

ParkC

Newsletter 2011

The new ParkC Student Research Excellence Award is here

In July of this year, the ParkC Early Onset Research Scholarship, commonly referred to as PORSCE, was re-invented as the ParkC Student Research Excellence Award.

The PORSCE was established by a group of individuals with Parkinson's, and their families, who wanted to support Parkinson's research locally.

Inspired by the efforts of Dr Meghan Thomas and her team at ECU's Parkinson's Centre (ParkC), the group decided to sponsor outstanding higher degree research students undertaking world class research projects in the area of Parkinson's.

The ParkC Student Research Excellence Award, valued at up to \$4,000 per recipient, continues to support local ECU



researchers with funding directly supporting all activities associated with the successful recipients' Parkinson's research projects.

The inaugural recipient of the new ParkC Student Research Excellence Award will be selected in semester two this academic year. At this stage the Award will be assisting ECU Parkinson's research students into 2012.

However, for the long term benefit for those with Parkinson's and their loved ones, we are aiming to fund the Award well into the future.

In 2010 and 2011, the PORSCE was awarded to three deserving research students whose work is assisting in improving the quality of life for those diagnosed with Parkinson's.

An update on our previous PORSCE recipients

Roger Pegoraro

After completion of a Masters Degree investigating the causes of muscle cramps, Roger joined ParkC to help establish the centre's Exercise Intervention for people with Parkinson's Research Trial in which over 25 people living with Parkinson's participated.

As a result of his involvement in this research, Roger decided to enrol at ECU to begin a PhD focusing on exercise interventions for Parkinson's.

The objective of Roger's PhD project is to investigate what improvements people with Parkinson's experience when they take on an exercise programs.

He evaluated the efficacy of a 12 week combined resistance and aerobic exercise intervention. Twenty eight people with Parkinson's were randomly allocated to a 12 week Exercise Intervention Program (EIP), or to the control group. The EIP group immediately undertook a supervised group program of progressive anabolic and aerobic exercise twice weekly for twelve weeks, while the control group maintained their usual lifestyle. Both groups undertook a range of task to

assess their thinking, mental and physical wellbeing, before and after the intervention. Results indicated that, compared to controls, the EIP group demonstrated significant improvements in some thinking tasks and had increased psychological wellbeing, decreased depression, improved perceived relationship with their environment and were generally stronger.

Based on this research, ECU's Vario Institute developed a commercial exercise program for people with Parkinson's: The Parkie Pumpers. In addition the results were published in a scientific, peer-reviewed journal [Cruise, K.E., Bucks, R.S., Loftus, A.M., Newton, R.U., Pegoraro, R., and Thomas, M.G. (2011). Exercise and Parkinson's: benefits for cognition and quality of life. *Acta Neurol Scand* 123, 13-19].

Roger has returned to his home state of Queensland where he is continuing his PhD studies.



Tiza Chipungu

At the time of receiving the PORSCE, Tiza was an international student enrolled at ECU undertaking an Honours degree. The PORSCE enabled Tiza to pay for her university course fees and attend the 30th Annual Meeting of the Australian Neuroscience Society.

The objective of Tiza's research was to create a detailed map of the primate caudal zona incerta (ZI), deep brain stimulation (DBS) target for Parkinson's and locate the concordant cytoarchitectural region within the rodent ZI.

Tiza was interested in the ZI as it may be a safer and more effective target than the subthalamic nucleus (STN) for DBS in patients with PD and can be accurately targeted with MRI-directed guide tube technique being pioneered in Australia. Understanding the composition and function of ZI subregions is becoming critical. In contrast to the STN, the ZI differs markedly between rodents, primates and humans. It is much larger and fundamentally shaped differently in rodents than primates, including humans. For functional information to be translated between rodent and primate studies it is necessary to identify concordant cytoarchitectural regions within the rat, non-human primate, and human ZI.

Tiza received an Honours grade of 70% (Upper Second Class) in July 2010. The results from her researched were incorporated into a poster that was displayed at the 14th International Congress of Parkinson's Disease and Movement Disorders, in Buenos Aires, Argentina. The poster was one of 15% selected to be part of a Guided Poster Tour and the poster abstract was also published in a scientific, peer-reviewed journal [M Thomas, T Chipungu, C Watson, C Lind. A new DBS clinical target for Parkinson's disease (PD) - mapping the caudal zona incerta (ZI). *Movement Disorders* 25(S2): S181].

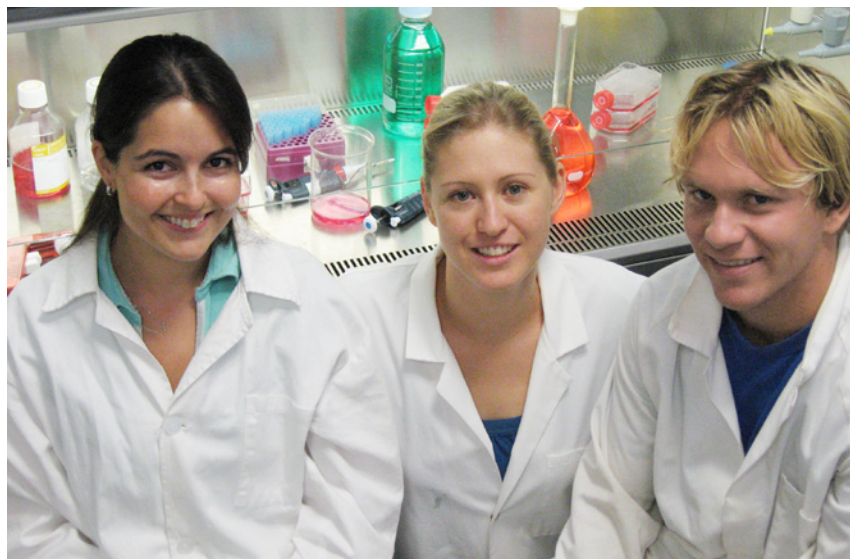
Maria Kroczek

Maria is a PhD student at the University of Western Australia, prior to this she worked as a research assistant at ParkC.

Maria's PhD investigates the impact of sleep quality on cognition in people with Parkinson's. The PORSCE enabled Maria to undertake a Graduate Certificate in Adult Sleep Science so that she could acquire the skills needed to conduct and analyse sleep studies. Any additional funds remaining after course fees will be used to pay for equipment essential for her research (i.e. a home PSG unit).

Difficulties with thinking and memory are some of the most significant non-motor symptoms of Parkinson's. These difficulties are also common in people who do not have Parkinson's but who do have disturbed sleep. Maria's research aims to determine if the sleep problems experienced by people living with Parkinson's are exacerbated and/or contribute to their cognitive difficulties or if the two are independent of each other.

Maria has completed the training and is now a qualified sleep technologist. She is currently recruiting participants for her research project.



A big thank you

We would like to take this opportunity to thank all of you who have previously and generously donated to ParkC and the PORSCE. Your donations have assisted our research students with their studies and in turn assisted those living with Parkinson's by helping to improve the health and wellbeing of people with Parkinson's and their carers.

For more information or to make a donation

If you would like to learn more about the research undertaken at ParkC, please do not hesitate to contact:

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