



THREE PHD STUDENT POSITIONS ARE AVAILABLE IN ALZHEIMER'S AND PARKINSON'S DISEASE RESEARCH

The Alzheimer's and Parkinson's Disease (A+PD) Laboratory aims to attract the brightest students. We are interested in three candidates who have secured APA scholarships for which we will provide a **top-up** of AU\$5,000 p.a. Overseas students are encouraged to apply, provided they have secured full scholarships, including tuition fees.

Laboratory: The Alzheimer's and Parkinson's Disease Laboratory is based at the Brain & Mind Research Institute (BMRI) of The University of Sydney in Mallett St, close to the University's Camperdown Campus. The laboratory is well equipped with to perform molecular and cellular work (ELISA reader, LifeCycler, Versadoc, etc), a histology unit, a micromanipulation set-up and a tissue culture laboratory. The laboratory has access to state-of-the-art behavioural facilities.

Research in the A+PD Laboratory: The laboratory is internationally recognised for its cutting edge research in Alzheimer's disease and related neurodegenerative disorders. The laboratory focuses on the development of animal (mouse and *C. elegans*) and cellular models to unravel the causes of Alzheimer's disease. It uses molecular and functional genomics techniques (proteomics, transcriptomics, miRNA analysis) to dissect the underlying pathomechanisms and it uses a variety of approaches to find a treatment for these debilitating diseases.

Available projects:

- (1) Mechanisms of tau-mediated A β toxicity
- (2) *C. elegans* models of neurodegeneration
- (3) Modifier screen of Parkinsonism
- (4) Target validation of deregulated miRNAs in Alzheimer's disease
- (5) Combinatorial approaches investigating geriatric conditions in Alzheimer's disease
- (6) Mapping of protein/protein interactions as a treatment approach



Recent publications:

- Rhein V et al (2009) A β and tau synergistically impair the oxidative phosphorylation system in triple transgenic Alzheimer's disease mice, **PNAS** 106: 20057 [**Highlighted in Nat Rev Neurosci** Jan 2010]
- Ittner LM et al (2008) Parkinsonism and impaired axonal transport in a mouse model of frontotemporal dementia, **PNAS** 105: 15997
- Götz J & Ittner LM (2008) Animal models of Alzheimer's disease and frontotemporal dementia, **Nat Rev Neurosci** 9: 532
- Habicht G et al (2007) Directed selection of a conformational antibody domain that prevents mature amyloid fibril formation by stabilizing A β protofibrils, **PNAS**, 104: 19232

If you are interested please contact Prof. Jürgen Götz (juergen.goetz@sydney.edu.au) or Dr. Lars Ittner (lars.ittner@sydney.edu.au) by 25 June 2010.