

NANOZOOMER GOES OPERATIONAL



NRF

NeuroSurgical Research Foundation

AUTUMN ISSUE 2016



The NanoZoomer purchased through NRF fundraising of \$110,000 for the Translational Neuropathology Laboratory at the University of Adelaide operational.

Left: NRF Director of Neurosurgical Research Dr Renee Turner with the NanoZoomer

The ultra-high resolution digital NanoZoomer is capable of capturing 1.9 billion pixel images of tissue samples, expanding the opportunities for rapid, large-scale tissue analysis. Using the NanoZoomer, medical scientists in the Translational Neuropathology Laboratory are able to undertake sophisticated tissue sample analyses and greatly increase their research outputs on their study of key brain diseases and conditions. Based in the University's School of Medicine, the NanoZoomer will be a vital tool for the following key research fields:

BRAIN TUMOUR: Much of the death and disability associated with tumours can be attributed to their ability to spread and invade the brain, with devastating consequences such as brain swelling and loss of function. Brain cancer kills more adults under 40 than any other cancer, kills more children than any other disease, and takes one life about every seven hours in Australia.

CONCUSSION: An especially common injury in contact sports such as football, chronic traumatic encephalopathy is a neurodegenerative disease, which appears to be exclusively related to repeated concussion.

TRAUMATIC BRAIN INJURY (TBI):

The leading cause of disability and death worldwide and is associated with significant impairment in brain function, impacting cognitive, emotional, behavioural and physical functioning. TBI is also a significant risk factor for later development of dementia and Alzheimer's disease.

STROKE: Over 72,000 Australians suffer a stroke each year, 2/3 of which are left dead or disabled as a result. A significant contributor to these poor outcomes is the development of brain swelling, which can dramatically increase pressure within the brain.

2016 NRF AGM WEDNESDAY 10TH AUGUST 6:30PM

Please join us at the University of Adelaide in the Ingkarni Wardli Conference Room L7, North Tce Campus.

RSVP to Ginta Orchard (08) 8371 0771 or ginta.orchard@nrf.com.au

The AGM will feature presentations from the following researchers funded by your donations:



Dr Alistair Jukes

Abbie Simpson Fellow – Skull Based Neurosurgery
Haemorrhage control in endoscopic skull base surgery: Developing a patch to stop arterial haemorrhage whilst maintaining brain perfusion, ensuring its safety when used on neural tissue and reducing the incidence of aneurysms.



Jillian Clark

Postdoctoral Research Fellow - SA Spinal Cord Injury Research Centre

Hyperspectral Imaging as an analytical tool to predict neurological prognosis and guide practice: Investigating blood as a predictor of spinal disease, and the aptitude of blood cell signatures that may be clinically determined at the time of spinal cord injury to discriminate neurological status.



Anna Leonard

Lecturer & Research Fellow - Adelaide Centre for Spinal Research

Take the pressure down: determining how to alleviate pressure increases following traumatic spinal cord injury to improve tissue survival and functional outcome.



Annabel Sorby-Adams

PhD Candidate, Stroke Research Program, Translational Neuropathology Laboratory

A novel approach to improving translation in stroke: determining the temporal profile of cerebral oedema and intracranial pressure in a pre clinical model.



Hannah with her family

HANNAH, LIVING WITH BRAIN CANCER

Initial symptoms appeared at least 12 months prior to my diagnosis and surgery. In July 2015 I was hospitalized in Wallaroo where I experienced 2 tonic-clonic seizures. I was transferred by helicopter to the Royal Adelaide Hospital where I was diagnosed with a Grade 2 Oligoastrocytoma, which is a malignant (cancerous) brain cancer.

Most of my tumour was removed during surgery and I went on to complete six weeks of radiation therapy. I live approximately 170km from Adelaide and was able to spend most of my time

at home between treatments thanks to my wonderful family and friends who drove me to and from appointments. I am now trying to wean off the dreaded steroids, find a 'new normal' and a way to survive the six-monthly MRI scans and appointments. With the help of friends and family I would like to raise awareness and funds for Brain Cancer Research. My dream is to look after my children with my husband and watch them grow into successful independent adults.

Organising Head Case Family Fun Day Sunday 26th June in Kadina more information at www.nrf.com.au

LUCINDA, BRAIN TUMOUR SURVIVOR

I was diagnosed with a huge benign (noncancerous) brain tumour that was in a life threatening position in the brain. When I was shown the emergency MRI scans I could see the tumour sticking out like a sore thumb. The Hemangioblastoma was 5.6cm round and under the brain taking up the whole brain stem, which is why I felt numbness and weakness. My Hemangioblastoma was a benign but

highly vascular tumour, made up of thousands of tiny blood vessels. It was attached to two cysts. It was the biggest one my neurosurgeon and neurologist had seen in that position in the brain. It's a miracle that I am here and that I can walk and move. This will affect me for the rest of my life.



Lucinda wearing Grey in May for Brain Tumour Awareness Month)

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 and taken up fundraising for neurosurgical research.



2016 GOVERNMENT HOUSE THANK YOU EVENT

The awards presented recognised our key supporters and donors who have been actively involved with the NRF over the last two years. Recipients included Individuals, Groups, Foundations and Companies who have donated, fundraised and sponsored NRF appeals and events. The awards were given at Government House in May by His Excellency the Honourable Hieu Van Le AO.

• Friend of the Foundation - awarded for ongoing generous donations:

SA Police – Ride Like Crazy - Brain Cancer Research
James & Diana Ramsay Foundation - Paediatric Research

• Benefactors - awarded for ongoing generous donations: Barbara Kelley

MAJOR CORPORATE BENEFACTORS - AWARDED TO COMPANIES AND FOUNDATIONS FOR GENEROUS DONATIONS:



Harvey Foundation
Trevor Harrison



Letcombe Foundation
Henry Rischbieth



Nu Vasive
Merv Killey



Wilkins Family Foundation
Michael & Sandra Wilkins

MAJOR COMMUNITY BENEFACTORS - AWARDED TO COMPANIES AND GROUPS FOR FUNDRAISING:



Adult Brain Cancer Support Association's (ABC SA) – Fundraising for Brain Cancer Research
Paola Dougherty, Manuela Smith, Scott Nussey, Andy Stokes, Hannah Philbey



Aussie Farmer Direct
Rohit Sharma



Celebrate for a Cure
Tracey Heath and
Christine Pond



Maddie's Appeal
Sandy Beckett and
Danielle Miller



Strong Enough to Live
Martin Adams

2016 FUNDRAISERS

FOR MORE INFORMATION AND TO BOOK
RING 8371 0771 OR VISIT WWW.NRF.COM.AU

SWEAT FOR NEURO IN THE CITY-BAY SUNDAY 18TH SEPTEMBER JOIN NRF TEAM NEURO

Walk or run 3, 6 or 12km to raise funds for neurosurgical research. Join the team by purchasing a t-shirt or go the extra mile and recruit sponsors to raise additional funds. Start your training and fundraising today!

Register: Go to www.city-bay.org.au and join NRF Team Neuro in support of the NeuroSurgical Research Foundation. Fundraise online: Register at www.everdayhero.com then search under charities for NeuroSurgical Research Foundation and follow the prompts.

NRF Team Neuro Members who raise \$120 or more will to receive a Free NRF t-shirt or singlet, cap, water bottle and lap-top bag. Alternatively you can join the team by purchasing a t-shirt or singlet for \$60 each and also receive the NRF cap, water bottle and lap-top bag. Order Closing Date Friday 9th September.

Request an order form by ringing 8371 0771 or download one from www.nrf.com.au



INDEPENDENCE DAY: RESURGENCE PREMIERE CHRIS "CRITTER" ADAMS FUNDRAISER THURSDAY 23RD JUNE 7PM

Join Critter's family and friends at the premiere of this most anticipated movie release: Independence Day: Resurgence. The premiere will be held at Palace Nova Eastend Cinemas on the 23rd of June

from 7:00pm to 10:00 pm. Tickets are \$30 and include red carpet entrance and a short reception, with drink on arrival. All proceeds to the NeuroSurgical Research Foundation.



**DR JONES
& PARTNERS**
MEDICAL IMAGING

THANK YOU DR JONES & PARTNERS CITY TO BAY SPONSORSHIP

THANK YOU FOR SPONSORING NRF TEAM
NEURO IN THE CITY TO BAY SINCE 2011,
RAISING OVER \$225,000.

Right: Prof Robert Vink & David Corey from Dr Jones & Partners.



FUNDRAISING THANKYOU'S

Lightview
RIDE LIKE CRAZY
Proudly supported by the South Australia Police

LIGHTSVIEW RIDE LIKE CRAZY 2016

Funding brain cancer and tumour research.

Deputy Commissioner Linda Williams, Chairperson for the Lightview Ride Like Crazy event committee, presented the cheque to NRF researcher Stefan Court-Kowalski.

The annual event, supported by South Australia Police, is conducted in recognition of the late STAR Group member Senior Sergeant Mick 'Crazy' Koerner, who sadly passed away in 2009 from an inoperable brain tumour.

Since 2010, the charity ride has raised about \$1.3M for charity.



BAY TO CITY NRF TEAM NEURO MARCH 2016

The following three 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. All monies raised will go to fund research programs in brain tumour, vascular conditions and brain and spinal cord injury research.



Running for Richard for brain cancer research. The Buttery family and friends.



Marissa and friends AVM survivor Read Marissa's full story on page 2.