

# NEURONEWS

## FUNDING LIFESAVING NEUROSURGICAL RESEARCH

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### CAR-T CELL THERAPY RESEARCH



Dr Lisa Ebert

## FUNDING WIN TO PROGRESS CAR-T CELL THERAPY RESEARCH

Dr Lisa Ebert, a Senior Research Fellow at the Centre for Cancer Biology (a partnership between UniSA and SA Pathology), is focused on cancer immunotherapy: a new type of cancer treatment that uses a patient's own immune system to fight their cancer. Such approaches are yielding exciting new therapies for some cancer types. Sadly, however, these discoveries are yet to benefit patients with primary brain tumours such as glioblastoma.

With the ongoing support of the NRF, Dr Ebert and her team are working to change this outlook, by developing a new treatment for glioblastoma using CAR-T cells. This cutting-edge approach involves 'super-charging' a patient's own immune cells to enable them to specifically destroy cancer cells.

Dr Ebert was recently awarded \$360,000 in funding over 3 years from the Ray and Shirl Norman Cancer Research Trust to investigate CAR-T therapy for brain cancer. Dr Ebert will investigate the development of a novel CAR-T therapy for brain cancer (with fellow researchers Michael Brown, Stuart Pitson and Guillermo Gomez).

The NRF funded two project grants in 2020 and 2019, which laid the groundwork for Dr Ebert to apply and win this new funding grant, to continue this vital work for brain cancer patients and their families.

This new research project is titled: 'Development of new combination immunotherapies for glioblastoma based on Chimeric Antigen Receptor (CAR)-T cell and Bispecific T cell Engager (BiTE) technologies.'

Dr Ebert said, "We have recently developed a new CAR-T cell approach that we believe may be effective for the treatment of glioblastoma. In our approach, CAR-T cells are produced that target a specific molecule, which we have recently shown to be broadly expressed in patient glioblastoma tumours, but not healthy brain tissue.

"We therefore believe that these specific molecule-targeting CAR-T cells should allow effective targeted destruction of glioblastoma cells, leading to tumour shrinkage with minimal side effects," she said.

The team is perfectly positioned to translate this research to improved patient outcomes.

"The results obtained thus far support our continued development and testing of these specific molecule-targeted-CAR-T cells in more advanced pre-clinical models, and eventually a Phase I clinical trial in the setting of recurrent glioblastoma.

"This trial would be launched out of the Cancer Clinical Trials Unit at the Royal Adelaide Hospital (where Cl Brown is Director) and utilise the facilities and processes already in place for our current CAR-T cell clinical trial in metastatic melanoma patients. Of note, our team is one of the few in Australia with direct experience in CAR-T cell therapy, and we are playing a key role in helping to bring this revolutionary technology to Australia," Dr Ebert said.

To find out more please visit: [www.nrf.com.au](http://www.nrf.com.au)



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Purchase your NRF Star of Hope

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Brain Cancer Impact Forum on Tuesday May 25<sup>th</sup>

Join NRF Team Neuro in the City to Bay on Sunday 19 September

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# YOUNG DAD'S JOURNEY WITH A BRAIN TUMOUR



“THE NEUROSURGEONS BELIEVED THE TUMOUR WAS BETWEEN 7- 10 YEARS OLD AND I WAS COMPLAINING ABOUT BEING TIRED AND HAVING HEADACHES SERIOUSLY FOR OVER 9 MONTHS BEFORE I DID ANYTHING ABOUT IT.”

Simon, a young dad, was last year diagnosed with a benign Grade 2 Meningioma. He shared his brain tumour journey with the NRF for Grey May.

“I was initially referred to an Ophthalmologist at the Royal Adelaide Hospital after visiting my Optometrist just after Australia Day 2020. I had consistent headaches for some time and just put it down to poor work-life balance. I thought that it could have been my glasses rubbing on the back of my ear, however the Ophthalmologist confirmed what the Optometrist mentioned that I had consistent pressure on my Optic Nerve. A CT scanned followed at the RAH and shortly after when driving home, I received a call to return immediately back to the hospital.

“I was then diagnosed with, ‘a large brain tumour’, in the left frontal lobe. After going into shock and being ushered through the back halls of the RAH into the ER and then placed up on the ward that night, the surgeons advised me that I would have surgery in 5 days to remove the mass. This was the first time in my 34 years I had even heard of the term ‘craniotomy’.

The surgery was a success, and I cannot speak highly enough of the nurses who took wonderful care of me before and after the surgery, along with wonderful team of the Neurosurgeons lead by Dr Simon Sandler and Dr Gareth Rutter. I will be forever grateful that I was diagnosed with a benign Grade 2 Meningioma - thankfully, my tumour was in a very accessible position. Reflecting on the diagnosis, operation, and initial physical recovery it does feel like it was all blended into one. It was only when I

returned home from the RAH that it started to really sink in.

“It has now been just over 13 months from “The journey has taught me many things, the power of the human body and mind, not only how fragile life can be and how it can all change in an instant, along with how everyone’s recovery is very different.

“Before my operation I took many things for granted, including the health of myself and family/friends. As a public patient I certainly took for granted our health care system and while the wait times are frustrating the clinical care you receive on the wards, in surgery and ICU is first class.

“I was fortunate in that I had never experienced anything worse than a few broken fingers prior to my operation. Spending 3-4 weeks in hospital where so many are people battling life and death or have had seizures whereby their lives will now be in the hands of others certainly changes the way you treat your own body and care for those around you. I lived a very fast-paced life beforehand, where at times I put my family second to my own personal needs such as work and sport, I was fortunate to always have the support of Tammy for this, but the experience has certainly emphasized the importance of good health and family life over other material aspects.

“It has also taught me how important it is from a male perspective to check in

on your health and be open and honest about it. The Neurosurgeons believed the tumour was between 7- 10 years old and I was complaining about being tired and having headaches seriously for over 9 months before I did anything about it. So, when in doubt - please speak up and don’t take any risks with your health.

**What are your goals or next steps with your life?**

“My goals are to continue to be the best partner, family-oriented person, dad to my two young boys and continue to be incredibly grateful for all the care and love I have received over my journey. I am also looking forward to Tammy having a decent holiday as she certainly deserves it!”





# DR XENIA DOORENBOSCH

**Dr Xenia Doorenbosch is a Consultant Neurosurgeon (Adult and Paediatrics) at the Women's & Children's Hospital and the Royal Adelaide Hospital. She is also an NRF Board Member.**

**Why did you decide on a career as a Neurosurgeon? What inspired this choice?**

"Neurosurgery was my first passion in medicine while studying. I was drawn to the complexity of the anatomy and the intricacy of the surgical interventions, as well as the rapid progress in techniques and utilisation of advancing technologies. When I finally did my elective rotation at the Royal Adelaide Hospital as a year 4 medical student, I became an instant neurosurgery groupie. I loved the diversity of the speciality – they operate in so many different parts of the body, not just the brain, and their day can be completely routine and mundane but then suddenly upended by an emergency lifesaving surgery where they suddenly change gears.

"I was also inspired greatly by the Neurosurgery consultants at the WCH, and particularly Dr Cindy Molloy. She was the first, and at that time the only female Neurosurgeon in South Australia. She served as a very visible role model paving the path for future female generations to become neurosurgeons. She did not do this by drawing attention to her gender in a male dominated field and how much she had to overcome in her career being female but by modelling competence and a solid professional identity. She proactively maintained an interest and commitment to guide the female junior doctors in their career paths and was always accessible for advice and encouragement. Her mentorship gave me the confidence and support to

pursue a career in Neurosurgery. I hope I can pay it forward and provide support and mentorship to the next generation."

**What is it about Neurosurgery that fascinates you and why?**

"Neurosurgeons treat a large variety of conditions from improving quality of life to saving a life. Paediatric Neurosurgery fascinates me the most. I love the interplay between the developing brain that is so full of potential, and its incredible ability to recover. It still amazes me the extent of how a paediatric brain can recover and develop to function almost normally despite significant structural injury. And to top it all off, bearing witness to the incredible resilience of my little patients and their families gives me such inspiration and motivation every day. I am humbled to be a part of their journey and so privileged to see them grow up."

**What is a day in your life like?**

"Although there is a routine to my work and schedule, I still find every day is different. I work in three different hospitals and juggle my time between them, sometimes having to visit all three in one day. On average I work between 10-12 hours a day from Monday to Friday, plus Saturday mornings. Often, I have to find time outside of this to complete paperwork and emails.

"Generally, my days are split between operating, outpatient clinics, ward rounds and attending meetings. An important part of my role as a consultant is teaching and

supporting training doctors. I am also on call on average two days a week, and you never know what to expect during that time. If I am required to attend to one of the hospitals urgently in the middle of my day (or night), it can cause some chaos to my tightly planned schedule, but fortunately that does not happen too frequently."

"I get to work alongside so many people, caring for such diverse patients presenting with such a variety of conditions and never knowing what might come in next. This keeps things fresh, and I find no two days are the same and my days often end differently to how I had planned."

**What would you say now to a young person contemplating a medical career?**

"I would whole heartedly say "Go for it". Despite the long hours and personal sacrifices, I feel it is an extremely rewarding career. The basic medical degree is just a stepping-stone to many different career pathways. There are so many different areas you can specialise in, even if you do not want to be a clinician you can work in public health or medical administration for example.

"Medicine is also a very transportable career. You can work anywhere in the world. I personally have enjoyed being able to work overseas as a junior doctor for a number of years. Although not a primary reason for many people, it is also important to consider that there is good job security being a doctor."

## CITY TO BAY FUN RUN

**Join NRF Team Neuro Now!  
Sunday 19 September 2021**

**Start fundraising and register now - [www.nrf.com.au](http://www.nrf.com.au)**



# BRAIN CANCER IMPACT FORUM MAY 25, 2021

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Proudly sponsored by Dr Jones & Partners Medical Imaging

**Please join us at the Brain Cancer Impact Forum on May 25, 2021.**

This event aims to raise awareness of the need for brain tumour research during Grey May, and to provide support to those with a current brain tumour diagnosis. Everyone is welcome.

## SESSION 1

### Wellbeing support information



Professor Marion Eckert



Dr Evangeline Mantziaris

## SESSION 2

### UniSA brain tumour researchers



Dr Melinda Tea



Dr Briony Gliddon



Dr Lisa Ebert

## SESSION 3

### Clinical trials and applications



Dr Ganessan Kichenadasse



Dr Tessa Gargett

#### Event Partners:

The NRF is proudly partnering with the Centre for Cancer Biology (a partnership between UniSA and SA Pathology), the Brain Tumour Alliance Australia (BTAA), the Adult Brain Cancer Support Association of South Australia (abcsa) and the Adelaide Brain Tumour Support group.

#### Thank you to our Event Sponsor:

Thank you to Dr Jones & Partners Medical Imaging for sponsoring this event and providing a lunch and tea/coffee for our guests. Please visit [www.drjones.com.au](http://www.drjones.com.au) for all your medical imaging needs.

#### Book now:

**Please book online: [www.nrf.com.au/events/brain-cancer-impact-forum-save-the-date](http://www.nrf.com.au/events/brain-cancer-impact-forum-save-the-date)**

Lunch and tea/coffee has been generously donated by our event sponsor, Dr Jones & Partners.

#### Location:

**Level 8, Bradley Building (formerly UniSA Cancer Research Institute building) University of South Australia, North Terrace, Adelaide.**