

Kia ora

Welcome to our Winter Newsletter. As well as research staff, we have a number of postgraduate research students. This newsletter highlights Sarah, Nick and Daniela. Sarah completed her PhD as a student with us, travelled overseas and is now working with us as a Research Fellow. Completing his studies is Nick, while Daniela is just beginning her Masters thesis. In this newsletter, we are also introducing an interesting series of news and reviews written by Dr Philip Parkin, neurologist, Christchurch.

### Researcher Profile - Sarah Perry

Completing her PhD in Christchurch, Sarah has spent the last four years researching swallowing and speech disorders at the prestigious Columbia University, New York. We're pleased to welcome her back to NZBRI, where she'll be working on a project in conjunction with the [UC Swallowing Rehab Research Lab at the Rose Centre](#). Sarah has received a two-year senior fellowship grant for her project on how the cough reflex changes as a function of cognitive decline and the



impact that has on your overall health. Sarah says "During my time overseas I learnt new techniques and I'm excited to bring those back to New Zealand. Incorporating cough into swallowing care has been slow to take off in clinical practice in the States but New Zealand has been doing it for over ten years. As a clinical researcher you don't just want your research to stay in the lab, you want it to help people and improve outcomes."

She's had great success improving outcomes in the past – her PhD research led to a standardised hospital protocol for using cough reflex testing, reducing pneumonia rates in stroke patients from 28% to 10%. We'll be watching her research closely and are so pleased she's returned to Christchurch.

## Neurological Snippets - by Dr Philip Parkin The Autonomic Nervous System

As the name implies, this neurological system functions largely beyond our will, with little awareness on our part of the crucial role it is playing behind the scenes, although it is controlled from the brain. It is, quite simply, the control system that regulates such bodily functions as breathing, heart rate, digestion and the transportation of food through the gut, bladder and sexual function and the regulation of blood pressure – to name just some. It is also the generator of the familiar 'fight-or-flight' response.



[Read more about the Autonomic Nervous System](#)

## Nick Palmer - researching biomarkers in Parkinson's

Working with MRI was always Nick Palmer's goal after studying radiography, "MRI gives you incredibly detailed, high resolution pictures that can have a massive impact on a patient's diagnosis and treatment plan". Using MRI data gathered over the past ten years from NZBRI's longitudinal Parkinson's study, Nick has just completed his Master's thesis looking for a biomarker of Parkinson's disease progression by considering MRI derived volume and shape changes of subcortical grey matter regions within the brain.



## Daniela Nolan - researching blood flow in the brain

Moving back to Christchurch from the UK to complete her Masters in Medical Physics, Daniela is new to NZBRI and will spend the next year with us looking for changes in blood flow in different regions of the brain in Parkinson's patients using perfusion MRI. Her research will tell us more about what is happening in the brains of people with Parkinson's, helping us understand how cerebrovascular health is related to cognitive decline in Parkinson's disease.



## 9th Annual Friends of the Brain Institute Golf Day

Friday 27th November, 2020

This event has raised \$300,000 for neurological research in Canterbury to date. Players are treated to a lovely packed lunch to take on course, Pegasus Bay wines at the Pagoda, great prizes and after match food. Each year we raise in excess of \$30,000 for Brain Research and hope we can achieve similar again this year.



The New Zealand Brain Research Institute relies solely on research grants, fundraising and donations. For more information about our work or how to support us contact us at

Website: [www.nzbri.org](http://www.nzbri.org)

Or email: [info@nzbri.org](mailto:info@nzbri.org)

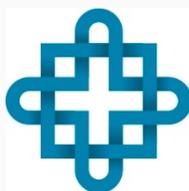
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Ngā mihi

The New Zealand Brain Research Institute Team



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