



Newsletter

ISSUE 7 AUGUST 2018

NEWSLETTER OF THE NEW ZEALAND PEDIATRIC TRAUMATIC BRAIN INJURY CONSORTIUM

Brain injury continues to receive growing worldwide attention. At AUT University we are very delighted to be hosting a Global Brain Summit later in the year. There have been many months spent planning this event and we look forward to it taking place in November (see page 2). On another note, Professor Nicola Starkey and I look forward to presenting some of the latest findings of our child TBI research at the Third International Paediatric Acquired Brain Injury conference in Belfast, Ireland next month: see <http://www.internationalbrain.org/third-international-conference-on-paediatric-acquired-brain-injury/>

We will be sure to update you all on this event in our next newsletter. Meanwhile, below are some links to other upcoming conferences that may be of interest.

ICM+ Workshop September 10-11, 2018, Cambridge, UK

<https://icmplus.neurosurg.cam.ac.uk/icm-workshop-cambridge-uk/>

ESICM Lives 2018 October 20-24, 2018, Paris, France

<https://www.esicm.org/events/31st-esicm-annual-congress-paris/>

EANS 2018 October 21-25, 2018, Brussels, Belgium <http://eans2018.com/>

EANS Pre-congress Meeting October 21, 2018 (16:00-18:30) Square Brussels Meeting Centre Meeting for CENTER-TBI and RESCUE ASDH Investigators. Free registration via the CENTER-TBI website.

Euro Neuro November 8-10, 2018, Brussels, Belgium

<http://www.euroneuro2018.org/15/main.asp>

1st EANS Trauma & Critical Care Update Meeting December 13-14, 2018, Lund, Sweden <https://www.eans.org/events/event-1230/>

IBIA March 13-16, 2019, Toronto, Canada <http://ibia2019.org/>

Feel free to send through any updates from your organisations that may be of interest to members in our collective efforts to prevent TBI, promote recovery in children and adolescents, and to support their families.

Best wishes,

Kelly Jones

MISSION STATEMENT

Our goals are to 1) expand understanding of TBI during childhood and adolescence and 2) improve outcomes of affected children and their families by promoting a collaborative approach to research.

Inside:

BRAIN SUMMIT IN
NEW ZEALAND

LATEST LOCAL
RESEARCH
UPDATES
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INTERNATIONAL
RESEARCH
BREAK THROUGH
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SUPPORTED BY:

safekids
Aotearoa


MIDLAND
— TRAUMA SYSTEM —


**Brain
Injury**
WAIKATO

Global Burden of Disease Brain Summit to be held in New Zealand



Local TBI updates

NEUROLOGICAL DISORDERS are now the leading cause of disability worldwide, and the second leading cause of deaths. On 27 November 2018, AUT University is hosting a one-day Global Brain Summit to celebrate the launch of a special edition of *The Lancet Neurology* and address the important health issue of neurological disorders - see <https://www.aut.ac.nz/events/global-burden-of-disease-brain-summit> The upcoming special edition of *The Lancet Neurology* is devoted to a series of papers on the Global Burden of Disease (GBD) study's estimates of the burden of neurological disorders. The GBD study is the largest study of its kind in the world, and the resulting data provides the World Health Organization and governments worldwide with vital national and global information. New Zealand's Minister of Health, the Hon. Dr David Clark will present a talk at the Summit. Other speakers include the Presidents of the World Federation of Neurology, the World Stroke Organisation, and the African Academy of Neurology as well as the Chief Executive of the European Brain Council, the Editor in Chief of *The Lancet Neurology* and Global Burden of Disease team members. Attendance is by invitation only, but the event will be live-streamed and available for viewing at: <https://livestream.com/accounts/5183627>

PARENT AND CHILD RATINGS OF CHILDREN'S RECOVERY AFTER MILD TBI

Mild TBI in children is most commonly associated with parent-reported child behaviour problems. The extent to which parent and child ratings align is unknown. One of our latest publications examined differences in child behaviour and patterns of recovery over the first 12 months following mTBI based on parent and child self-report. Ninety-nine children (8-15 years) with mild TBI and one of their parents completed the Behavioural Assessment Scale for Children – version 2 to assess child hyperactivity, anxiety and depression at baseline (within 14 days of injury), 1, 6 and 12 months post-injury. Our findings showed that parent and child ratings for child hyperactivity, anxiety and depression differed significantly at baseline and these differences remained constant at each follow-up. Parents tended to report more child hyperactivity, anxiety, and depression. Over time, both parents and children reported fewer child hyperactivity and anxiety problems. It was concluded that parents and children have poor agreement in ratings of child behaviour yet there is general agreement in patterns of recovery in the year following mild TBI. Findings show the importance of considering both parent and self-report of child behaviour. There are 50 free copies of the full manuscript available at <https://www.tandfonline.com/eprint/bDr9ZGufihik6kfNe5Zw/full>

NEUROIMAGING TOOLBOX FOR MILD TBI

Researchers from AUT University, The University of Auckland Centre for Advanced Magnetic Resonance Imaging, and Stanford University are currently working together to inform new ways of using latest magnetic resonance imaging (MRI) techniques to confirm the presence of mild TBI in young people aged 11 – 18 years old. Individual imaging techniques fail to reliably detect mild injuries. The team are looking at ways to combine MRI data from a range of different imaging techniques that may be more sensitive to the detection of mild TBI. We propose to run a pilot study to test a neuroimaging toolbox that will include five of the latest advanced imaging techniques. This type of combined approach may be more helpful for confirming the presence of mild TBI, and for predicting how well someone will recover. Watch this space!





NATIONWIDE BRAIN INJURY WORKSHOPS

In July and August Assoc Prof Alice Theadom and Dr Debbie Snell presented a series of workshops sponsored by ACC and the NZPsS on working with TBI across the severity spectrum. Held in Auckland, Wellington and Christchurch, the workshops attracted a great range of professionals including TBI specialists, psychologists, corrections and mental health workers, physiotherapists, sports physicians OTs, osteopaths, audiologists and psychiatrists. Many were working with children and their families post-injury. The workshops presented the latests research in the field, included an exercise on how to identify someone's lifetime history of TBI and the longer-term impacts, including how many children start to lose confidence over time as they struggle to 'catch up' following a TBI. There were some interesting case study discussions and great networking! Its great to ACC and NZPsS facilitating such a great initiative!



International TBI research update

PROMISING NEW BLOOD TEST FOR TBI

More objective biomarkers to support a diagnosis of TBI and to inform clinical decision making are topics of continuous research, as evident in our current efforts reported above. Jeffrey Bazarian and colleagues recently reported that a new blood test combining the results of assays of two blood-based biomarkers has high sensitivity (0.976, 95% CI 0.931–0.995) to predict traumatic intracranial abnormalities on CT scan. These results from the ALERT-TBI study support the potential role of this test to rule out the need for a CT scan in patients seen in hospital emergency departments with suspected TBI, and suggest that routine use of the test could reduce the number of CT scans by approximately 35%. FDA clearance has been attained to market the Banyan BTI™ for adults with mild TBI, or concussion, that present to a healthcare facility within 12 hours of a suspected head injury.

This research team are now focusing their efforts on working closely with their license partners to bring the test to patients worldwide.

To learn more about this new biomarker access the Lancet Neurology publication at

[https://www.thelancet.com/pdfs/journals/laneur/PIIS1474-4422\(18\)30231-X.pdf](https://www.thelancet.com/pdfs/journals/laneur/PIIS1474-4422(18)30231-X.pdf)



Do you have colleagues who would like to join the consortium?
Just ask them to email kelly.jones@aut.ac.nz to join.

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