



# NRF

NeuroSurgical Research Foundation

**ANNUAL REPORT 2015/2016**





To promote, foster, develop and assist the study of all matters related to neurosurgery.

To encourage, stimulate and aid research and investigation into such matters and to stimulate public interest in neurosurgery.

To cooperate with other organisations in neurosurgical work and research.

To encourage post graduate medical study in neurosurgery.

To assist the NRF Chair of Neurosurgery.

To raise funds for the above purposes.

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Ms Catherine Branson

Patron

Dr Renée Turner

NRF Director of Neurosurgical Research

The past year has seen some remarkable achievements by the NRF.

Perhaps the highlight of the year for me was seeing our new President, Professor Robert Vink, hand a cheque for \$1 million to the Vice Chancellor of the University of Adelaide at a wonderful celebratory dinner held at the Wine Centre in November. These funds came from the Paediatric Research Appeal and will support paediatric neurosurgical research at the University of Adelaide involving both interstate and international collaborations. As Professor Alastair Burt, the Executive Dean of Health Sciences, observed at the dinner, the relationship between the NRF and the University of Adelaide is both long and strong with the NRF having donated over \$5.3 million to support neurosurgical research at the University. This is a truly significant achievement and reflects the true generosity and dedication of our many donors and fundraisers.

Our NanoZoomer Appeal was also completed during this past year, with the final \$59,000 being raised at the November dinner. The remainder of the \$110,000 needed to meet the cost of this large tissue scanner, critical to contemporary neurosurgical research, was raised via the City to Bay Fun Run. Particular thanks are due to the runners of Team Neuro.

The past year also saw the first Abbie Simpson Clinical Fellow, Dr Alistair Jukes, start his two-year project on skull-based neurosurgery.

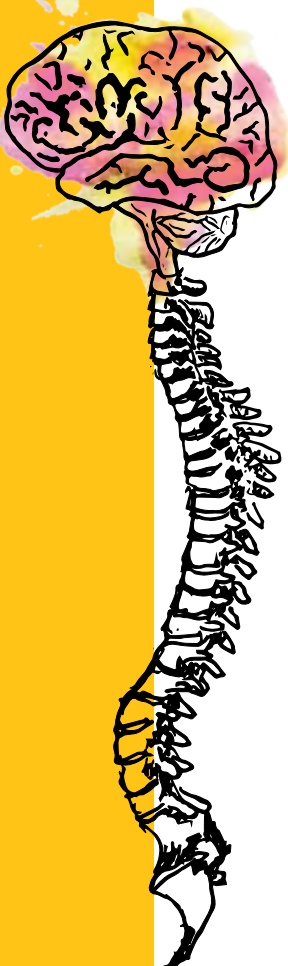
Finally, we were privileged that His Excellency the Honourable Hieu Van Le AC and Mrs Le agreed to host a reception at Government House to recognise the outstanding contributions made to the NRF by our major donor and supporters. It proved a delightful occasion for which we are most grateful to the Governor, Mrs Le and the staff of Government House.

Once again I close by expressing my grateful thanks, first, to Ms Ginta Orchard, Executive Officer of the NRF, for her hard work and commitment to the objectives of the NRF; secondly to the Board Members of the NRF for their important voluntary work in overseeing the operations of the Foundation; and finally to our very many members, volunteer and other supporters without whom the proud record of the NRF could not be maintained.



Catherine Branson  
**Patron**





## NRF Life Members

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Richard Campbell  
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Donald Simpson AO

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Melissa Gillian Sparrow  
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June Bowman  
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Muriel Gunn Research Trust Fund  
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Jody Koerner  
South Australian Police

## Major Benefactors

Bill & Jo Cooper  
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Harris Foundation  
Medtronic  
SANTOS

CMV Foundation  
Wilkins Family Foundation  
NuVasive  
Sarah Constructions

## Major Community Benefactors

Adult Brain Cancer Support Association  
Maddie's Appeal

Aussie Farmers Direct  
Patrick of Coonawarra

Celebrate for a Cure  
Strong Enough To Live



The NRF held an event at Government House on 18th May to presented recognition awards to our key supporters and donors. Recipients of these awards included individuals, groups, foundations and companies who have donated, fundraised and sponsored NRF appeals and events during the past 2 years. The awards were presented by His Excellency the Honourable Hieu Van Le AO.

## Friend of the Foundation Major Benefactors



SA Police – Ride Like Crazy  
Deputy Police Commissioner Linda Williams – Brain Cancer Research



James & Diana Ramsay Foundation  
Kerry de Lorme  
Paediatric Research



Barbara Kelley

## Major Corporate Benefactors



Wilkins Family Foundation – Michael & Sandra Wilkins



1.



2.



1. Letcombe Foundation  
Henry Rischbieth
2. Nu Vasive  
Merv Killey
3. Harvey Foundation  
Trevor Harrison

## Major Community Benefactors



1.



2.



3.

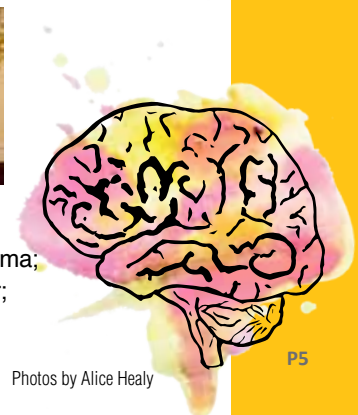


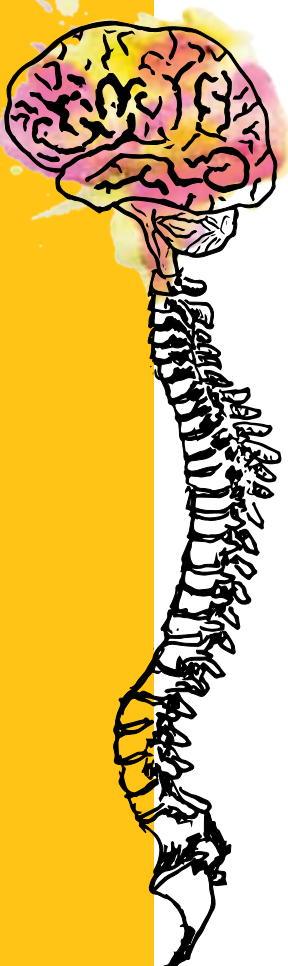
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5.

1. Adult Brain Cancer Support Association's (ABCSA) – Fundraising for Brain Cancer Research - Paola Dougherty, Manuela Smith, Scott Nussey, Andy Stokes, Hannah Philbey;
2. Aussie Farmer Direct - Rohit Sharma;
3. Celebrate for a Cure - Tracey Heath & Christie Pond;
4. Maddie's Appeal - Sandy Beckett & Danielle Miller;
5. Strong Enough to Live - Martin Adams





My first term as President has been both personally rewarding, as well as a very successful year for the NeuroSurgical Research Foundation. I started the year with the intention of broadening the NRF research base, encouraging translational research and raising the profile of the NRF as a body that supports neurosurgical research. I am pleased to report that we are now beginning to see many of these aims being addressed.

Last November, the Foundation donated \$1.0 million to the University of Adelaide to support collaborative paediatric neurosurgical research. The intent of this endowment fund is to increase interstate and international collaboration in this research area, addressing both a broadening of the research base as well as encouraging translational research. Moreover, the donation was made at a dinner to celebrate the achievements and contributions of past President, Dr. Brian North, who continues to contribute in a very positive way to the success of the NRF as a board member. By making this donation at the dinner, we fulfilled our aim of raising the profile of the NRF as a body that supports neurosurgical research.

Similarly, the 2016 proceeds of our joint partnership with SAPOL and the Ride Like Crazy campaign were donated to Prof. Stuart Pitson of the University of South Australia, who is developing novel pharmacological strategies to treat glioblastoma, one of the most aggressive and deadly brain cancers known today. The Ride Like Crazy campaign is a very successful collaboration with the NRF, and has raised over \$500,000 for the NRF to fund brain cancer research. This is the first NRF donation to the University of South Australia, creating a new partnership in what is a critically important area of neurosurgical research. Again, this donation and

the presentation ceremony and consequent media coverage contributed to our aims of broadening the research base, encouraging translational research and raising the profile of the NRF as a body that supports critically important neurosurgical research.

Throughout 2015/2016, The NRF also supported the acquisition of a large slide NanoZoomer for the University of Adelaide, that makes it possible to rapidly acquire and store digital images of neurosurgical pathology for analysis and publication, and continued the support of the Abbie-Simpson Fellow, Dr. Alistair Jukes, in Prof. Peter Wormald's laboratory, and the ongoing paediatric neurosurgical research of Dr Amal Abou-Hamden. In addition, we supported a number of other research projects through our grants-in-aid scheme. In total, over \$1.3 million was directed to supporting research in the last 12 months. The support of research investigating neurosurgical conditions is the fundamental mission of the NRF with the goal being to not only to save lives, but also improve the quality of life of those affected by conditions that affect the brain and spinal cord.

I am also pleased to report that the Foundation also received its largest bequest in its 53-year history, that of \$2.4 million from the estate of Thomas James Ashton. These types of bequests give the NRF an opportunity to significantly shape future neurosurgical research in Adelaide and Australia. We can all recall the impact of the NRF establishing Australia's first Professor of Neurosurgical Research in 1992 with a donation of \$1.8 million to the University of Adelaide. This bold and visionary step created what has now become Australia's premier brain injury research team, widely recognized as a world leader in head injury research. The Board now is facing the challenge of how to best utilise the Ashton bequest to



Photo by Alice Healy



create a similar impact on neurosurgical research in Adelaide and Australia, and I am confident that they will make a wise decision.

Late last year, Dr. Renée Turner was appointed as the NRF Director of Neurosurgical Research at the University of Adelaide, ensuring that the neurosurgical research laboratory will build on its long-standing success as Australia's premier brain injury research group. The laboratory now has active research programs in a wide variety of conditions that affect the brain and spinal cord including traumatic brain and spinal cord injury, stroke, brain swelling, concussion, neurodegeneration, brain tumours and sudden infant death syndrome, amongst others. Dr. Turner was accordingly invited to our board meetings and we certainly appreciate her contribution to the future success of the NRF.

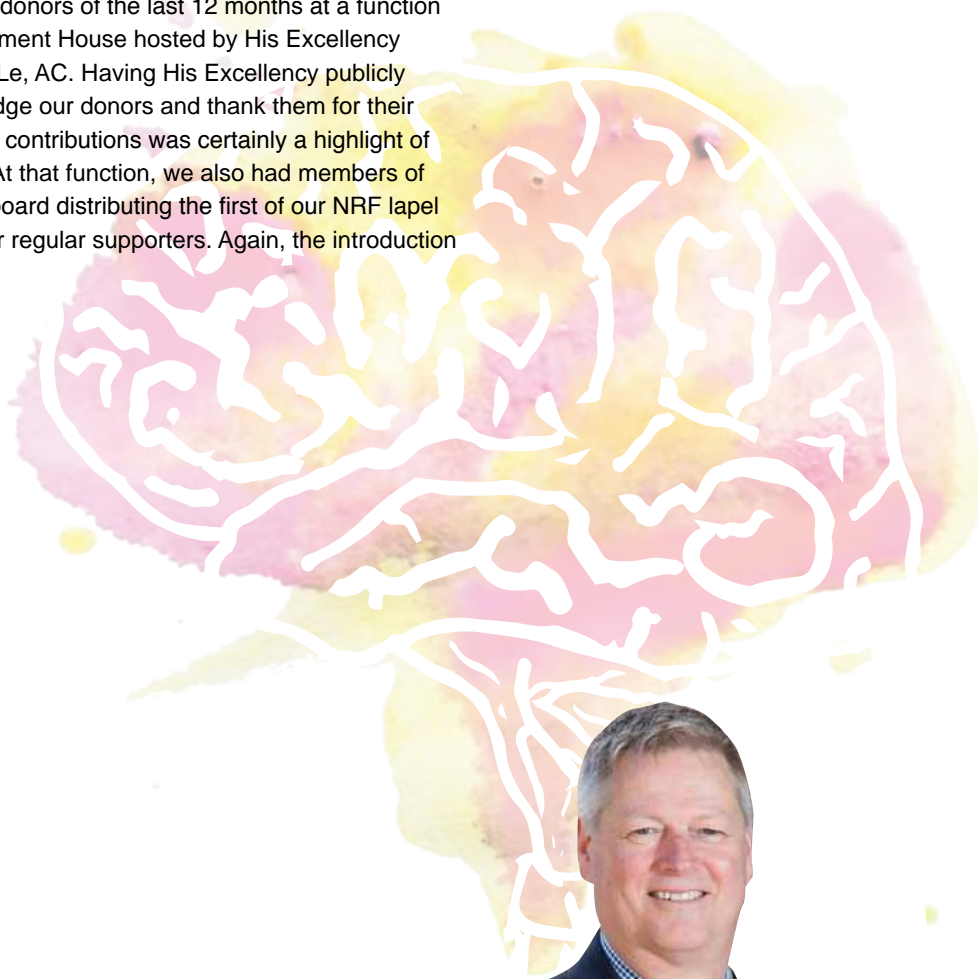
The support of our donors is absolutely critical to the success of the Foundation and we were fortunate to have the opportunity to thank many of our major donors of the last 12 months at a function at Government House hosted by His Excellency Hieu Van Le, AC. Having His Excellency publicly acknowledge our donors and thank them for their significant contributions was certainly a highlight of the year. At that function, we also had members of the NRF board distributing the first of our NRF lapel pins to our regular supporters. Again, the introduction

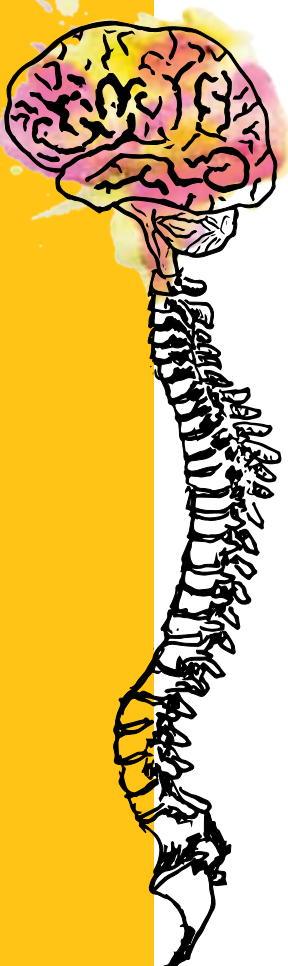
of the lapel pins is a way of raising the profile of the NRF in the community. Whenever you see an NRF lapel pin, you will know that the wearer is a highly valued member and donor of the Foundation.

Finally, I wish to sincerely thank the members of the board for contributing their valuable time to the Foundation, and for supporting me in my first year as President. I know that every President does things a little differently than their predecessor, and I sincerely thank the Board for their perseverance as we seek to build on the solid foundations laid over the last 53 years.



Professor Bob Vink  
**President**





## Celebration Dinner 25th November

The 'NRF Celebration Dinner' held on 25th November successfully raised \$59,000 towards the NanoZoomer Appeal allowing us to finally reach our goal. The dinner recognised 52 years of the NRF funding neurosurgical research to the University of Adelaide.



"I would like to extend the University of Adelaide's thanks to the Foundation for their long-term philanthropic support to the University. This has delivered \$5.3 million for research since 2003."

"Over the past 10 years, this research group has attracted an additional \$6 million in externally funded grants and fellowships for every dollar the Foundation has donated—a result which clearly highlights the importance of seed funding."

*Prof Warren Rebhington*  
Vice-Chancellor – The University of Adelaide

The relationship between the NeuroSurgical Foundation and the University of Adelaide is both long and strong. This has supported research covering a range of important neurosurgical topics including traumatic brain injury, spinal cord injury, stroke, brain tumours, sudden infant death syndrome, and neurodegenerative diseases such as Parkinson's disease. In total this has led to over 100 published papers. Many of the projects supported by this funding have generated scientific information which will be translated into clinical practice with a direct benefit to patients with neurosurgical conditions. The Foundation has also supported a pipeline of higher degree students. Team Neuro have successfully trained 15 PhD's, 5 Masters and 16 Honours students over the past 10 years. "We are thrilled by the further donation of \$1 million to support staff in the University of Adelaide to undertake research into injury and disease of the brain in childhood."

*Prof Alastair Bart*  
Executive Dean of Medical School – The University of Adelaide

**The NRF would like to thank the following Sponsors and Donors who made this successful event possible.**

### Diamond Sponsor



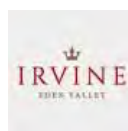
### Gold Sponsor



### Dinner Sponsors



### Dinner Supporters



### Prize Donors

Abou-Hamden Family	Aldgate Vet Clinic	Bank SA	Beauty Vibe
Caffe Buongiorno Modbury	Coopers	Glenn McCulloch	Haigh's Chocolates
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Leconfield Wines	Mark Foster	Julie Lawry	Nadia Kingham
Neo Douvartzidis	Patrick of Coonawarra	Mel Zerner	Orchard Family
Pauline & the late Elias Lianos	Pukitis Family	Rezz Hotel	Perpetual
T-Bar	Vrodos Family	Robert Searcy	Sir James & Lady Joan Hardy



In 2015 I was honoured to take up the position of NRF Director of Neurosurgical Research. The 2015/2016 year has been a very busy time for the Translational Neuropathology Laboratory with many new students joining the lab, whilst others are completing their research studies.

Dr Anna Leonard returned to Adelaide after 12 months at the University of Alabama, (Birmingham) under leading neurotrauma researcher, Dr Candace Floyd. During her time in the US, Anna learnt about new clinically-relevant models, skills which she has brought back to Adelaide and will apply in setting up the spinal cord injury research program here at the University of Adelaide.

New students that have joined the lab are Eden Dempsey, Amanda Marconni, Oana Marian, Rebecca Jury, Bianca Guglietti, Mark Pilla, Jessica Sharkey and Jade Spinelli. All of these students are undertaking a variety of research projects for their Honours degree, including investigating neuroinflammation in traumatic brain injury and neurodegeneration, blood-brain barrier dysfunction following stroke and Sudden Infant Death Syndrome.

The research studies of our current PhD students are progressing well. Wrapping up their PhD studies in 2016 are Fiona Bright and Viythia Katharesan, who are both writing their PhD theses. Fiona has returned to Adelaide after completing 18 months of her PhD on Sudden Infant Death Syndrome at Harvard University (Boston, USA). During this time Fiona learnt a number of cutting edge techniques that assisted in her exploration of neurotransmitter control in Sudden Infant Death Syndrome. PhD students Kimberley Mander, Stefan Court-Kowalski, Stephanie Plummer and Kelly McAteer are in the final year of their experiments, all of these students are working on projects examining aspects of brain tumours or traumatic brain injury. Finally, Annabel Sorby-Adams and Alina Arulsamy are both in the first year of their PhDs and have recently embarked on their research programs.

In the current research climate, winning external grant funding is becoming extremely difficult which is why the continued external grant success of the laboratory speaks of the international quality of the research being undertaken by the group. In the past year, the group has been awarded over \$382,000 in competitive project funding, including grants from Conquer Paralysis Now, Brain Foundation and Astra Zenica. Publications in the lab over the past 12 months have been in a number of international journals including PLoS ONE, British Journal of Pharmacology and Journal of Neurotrauma, amongst others. Members of the group have

delivered conference presentations at a number of national and international scientific meetings including National Neurotrauma (USA) and National Neurotrauma Symposium (Adelaide), in addition to invited presentations at the University of Nottingham, University of Alabama, International Symposium on Neurorepair and Neuroprotection (Germany) and International Neurotrauma Symposium (South Africa). Senior members of the laboratory have also established new research collaborations with groups at the University of Nottingham (UK), University of Nagoya (Japan), Stellenbosch University (South Africa), University of Bonn (Germany) and University of Western Australia. Such research collaborations, presentations and publications highlight the novel and innovative research conducted by the team.

PhD student Viythia Katharesan was a University finalist in the three-minute thesis competition. PhD student Stephanie Plummer and Post-Doctoral Researcher Dr Anna Leonard were amongst 10 young South Australian scientists selected in Fresh Science 2016. This program recognises excellent young researchers and takes them through science communication and media training workshops to equip them with vital skills for communicating their science as they move through their careers. Dr. Lyndsey Collins Praino was a finalist in the South Australian Unsung Heroes awards and has recently been named a finalist for the South Australian Young Tall Poppy for 2016 by the Australian Institute of Policy Science, an award which recognises excellence in science communication.

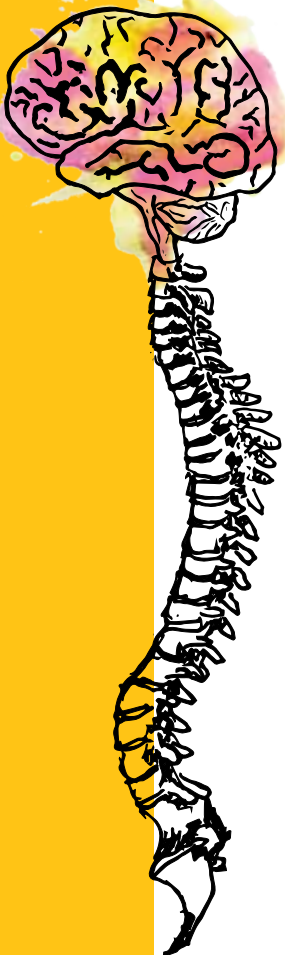
None of this would have been possible without your support as donors to the NRF, so thank you once again for your generous support of the NRF.



Dr Renée Turner  
**NRF Director of NeuroSurgical Research**



Photo by JoAnne Robinson



\$1,339,012 in new research and equipment funded by the NRF through generous donations.



**EQUIPMENT:** NanoZoomer large scale tissue analyser  
**DONATED TO:** Translational Neuropathology Laboratory, The University of Adelaide  
**FUNDED BY:** City to Bay and Celebration dinner fundraising

The ultra-high resolution digital NanoZoomer is capable of capturing 1.9 billion pixel images from tissue samples, greatly expanding the opportunities for rapid, large-scale tissue analysis. Using the NanoZoomer, medical scientists studying key brain diseases and conditions will be able to significantly increase their output of potentially lifesaving research. The NanoZoomer will become a vital tool for the following key research fields: brain tumours, stroke, concussion, neurodegeneration and traumatic brain injury.

Photo: Dr Lyndsey Collins-Praino and Dr. Renée Turner.



**EQUIPMENT:** Cerebrovascular Flowprobes  
**DONATED TO:** Neurosurgical Department, Royal Adelaide Hospital  
**FUNDED BY:** Maddie's moyamoya Appeal

Flowprobes measure volume flow in intracranial and extracranial vessels during surgeries. Intraoperative measurements of volume flow assure the integrity of flow in cerebral vessels and they alert the surgeon to dangerous flow deficits at a time when every minute counts. Flowprobes will be used to for cranial bypass procedures for people with moyamoya disease, stroke, aneurysms, arteriovenous malformations and brain tumours involving blood vessels.

Photo: Maddie's moyamoya Appeal, represented by Sandy and family with Danielle, Karli from Port Lincoln and Malcolm from the Yankalilla Bakery.



**EQUIPMENT:** Vascular Equipment Lawton Neurovascular Bypass Instruments  
**DONATED TO:** Neurosurgical Department, Royal Adelaide Hospital  
**FUNDED BY:** The Wilkins Family Foundation

Vascular Equipment, Lawton Neurovascular Bypass Instruments are the first to be used exclusively for Cranial Vascular Surgery in Australia and will be used in lifesaving vascular bypass surgery for patients with moyamoya disease, complex aneurysms, carotid and vertebral arteries narrowing and brain tumours.

Photo: Michael and Sandy Wilkins, Dr Amal Abou-Hamden and Geraldine Clark.



**EQUIPMENT:** Dual Channel Intraoperative Optima Flowmeter  
**DONATED TO:** Neurosurgical Department, Royal Adelaide Hospital  
**FUNDED BY:** David Gunn, through the Muriel Gunn Medical Research Trust Fund

Optima Meters are the next generation of surgical flow meters providing unsurpassed accuracy and resolution, ensuring flow integrity and immediate, quantitative flow measurements. Optima Flow-meter will be used to for cranial bypass procedures for people with moyamoya disease, stroke, aneurysms, arteriovenous malformations and brain tumours involving blood vessels.

Photo: Prof Robert Vink, Dr Amal Abou-Hamden, David Gunn and Geraldine Clark.





**NEW RESEARCH:** Skull Base Neurosurgery Haemorrhage & Aneurysm Research

**RESEARCHER:** Dr Alistair Jukes – Neurosurgical Trainee

**APPOINTED AT:** Translational Neuropathology Laboratory, University of Adelaide

**FUNDED BY:** NRF Abbie Simpson Fellowship

Alistair Jukes, under the supervision of Professor Peter J Wormald and Dr Stephen Santoreneos, will be looking at haemostasis in endoscopic skull base surgery. There is a high risk of bleeding when operating within the skull base, whether endoscopically or with open surgery. This research investigates mechanisms of controlling such bleeding with self-assembling protein glues and patches. These glues and patches, when applied to bleeding vessels, form a scaffold around the point of bleeding and stop the haemorrhage. The aim of this research is to determine which of these is most effective, how best to apply them, and long-term effects on the brain itself. This research will also look at platelet aggregation and activation when using muscle patches to stop arterial bleeding.



Photo: Prof Robert Vink and Prof Warren Bebbington

## NRF PAEDIATRIC NEUROSURGICAL RESEARCH FUND

**MAIN FUNDER:** Neurosurgical Research Foundation

**APPOINTED AT:** The University of Adelaide

The NRF Paediatric Neurosurgical Research Fund has been created through a donation of \$1 million to the University of Adelaide. This Fund will support research in paediatrics and aims to promote collaborative paediatric neurosurgical research with other national and international research groups. The main focus will be neurosurgical paediatric research into injury and disease of the brain in childhood.



## PAEDIATRIC NEUROSURGICAL RESEARCH

**MAIN FUNDER:** James & Diana Ramsay Foundation

**RESEARCHERS:** Dr Amal Abou-Hamden  
Neurosurgeon and  
Assistant Dr Aye Aye Gyi

**APPOINTED AT:** Department of Neurosurgery at the Women's and Children's Hospital



We continue to collect clinical data on all children with neurosurgical conditions admitted to Department of Neurosurgery at the Women's and Children's Hospital over the past 5 years. We have conducted research to develop and validate simple and objective tools to assess children with neurosurgical disorders. This work will enhance our ability to care for these children by looking at treatment outcomes and will be able to assist with clinical trials in paediatric neurosurgery to advance knowledge, and to improve outcomes of neurosurgical treatment in children. We examined an area of high priority in hydrocephalus research, specifically shunt infections. This project aims to improve our understanding of the causes of shunt infections and thus the development of strategies to minimise the risk of such infections.

Photo: Dr Amal Abou-Hamden



## BRAIN CANCER RESEARCH FUNDED BY LIGHTSVIEW RIDE LIKE CRAZY

**FUNDED BY:** Lightsview Ride Like Crazy since 2010

Kimberley Mander has developed a system that artificially replicates part of the blood-brain barrier. When cancers around the body spread to the brain, they unlock this barrier and squeeze through. Kim's work focusses on locking down the barrier, stopping metastasis in its tracks, using a targeted drug treatment.

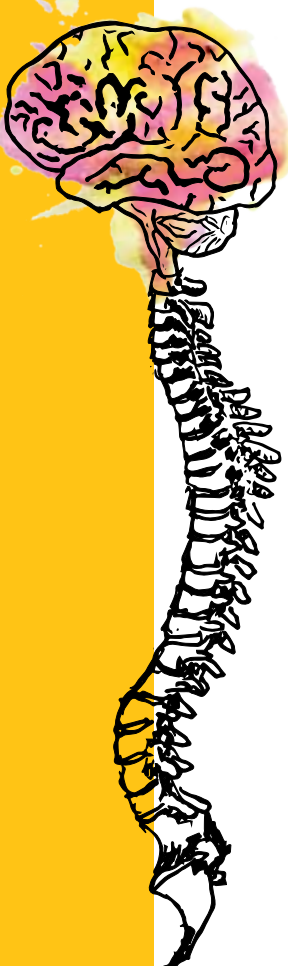


Stefan Court-Kowalski researches glioblastoma, which is the most common type of primary brain cancer. It is invariably fatal, with an average of one year to live after diagnosis and your chances of making it 5 years are 1 in 20. Compare this to a 90% chance with melanoma, breast, or prostate cancer. Research by Stefan focusses on blocking water channels in these tumours, again using a highly specialised drug, which will reduce the tumours' ability to grow and invade surrounding healthy brain.

Photo: Deputy Police Commissioner Linda Williams with Stefan Court-Kowalski.







## NRF Team Neuro City to Bay September



In September NRF Team Neuro raised \$40,000 towards the NanoZoomer Appeal for neurosurgical research.

This year, as in years past, NRF Team Neuro consisted of numerous groups, each striving to make a difference for those with neurological conditions. Thank you to those who donated to support NRF Team Neuro. Surgeons, researchers, Board Members, survivors, friends and family worked together to raise funds for cutting-edge neurosurgical research equipment.

NRF Research Team:

Stephanie, Frances, Emma, Corinna, and Kimberley, swapped their beakers for sneakers and lab coats for lycra.

NRF Board Members:

Bob, James and Catherine.

Team Brain Power:

Led by stroke researcher Emma, joined by family members Amy, Michael, and Molly, to raise funds for research.

Team Patrick:

From the Coonawarra region, in memory of Patrick Tocaciu.

Allison:

Inspired to raise funds after her daughter required lifesaving neurosurgery at 17 weeks old.

Dr Jones & Partners:

Marg, Moira, Beck, Phil, Amy, friends and family.

NRF Team Members:

Mark and daughter Courtney, Marguerite and her family and friends Geraldine, Pauline and Shelly.

Volunteers & Researchers:

Renée, Holly, Lyndsey, Stefan, Tahlia, and Annabel.

NRF friends:

Kahla, Alan and David.

Aussie Farmers Direct:

Rohit and Isha.



Team Brain Power

### Sponsors:

Dr Jones & Partners and The University of Adelaide

### Supporters:

Aussie Farmers Direct and Nippy's



## First Ever Bay to City NRF Team Neuro March

The following groups took on the new challenge of the Bay to City this March raising \$5,150 for neurosurgical research. Thank you to everyone who took part and to all the donors who supported them.



Running for Richard for brain cancer research.  
The Buttery Family & Friends



Marissa & friends  
AVM survivor

## Volunteers Thank You!

A special thank you to all the volunteers who have helped at events and in the office this year. Your assistance is critical in the NRF success.

### Celebration Dinner Volunteers:

Allys, Di, Ellen, Ints, Kahla, Kat, Jessica, Margota, Matiss, Robin, Selga.



### City to Bay Volunteers:

Researchers: Renée, Holly, Lyndsey, Stefan, Tahlia, and Annabel.

NRF friends: Kahla, Alan and David.

Aussie Farmers Direct: Rohit and Isha.



### Office Volunteers:

Di, Jessica, Kahla, Kat, Matiss, Robin

Donations and fundraising have enabled us to fund a total of \$1,339,012 in new neurosurgical research projects and equipment for both research and treatment this year. The institutions and neurosurgical teams to benefit include the University of Adelaide, Royal Adelaide Hospital and Women's and Children's Hospital.

The areas of research funded by the NeuroSurgical Research Foundation continue to grow with this year's research focus on the following area:

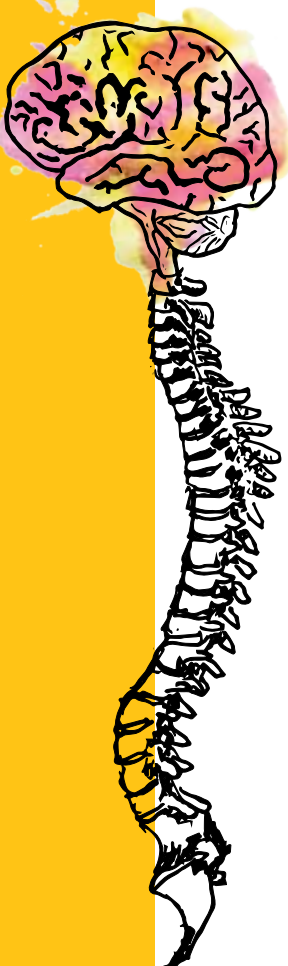
- Primary brain tumours - Reducing tumour growth, swelling, and invasiveness
- Metastatic brain tumours - Closing the blood-brain barrier to stop the spread of cancer
- Neurodegeneration - How neuro-inflammation affects the brain
- Stroke - How to minimise brain tissue damage
- Neurotrauma - How to limit swelling after traumatic brain and spinal cord injury
- Paediatric Research - Impact of traumatic brain injury and how to stop shunt infections

Research resulting in new treatments, greater understanding, longer survival, better quality of life!

Please join me, Ginta Orchard NRF and the Neurosurgical Research Foundation on Facebook & Twitter for up-to-date research stories, event information, and fundraisers such as the events highlighted above.

Ginta Orchard  
Executive Officer





## Donations and regular monthly donations

The NRF relies on your generosity to continue to support vital neurological and neurosurgical research and to be able to donate equipment for both research and treatment.

Regular monthly donations are a great way to spread your giving throughout the year, and an annual statement summarising your donations will be delivered to you.

One-off donations and regular monthly donations can be made either online, at [www.nrf.com.au](http://www.nrf.com.au), by clicking the "Donate Now" button, or by completing the enclosed form.

## In Memoriam Donations

In memoriam gifts are donations that may be made in lieu of sending flowers, or in memory of a loved one, friend, relative, or colleague. They are a positive and thoughtful way to honour the memory of someone special.

Family members are notified of all donors, and gifts are receipted and acknowledged promptly.

The NRF wishes to acknowledge the following In Memoriam donations received from families and friends in memory of their loved ones:

Christopher Adams	Maddy Beckett	Richard Buttery
Henryk Dutkowski	Janet Ferguson	John Edward Gilbert
Mark Harries	Keith Ernest Johnson	Joe Mazzachi
Alan Raymond Mead	Eve Nowakowski	Grant Paech
Mark Brenton Stanley	Margaret Tate	

## In Celebration Donations

Next time you're celebrating a birthday, anniversary, engagement, or special event, why not ask friends and family to skip presents and donate to lifesaving research instead.

The NRF wishes to thank the following In Celebration events created this year: Shirley Barry - Birthday Celebration



Robyn Richards  
Birthday Celebration



Sandy Neindorf  
Birthday Celebration



Kelsey Wilkins & Michael Clay  
Engagement Celebration

Thank you for  
your generous  
support!



## Bequests

Bequests are valuable gifts which allow us to continue funding major research projects and positions, including the trainee fellows and research chairs.

Bequests may be made to the foundation in your will. To leave a bequest to the Foundation, contact your solicitor, who will advise you of the required documentation. Bequests should nominate the NeuroSurgical Research Foundation.

The NRF wishes to thank Thomas James Ashton for leaving a bequest to the NRF.

## Fundraising Events and Personal Challenges

You can help raise money for the NRF by creating your own fundraising activity or event. Go online to [www.nrf.com.au](http://www.nrf.com.au) and click "Fundraise Now" to start, or phone us and we will assist you.

The NRF wishes to acknowledge the following fundraising events and personal challenges created this year:



Danielle Camer / Courtney Mitchelson / Geoffrey Pidcock / Clint Shumack / Jennifer Zadel – City To Surf Sydney In Memory Mark Harries



Ginta & Selga Orchard's Bloody Long Walk



Danielle Miler and Karli Trezise Maddie's Moya Moya Appeal



Brenda Bryne Brenda's Shave



Cherrie & Martin Adams Strong Enough To Live campaign In Memory Chris "Crittter" Adams

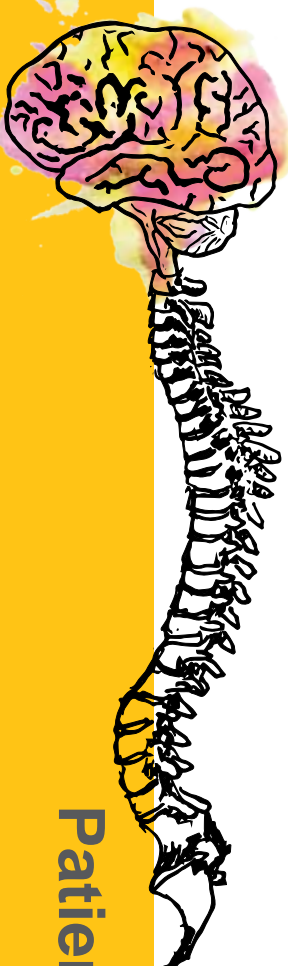


Brenda Harrison Selling NRF Water Bottles



Adult Brain Cancer Support Association Andy & Rosel Stokes – Dress Maker Movie Premier





## Sheryl's Life-changing Epilepsy Surgery



As a child Sheryl struggled with temporal lobe epilepsy, having regular seizures until 14 years old. After 36 years without seizures Sheryl's symptoms returned in her early 50's and for her own safety she could not go out alone. She lost her independence.

In 2012 Sheryl had surgery to remove her temporal lobe, and it changed her life. She no longer suffers from epilepsy and has regained her independence. She has an infectious love for people and life, and insists on 13 hugs a day to spread her joy. Temporal lobe epilepsy is one of the most common forms of epilepsy, especially among adults. Symptoms vary greatly from person to person. Although treatments vary, sadly not all patients can be treated, and untreated patients can develop memory and mood difficulties. Ongoing research is needed to explore treatments and surgeries for more people living with epilepsy.

## Marissa, Living with Arteriovenous Malformation (AVM)



It was a persistent 'whooshing' sound that led to my diagnosis of a Grade II AVM in the left temporal region. Originally I had heard the noise around six years ago and went to the GP who gave me antibiotics, thinking it might be an infection. After having enough of trying to get to sleep with the annoying 'sound' in my left ear I sought further medical investigation.

The time between initial investigation and final diagnosis was a matter of 8-10 weeks and it involved an MRI, MRA and CT angiogram to confirm the diagnosis, resulting in a referral to a neurosurgeon.

An arteriovenous malformation (AVM) is a tangle of blood vessels in the brain bypassing normal brain tissue and diverting blood from the arteries directly to the veins.

I underwent a craniotomy to resect the AVM. The surgery was successful and follow-up tests over the next few years will confirm whether I am cured. Since writing her story, Marissa has joined NRF Team Neuro in the Bay to City and taken up fundraising for neurosurgical research.

## Pam, Living with Hydrocephalus



Pam recently retired at 64 years of age after a 42-year teaching career. Initially as an early years and primary school teacher then later she also qualified as a special education and English as a second language teacher.

When Pam was six years old (1957) she was diagnosed with benign juvenile hydrocephalus (a build-up of cerebral spinal fluid in the brain). If Pam's hydrocephalus was left untreated it would lead to unsteadiness of walking and gradual loss of mobility, migraine headaches, nausea, vomiting and blackouts. It would also impair her gross and fine motor skills, thinking abilities, academic performance and emotional wellbeing.

Pam underwent successful surgery undertaken by Mr Trevor Dinning in 1957 to implant a ventricle-spinal shunt. Through immense time, effort, and determination, and with supportive parents, Pam mostly succeeded in achieving her career and personal goals.

When Pam was 31 in 1982 she suffered balance issues, unsteady walking, migraine headaches and 2 blackouts. A visit to her neurosurgeon Trevor Dinning followed by a head CT scan revealed chronic changes of raised pressure. Mr Trevor Dinning referred Pam to Mr Peter Reilly who implanted a V-P shunt. Six years after implanting the shunt Pam felt unwell again. A revision operation revealed that her shunt was broken. A stronger shunt was implanted and yearly / 2 yearly check-ups continue to this day.

None of this would have been possible without neurosurgical research and the two highly skilled and brilliant neurosurgeons who diagnosed and treated Pam's hydrocephalus. Pam says her quality of life would have been vastly limited if her Hydrocephalus was left untreated. In gratitude Pam regularly donates to the Neurosurgical Research Foundation. Full story available at [www.nrf.com.au](http://www.nrf.com.au)

**NEUROSURGICAL RESEARCH and NEUROSURGERY SAVES LIVES.**  
**NEUROSURGICAL RESEARCH and NEUROSURGERY ENHANCES LIVES.**



**THE NEUROSURGICAL RESEARCH FOUNDATION INCORPORATED**  
**STATEMENT OF COMPREHENSIVE INCOME**  
**FOR THE YEAR ENDED 31<sup>st</sup> MARCH 2016**

		2015	2016
		\$	\$
<hr/>			
	<b>NOTE</b>		
<b>INCOME</b>			
Donations and Fundraising	2	899,820	2,940,424
Investment Income		227,150	(31,321)
<b>TOTAL INCOME</b>		<b>1,126,970</b>	<b>2,909,103</b>
<hr/>			
<b>LESS EXPENSES</b>			
Administrative Expenses	3	(102,532)	(127,238)
<b>SURPLUS/(DEFICIT) BEFORE GRANT EXPENDITURE</b>		<b>1,024,438</b>	<b>2,781,865</b>
Research Grant Expenditure	4	(894,122)	(1,339,012)
<b>TOTAL SURPLUS / (DEFICIT) FOR YEAR</b>		<b>130,316</b>	<b>1,442,853</b>
<hr/>			
<b>NOTE 4 RESEARCH GRANTS</b>			
NRF Chair of NeuroSurgical Research		25,000	85,000
Brain Tumour Research		80,000	---
Paediatric Research		90,000	90,000
Flinders Medical Centre		504,900	---
University of Adelaide – Research and Equipment		148,605	117,214
Royal Adelaide Hospital		45,617	46,798
Paediatric Research – University of Adelaide		---	1,000,000
		<b>894,122</b>	<b>1,339,012</b>
<hr/>			

These pages are extracts from the Audited Financial Statement. If you require a full set of the Financial Statement please contact Ginta Orchard – Secretary by either phone (08) 8371 0771 or email ginta.orchard@nrf.com.au.

Thank you William Buck for pro bono audit services





**THE NEUROSURGICAL RESEARCH FOUNDATION INCORPORATED**  
**STATEMENT OF FINANCIAL POSITION**  
**AS AT 31<sup>st</sup> MARCH 2016**

	2015	2016
	\$	\$
<b>NOTE</b>		
<b>CURRENT ASSETS</b>		
Cash and Cash Equivalents	45,029	166,166
Inventories	---	1,378
Prepayments	2,866	5,278
Deposits	1,014,261	---
<b>TOTAL CURRENT ASSETS</b>	<b>1,062,156</b>	<b>172,822</b>
<b>NON-CURRENT ASSETS</b>		
Office Equipment and Computer Software	1,115	---
Managed Investment	1,720,848	3,903,647
<b>TOTAL NON-CURRENT ASSETS</b>	<b>1,721,963</b>	<b>3,903,647</b>
<b>TOTAL ASSETS</b>	<b>2,784,119</b>	<b>4,076,469</b>
<b>CURRENT LIABILITIES</b>		
Payables	(217,757)	(68,015)
Provisions	(5,267)	(7,617)
<b>TOTAL CURRENT LIABILITIES</b>	<b>(223,024)</b>	<b>(75,632)</b>
<b>NON-CURRENT LIABILITIES</b>		
Provisions	(10,382)	(7,271)
<b>TOTAL LIABILITIES</b>	<b>(233,406)</b>	<b>(82,903)</b>
<b>NET ASSETS</b>	<b>2,550,713</b>	<b>3,993,566</b>
<b>TOTAL ACCUMULATED FUNDS</b>	<b>5</b>	<b>3,993,566</b>

**THE NEUROSURGICAL RESEARCH FOUNDATION INCORPORATED**  
**STATEMENT OF CHANGES IN ACCUMULATED FUNDS**  
**FOR THE YEAR ENDED 31<sup>st</sup> MARCH 2016**

		2015 \$	2016 \$
	<b>NOTE</b>		
<b>ACCUMULATED FUNDS – CORPUS</b>		1,536,079	3,903,647
<b>ACCUMULATED FUNDS – OTHER</b>			
Opening Balance		1,027,397	1,014,634
Surplus / (Deficit) for the year		130,316	(739,946)
Transfer to Corpus		(143,079)	(184,769)
		<u>1,014,634</u>	<u>89,919</u>
<b>TOTAL ACCUMULATED FUNDS</b>	5	<u>2,550,713</u>	<u>3,993,566</u>

**NOTE 5 ACCUMULATED FUNDS**

	Corpus	General Funds	Paediatric Fund	Total
<b>Balance 31/03/2014</b>	<b>1,393,000</b>	<b>239,264</b>	<b>788,133</b>	<b>2,420,397</b>
Transfers	143,079	(143,079)	---	---
Surplus/(Deficit) Allocation	-	1,001,280	23,158	1,024,438
Research Grant Expenditure	-	(894,122)	---	(894,122)
<b>Balance 31/03/2015</b>	<b>1,536,079</b>	<b>203,343</b>	<b>811,291</b>	<b>2,550,713</b>
Transfers	184,769	(184,769)	---	---
Surplus/(Deficit) Allocation	2,354,299	410,357	17,209	2,781,865
Research Grant Expenditure (171,500)	---	(1,339,012)	171,500	(1,399,012)
Payment Paediatric Fund	---	1,000,000	(1,000,000)	---
<b>Balance 31/03/2016</b>	<b>3,903,647</b>	<b>89,919</b>	<b>---</b>	<b>3,993,566</b>





The objective of the Foundation is directed towards research into the cause, diagnosis, prevention and treatment of disease or malfunction of the brain, spine and nervous system.



### **NeuroSurgical Research Foundation**

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