attitude of ‘just work through it, you’ll be right’.”

Pushed by his friends who were growing sick of his complaining, Matt gave in and saw a doctor who prescribed antibiotics for a bad case of tonsillitis.

“I’d never go to the doctors, not unless I wanted a day off school and needed to fake a headache to stay home and watch Jerry Springer,” Matt said.

Running his course of antibiotics and still feeling no better Matt returned to the doctor who took a blood test to determine what was going on.

It was later that night, when out with friends, Matt received a rare phone call from his dad and instantly knew something was wrong.

“I have a brother with Down Syndrome, who also suffers from a plethora of health issues; I immediately thought something had happened to him,” Matt said.

“I answered my phone and my dad said ‘you have to come home. The doctors called and they think they have found leukaemia cells in your blood test’.

“This broke me. There was one thing I knew about leukaemia and only one. I couldn’t even spell the word but I knew that you could die from it.”

Immediately Matt began three rounds of chemotherapy lasting for 28 days and all resulting in the loss of his shoulder length hair style.

“My mum hated me having such long hair, so that took care of that, but it probably wasn’t quite the way she wanted it to happen.

“It was a tough time, having tonnes of medication every day, and having needles every four hours for observations, but I got through.”

Months later, happy to be over the three treatment hurdle, Matt sat down with his haematologist who regrettably informed his chance of relapsing was likely.



FACT:
Matt’s blood samples were used in Professor Pitson and Dr Pitman’s research (featured on Page 1).

The only solution was a bone marrow transplant, and after exhausting his family with no luck of a match, Matt was fortunate to discover he was compatible with a European female listed on the worldwide registry.

A number of weeks of chemotherapy, radiotherapy and numerous check-ups followed until he received the all clear to return home.

“Things went smoothly for a while; I stayed on my medication and kept myself indoors and safe from the elements while I recovered. It wasn’t until a few months down the track when things started to go wrong.”

Matt had Graft-versus-host disease (GVHD), a complication that can occur after a bone marrow transplant where the newly transplanted cells attack the recipient’s body.

The repercussions of GVHD left Matt with lasting problems with his liver and eyes, which he says are “continuing issues now but are certainly the lesser of two evils of what my outcome could have been.”

Now 27 years old Matt has just recently celebrated the seven year anniversary of his transplant, and through the RAH Research Fund plays a vital role in raising money for medical research.

“It may sound strange to hear, but in a way I see what I went through as a blessing more than a curse.”

“It’s helped me to spread the message about what research has done, and continues to do, and the importance of maintaining that research.

“I am living proof of what the continued success of cancer research is capable of, which is potentially, saving lives.”

Support of Nutritional Physiology

Established in 2007, the Centre of Research Excellence (CRE) in Translating Nutritional Science to Good Health seeks to encourage and promote clinical research in the area of nutritional physiology.

A number of projects at the Centre are supported by the RAH Research Fund and Project Manager, Dr Tim Murphy says this support is critical to the success of the Centre's research and also provides a number of researchers with jobs.

"We've been recipients of RAH Research Fund grants for a number of years now, which has been incredibly valuable to us," Dr Murphy said.

The Centre itself is funded by the National Health and Medical Research Council (NHMRC) until 2017 and Dr Murphy says there is about 70 people involved, falling under the Discipline of Medicine at the University of Adelaide, based at the Royal Adelaide Hospital campus.

According to Dr Murphy, there is a large amount of exciting projects occurring at the Centre in an area that's in dire need of continuous research to help build a healthier community.

"An example of some of our work is looking at protein as a dietary intervention strategy for people with Type 2 Diabetes. We've found that giving 25 grams of protein, 30 minutes before a meal induces a number of responses including the release of insulin, glucagon and gut peptides, while slowing gastric emptying, leading to improved glycaemic control. This is very beneficial to people with Type 2 Diabetes"

"One of our researchers, Dr Stijn Soenen from The Netherlands is supported directly by a RAH Research Fund Grant and he is examining protein in the elderly, which is a really interesting area."

"Many studies have looked at the benefits of using protein for glycaemic control and weight loss in younger people, but there are very few studies looking at protein in the elderly. As we get older, we can lose a lot of muscle mass, a condition known as Sarcopenia, which leads to frailty. Stijn and his team are looking at developing the most

effective form of protein supplement for older people, which combines the greatest anabolic effect on muscle with the least suppression of appetite and energy intake. These results are being translated to Aged-care facilities and programmes such as Meals-on-Wheels."

"Another translational research study in the Royal Adelaide Hospital is a project called PROWL – the Prevention and Reduction and Weight Loss in acute care patients. Part of this study is introducing a 'Red Tray' which alerts nursing staff to patients who are at risk of malnutrition, or who may have difficulty eating. Dr Murphy says "the idea is nurses can see which patients are at risk, and offer assistance to finish their meal, or find out the reasons why they can't finish the meal."

Coming from an interesting background in agricultural science, Dr Murphy joined the Centre in 2007 and loves working with an area that involves the general public.

"It's amazing how many people are willing to take part in clinical trials, but we could always do with a lot more!"

"Once we get people involved, we find they enjoy coming back for other studies – we have a great team of Research Officers and Nurses. It is a rewarding experience when you see people coming in for a weight loss study, and finding out they have kept the weight off and their lives have changed for the better – that is really great."

Dr Murphy also believes the support of the community, through bodies such as the RAH Research Fund, is crucial.

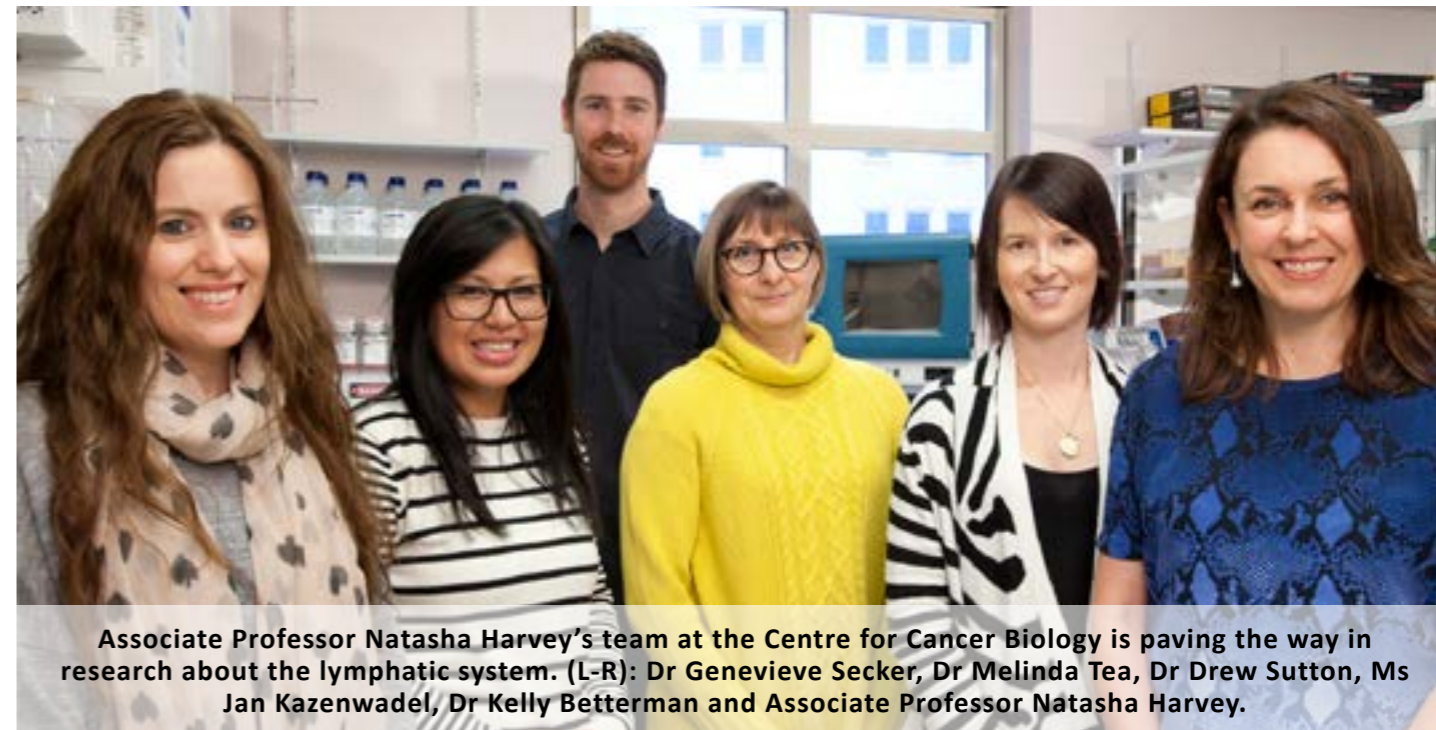
"The area of nutrition is crucial and people have to realise that if they become obese, then the likelihood of their children being obese is high, as research is finding the next generation is also effected," he said.



FACT:
The Centre runs a Wednesday Wrap fortnightly seminar series. For more info contact Dr Tim Murphy on (08) 8222 2960 / tim.murphy@adelaide.edu.au

The team at the Centre of Research Excellence in Translating Nutritional Science to Good Health are very thankful for the support of community donations in helping them work towards a healthier community.

Lymphoedema: Adelaide Researchers Unlocking the Gene Puzzle



Associate Professor Natasha Harvey's team at the Centre for Cancer Biology is paving the way in research about the lymphatic system. (L-R): Dr Genevieve Secker, Dr Melinda Tea, Dr Drew Sutton, Ms Jan Kazenwadel, Dr Kelly Betterman and Associate Professor Natasha Harvey.

Affecting more than 140 million people worldwide, lymphoedema is an inherited condition but can also be caused by serious damage or injury to the lymphatic system.

Causing localised fluid retention and tissue swelling because the lymphatic system is too compromised to function normally, lymphoedema is a debilitating condition and one that is not well understood across the globe.

In a bid to try and understand the cause of inherited or primary lymphoedema, Adelaide researchers who are supported by the RAH Research Fund have made an exciting discovery finding a particular gene, GATA2, is crucial in the formation and maintenance of valves in the lymphatic system.

Dr Kelly Betterman and Ms Jan Kazenwadel, who work in Associate Professor Natasha Harvey's team at the Centre for Cancer Biology (a partner of the RAH Research Fund), are thrilled to have been involved in a world-first discovery that has unlocked another piece of the lymphoedema gene puzzle.

"We've just had a paper that's come out in the Journal of Clinical Investigation that has been able to share this breakthrough finding with the rest of the research community," said Dr Betterman.

"There are already a number of genes that have been found that make up the lymphatic system, but we've now been able to add GATA2 to the list."

"We've confirmed there are particular mutations in the gene which will lead to lymphoedema, based on the type of mutation."

The research project came about after initial work collaborating with Professor Hamish Scott's data from a worldwide screening of patients with lymphoedema and a predisposition to developing myelodysplastic syndrome and/or acute myeloid leukaemia.

After seeing how GATA2 had a very important role to play in lymphatic vessel development, the team wanted to explore this further, and about three years of research led to the current discovery.

Both researchers love working in an area that is basic molecular biology combined with genetics and developmental biology, but with the opportunity to impact patients suffering from this condition.

"Working in the lab is like a form of cooking," Ms Kazenwadel said.

"There are a lot of frustrations, but when something comes together and goes right, it's the most exciting feeling."

"It's also so great to work in this area of research on something you feel has a possible application to help people in the future."

"Our work is making a vital contribution to understanding how the lymphatic system works, and with more research we hope it can be used to develop better treatment options for patients suffering from lymphoedema," she said.

The Right Hand of The RAH

With the relocation of the Royal Adelaide Hospital imminent, we caught up with Volunteer Manager Chris Iovino to find out the history behind the volunteer services at the RAH (fondly known to many as the Lavender Lads and Ladies) and the vision for the future.

Initiated in 1971, the concept of the Lavender Lads and Ladies at the time comprised of a small handful of volunteers from the local Adelaide community.

“These men and women would come in after hours or on weekends and keep patients company who didn’t have any visitors,” Chris said.

“The ladies would design craft kits and interact with the patients whilst the lads were in charge of driving to and from appointments.”

As for the history behind the name Lavender Lads and Ladies, Chris informs it is quite an amusing story.

“At the time, Woolworths was having a sale on uniforms, the only ones left were lavender as no one wanted that colour!”

Now, over 40 years on, the volunteer service has grown significantly both in the number of volunteers and the level of services offered to patients.

“We have 200 volunteers between the ages of 19 to 86 years old, ranging from university students to retirees,” Chris said.

The volunteer program currently offers nine different services to patients ranging from laundry and driving to palliative care. All of these services are provided completely free of charge.

“People say that ‘you’re only a volunteer,’ but there is so

much more to it. Our volunteers are very dedicated.”

Just in the last year the RAH volunteers have given an incredible 39,000 hours of their time to patient services.

“We’ve had students come in here and say ‘I didn’t know what I wanted to do with my career, but now I know I want to work in a hospital,’” Chris said.

Chris is looking forward to moving into the West End of Adelaide and sees the new hospital as an exciting opportunity to build volunteer numbers and increase the number of services available.

“I’m looking at creating a guided tour service, because I know that many members of the community will want to come and see the completed new hospital,” she said.

“I have lots of exciting plans for the new hospital and am very keen to continue in a job I love very much that provides much needed support to the staff and patients at the RAH.”



50 Years of Kidney Transplants Beginning in Adelaide

This year, we’re celebrating a major milestone at the Royal Adelaide Hospital – 50 years of kidney transplants in Australia, beginning right here in South Australia. With the renal and transplantation services located at the Royal Adelaide Hospital (RAH), we congratulate all involved in this major milestone.

On Saturday 1st of August, Health Minister Jack Snelling helped celebrate the occasion with one of Australia’s largest gatherings of kidney transplant recipients.

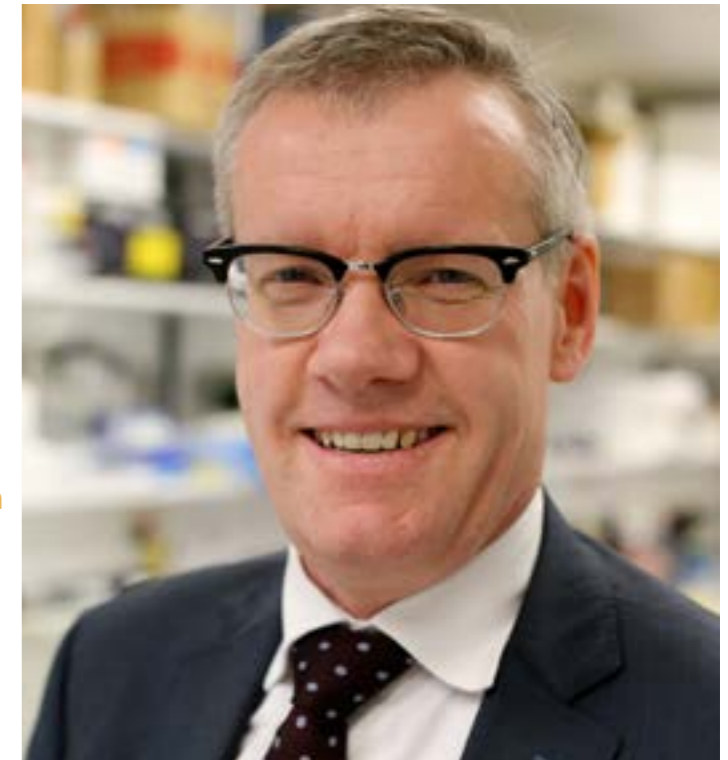
The first successful living kidney transplant occurred at The Queen Elizabeth Hospital (TQEH) on 21st February 1965 when Mr Domenic Centofanti gave a kidney to his son-in-law, Mr Peter Tirimacco, in an operation performed by Dr Peter Knight.

Mr Tirimacco’s successful transplant lasted for 11 years before the kidney failed and he had to recommence dialysis. During these 11 years, Mr Tirimacco was able to live a normal life – seeing his family grow up and resuming fulltime work.

According to Professor Toby Coates, Director of Kidney and Islet Transplantation at the RAH, much has been learnt in terms of immune suppression and care of living kidney donors since then.

Since the first iconic transplant, both TQEH and the Royal Adelaide Hospital (RAH) have performed over 2,500 kidney transplants and provided life and hope for thousands of people around the country. The science of transplantation and clinical care has also transformed.

From the two drugs available in 1965, there are now over 10



Professor Coates from the RAH says the last 50 years of kidney transplants would not have been possible without community support.

drugs that target different aspects of the immune system’s functioning and by understanding the immunological basis of tissue compatibility, transplant options have been opened up for thousands of Australians and patients worldwide.

Professor Coates says the willingness of South Australians to embrace new techniques and new technologies in transplantation has facilitated the worldwide advance of transplant medicine.

Today, the South Australian Renal Transplant Service also participates in a range of kidney transplants including desensitisation, where the patient’s immune system is modified to allow an incompatible transplant to occur. TQEH Kidney Unit was one of the first in Australia to undertake blood group incompatible kidney transplants with a strong program that continues to function today.

Tee Off Fore Life - Annual Golf Day

Settle in for a day of golf and help raise funds for an extremely worthy cause.

We’re very excited to be busily preparing for the RAH Research Fund’s Tee Off Fore Life Golf Day.

Sponsored for the second year in a row by GerFloor, a flooring company, proceeds for this year’s event will be helping the Youth Cancer Service in their aim to provide equipment for patients under the age of 25 who are being treated in the adult sector.

This equipment will follow them to the new RAH.

WHEN: Friday October 16 2015

WHERE: Adelaide Shores Patawalonga Golf Course, Military Road.

Team registration is \$600 +GST per team of four. Any prizes/gifts in kind are extremely appreciated, as are of course any monetary donations.

For more information or to book, please contact Matt Jackson, 8222 2744, matthew.jackson@health.sa.gov.au



A group happy snap of some of the wonderful RAH volunteers.

Join Us for A Movie Night!

A MESSAGE FROM BOND'S PAST SEES HIM UNCOVER THE TERRIBLE TRUTH BEHIND SPECTRE.

WHEN: SUNDAY 15 NOVEMBER 2015

WHERE: REGAL THEATRE - 275 Kensington Rd, Kensington Park

TIME: DOORS OPEN 12PM, SCREENING AT 1PM SHARP

TICKETS: \$20 per ticket OR \$15 per person for bookings of 10 or more

SEATS ARE LIMITED

Get your tickets now from the RAH Research Fund.

Funds raised will benefit cancer research at the Royal Adelaide Hospital

To purchase tickets contact us on 08 8222 5281 or RAHresearchfund@health.sa.gov.au. Alternatively, you can drop in to the office: Sheridan Building, North Terrace, Adelaide.

All tickets must be paid for prior to the screening and pre-paid tickets will be available for pick up on the night.



WE HONOUR THEIR MEMORY

Donations were received between 1 April 2015 and 31 July 2015 in memory of the following people:

Tran, My Hue	Goldring, Beverley	Clough, Bruce Fraser	Schapel, Mervyn (Merv) James	Roesler, Wayne Rex
Tsiorvas, Panagiotis (Peter)	Oakeshott, David	Harris, Barbara	Assender, Reta Isabel	Borgas, Ian Arthur
Brooks, Hector Buckland	Donato, Dominic	Mazzaro, Antonietta (Iris)	Henderson, Richard Dale (Dick)	Johnson, Neil William
Sellar, Damien Andrew	Morton, Joyce	Langlois, Lorna	Boult, Allan William	Malavazos, Michael (Guko)
Haughey, Gerard (Gerry)	Pannunzio, Giuseppe	Datson, Trevor John	Clark, Donald (Don) John	Simeone, Assunta
Czornohalan, Axent	Jancu, James Joseph	Baldwin, Philip Roger	Ambrusco, Emma	De Ionno, Nicola JP
Treadwell, Christopher P	Semple, Julie Marie	Ingram, Judith Margaret	Fantarella, Maria	Dimas, Dimitrios (Jim)
Wilson, Heather	Visvikis, John	Crea, Rosa	Collins, Margaret	Boase, Beryl Joy (Joy)
Grant, Joyce Doreen	Housden, Carol	Salu, Eda Renaate	Paterson, Howard James (Jim)	Kennedy, Robin (Bob)
Lane, Adam	Collett, Ian Douglas	O'Rourke, Daniel (Paddy)	White, Anthony (Tony) John	Kokkinakis, Christina
Seymour, Terry	Penberthy, Jillian Vi	Ardalich, Milan	Storer, Gerald Burdon	Nigro, Sabatina
Hourigan, Lloyd & Dianne	Millard, Lettie	Copeland, Alexander (Alex)	Carter, Basil Roy (Roy)	Sam, Dieu Trinh
Underhill, Donna	Bailey, Gerri Lou	Schilg, Jeanette Alison	Dodd, Vivienne	Daws, George Robert
Monaghan, Carol	Brini, Giovanni (John)	Slee, Colin David		Fitch, Ronald John
	Katsikas, Panagiotis			
	Merchant, Joyce			

CELEBRATORY DONATIONS RECEIVED

Thank you to those who sent in donations to celebrate the following events:

- Birthday of Antonia Zotti
- For the 70th Birthday of Fred Engelsma
- For the 60th Birthday of Aden through Nicolle Hancock
- For the birthday of G Lehmann