
FRONTIER

Frontotemporal Dementia Research Group

Annual Newsletter

December 2011



FRONTIER team 2011 (left to right)

Front row: David Foxe, Michael Hornberger, John Hodges, Cristian Leyton, Sharpley Hsieh, Claire O'Callaghan

Second row: Patricia Lillo, Belinda Yew, Bonnie Lam, Fiona Kumfor, Sarah Homewood, Sharon Savage, Naomi Daveson, Olivier Piguet, Muireann Irish

Third row: Sicong Tu, Marshall Dalton, James Burrell

Back row: Claire O'Connor, Chris Hoon, Jonathan Kam

Missing: Leone Chare, Lauren Bartley, Felicity Leslie

Research News

Research Progress

This year saw over 100 new participants involved in our research and many existing families welcomed back for annual reviews. We also launched a number of new studies investigating various aspects of FTD and other related disorders. Some of our current research projects and their findings include:

Our work investigating biological markers in FTD suggests that the accumulation of a specific protein in the hypothalamus, a brain region associated with feeding behaviour, is responsible for the eating disturbances experienced by many FTD patients. Understanding the relationship between clinical symptoms and changes in the brain is essential for the development and implementation of effective therapeutic strategies.

Over 60 of our participants have undergone a special type of brain scan at the Austin Hospital in Melbourne. These scans provide valuable information about how pathological changes in the brain can vary across the range of neurodegenerative disorders.

Muireann has been investigating how people think about the past and imagine the future. She has demonstrated that the same brain regions involved in semantic memory (knowledge about the world) are essential for our ability to imagine the future.

Michael's group have used imaging to investigate associations between structural changes in the brain and cognitive deficits in FTD. They found that lack of awareness regarding behavioural changes was related to frontal atrophy, particularly in the behavioural variant of FTD.

Sharon has begun expanding her previous work in word retraining exercises for semantic dementia patients using a new online program.

Patricia and James are close to completing their respective PhDs examining the overlap between FTD and motor neurone disease (MND).

cont'd

Sharpley's research into music and memory for tunes has shown that some patients have good memories for famous pieces of music, and that this ability relies on an area of the brain located behind the right ear. Her findings attracted widespread media attention, including coverage by *New Scientist*, *Sydney Morning Herald* and *ABC Radio National*.

Fiona has been looking at how memories are affected by emotion. The results so far suggest that some people with FTD demonstrate poorer recall of emotional events. We think this is linked to their difficulty with recognising and experiencing emotions.

Claire O'Connor ran a second intervention group for carers (15-week program) with our collaborators Colleen McKinnon and Eneida Mioshi. We would like to thank all carers who have participated directly or indirectly in this project in 2010 and 2011. We have been preparing works for scientific publication and presentation at conferences, and we hope to increase awareness and bring more attention to the specific needs of FTD carers.

Conference Presentations and Other Activities

The findings from our research projects have been presented at a number of international (England, New Zealand, Canada, USA, France, Germany, Japan) and national (Brisbane, Sydney, Gold Coast, Hobart) scientific meetings. In addition, over 30 articles have been published in international scientific journals.

New Collaborations

FRONTIER, together with teams at Macquarie University and the University of Western Australia, has formed the Centre of Excellence in Cognition and its Disorders. This collaboration is funded by the Australian Research Council and will allow further developments in dementia research. Current collaborations with research teams in UK, USA, Europe, South America and India are flourishing.

Other news from the Team

Hello and Goodbye!

We welcomed a number of new members to the FRONTIER team in 2011. These include: Lauren Bartley (Brain Bank liaison officer), Claire O'Connor (research occupational therapist), Chris Hoon and Belinda Yew (research assistants), Claire O'Callaghan (PhD student) and Jonathan Kam (Honours student). Long-time research assistant Sharon Savage remains within our team but has commenced a PhD. Tammy Lane spent much of the year as a research assistant before moving on to a clinical position at St Vincent's Hospital. We also farewelled Cathy Rienmueller. Once again we hosted a number of international visitors including Laurie-Anne Sapey-Triomphe from Lyon (France), Dr Peter Nestor from Cambridge (UK), Dr Thomas Bak from Edinburgh (UK), and Dr Ysbrand van der Werf from Amsterdam (the Netherlands).

Congratulations!

Congratulations to Muireann who was awarded a Dementia Research Grant from Alzheimer's Australia and the "Dean's Rising Star" Award from UNSW, which recognises the outstanding contribution of postdoctoral researchers in their respective fields of research. Sharpley's recently published article in the prestigious journal *Brain* was named the UNSW School of Medical Sciences Paper of the Month for October.

Thanks

Professor John Hodges, Dr Olivier Piguet and the FRONTIER team would like to offer their sincere thanks to all the participants and their families for their ongoing involvement in our research projects during the past year.