

Brain Matters



USING OUR BRAINS

FROM THE DIRECTOR

I am pleased to be able to share with you the successes of another year. Both the prospective brain donor program Using our Brains (UoB) and the associated NSW Tissue Resource Centre (TRC) continue to go from strength to strength. We continue to provide tissue for research projects to an increasing number of national and international researchers. In the past year we have assisted with over 121 research projects covering a diverse range of neurological and psychiatric diseases including schizophrenia, alcohol abuse, Parkinson's disease, Motor Neuron Disease and Multiple Sclerosis. These projects have resulted in 32 publications in medical and scientific journals and 63 presentations at research conferences.

Importantly, the tissue has also assisted 47 postgraduate research students working towards their degrees. The training of the future generation of medical researchers is a vital component of all research activities and we are pleased that TRC's resources can help facilitate this.

Last year we reported that the Schizophrenia Research Institute's Gift of Hope brain donor program would be incorporated into our UoB program. This amalgamation has successfully occurred and offers efficiencies in the operation of the donor programs and ensures that similar clinical information is available on all donors.

Dr Greg Sutherland, a research fellow in the Discipline of Pathology at the University of Sydney who is affiliated with the TRC, was awarded an early career research grant from Sydney Medical School to enable him to study brain white matter of alcoholics. He will compare the gene expression profiles in affected and unaffected brain areas in both alcoholics and those who were light drinkers. The results of the study will help elucidate the mechanisms underlying the regional susceptibility of the brain to alcohol abuse.

In 2011 we have welcomed Ms Beatrix Palmer-Aronsten to the TRC/UoB team. A brief article introducing Bea and the work she does is included in this newsletter.

I hope you enjoy reading the updates in this newsletter. If you have any questions, please do not hesitate to contact myself or one of the UoB team.

PROFESSOR JILLIAN KRIL



Professors Sullivan, Harper and Pfefferbaum at the Research Society on Alcoholism

CONFERENCE NEWS

This year's Research Society on Alcoholism meeting was held in Atlanta, Georgia and was attended by Professors Kril and Harper, and TRC manager Donna Sheedy. A highlight of the meeting was the presentation of the 2011 Distinguished Researcher Award to long time colleagues and supporters of the TRC, Professors Edith Sullivan and Adolf Pfefferbaum. Professors Pfefferbaum and Sullivan have worked together for over two decades and have made many landmark contributions to our understanding of the effects of alcohol abuse on the human brain. Using a combination of neuroimaging and neuropsychological approaches they have provided insights into the way the brain responds and adapts to chronic alcohol exposure. The Distinguished Researcher award is usually given to an individual whose research has had a major impact on the field. The shared award recognises the strength and the uniqueness of the collaboration between Professors Sullivan and Pfefferbaum.

The TRC team also presented posters on using the histological assessment of cerebellar neurons as an indirect measure of tissue integrity, and how to retrospectively quantify lifetime alcohol consumption for research studies. Both studies stem from our work on looking at ways to provide the best possible quality tissue and clinical information to researchers.

Staff attend the University of Sydney Inter-departmental Substance Abuse Research Group (ISARG) symposium. This is a one-day symposium organised by the University of Sydney's Discipline of Addiction Medicine in which local researchers and students presented their current projects around the theme of drug and alcohol abuse.

The SRI affiliated staff attended the 11th Biennial Australasian Schizophrenia Conference, Molecules to Mind, held in Sydney. The conference included many international speakers and Professor Cynthia Shannon Weickert, the chair of SRI. The program included a number of interesting seminars such as Environmental Risk factors for Schizophrenia and Social Cognition in Schizophrenia. Our presentations included the importance of brain donations for schizophrenia research and some of the findings of the 46 schizophrenia research projects supported by the TRC.

Current media has highlighted the problem of obesity and diabetes in the Australian population. In the conferences we attended there were presentations concerning weight of patients with schizophrenia and chronic disease. Antipsychotic drugs have been shown to increase the risk of obesity, diabetes and hypertension. A new word "drunkorexia" described reduced food intake to either save money to buy alcohol or the pattern of eating less to gain a quicker intoxication level. There has been research on the levels of alcohol intake and body mass index, those in the obese range tend to drink less, it is speculated that overeating may compete with alcohol for the brain reward sites and make alcohol less appealing. The association of brain volume and body mass index is one of the projects we are currently involved with.

Attending these conferences has further developed our network of researchers and stakeholders as well as providing our staff an avenue for understanding the current research developments.

UOB UPDATE

The UoB program is encouraged by the continued support from donors. We welcome the donors from the Gift of Hope program under our banner, increasing the number of donors to over 1,000. I would like to thank those who returned the 2010 annual update information form, this is important to ensure we have correct contact details and we are up to date with medical information.

Our host institution, the University of Sydney, has undergone rebranding and we have had to redesign both the UoB and NSW Tissue Resource Centre websites. Please visit the new site and update your browser bookmark to the website address sydney.edu.au/medicine/pathology/trc/using-our-brains.php. This includes a Frequently Asked Questions page with the common questions we are asked about the program.

A few of the most frequent questions over the past 12 months were:

- * I am an organ donor. Can I still donate my brain?
- * I am a full body donor (or whole body donor). Can I still donate my brain?
- * Who can be my Next of Kin?

Visit our website for the answers.

Thank you to all donors that contacted us in 2010 with interest in participating in the MRI scan. We are no longer running this study but have noted your interest for future research.

The 2011 Annual information update is enclosed, it is important to complete and return this as it helps us keep in contact. If you have any questions please do not hesitate to contact me. Included in the update is the choice of receiving the SRI newsletter in conjunction with the UoB Brain Matters and whether you would be interested in participating in future research projects.

If your details change throughout the year or you have questions or enquiries any please contact the office on (02) 9351 2410 during business hours. Alternatively you can contact UoB via email medicine.uob@sydney.edu.au. Please only call the After Hours number in the event of death.

SARAH WEST

WHO'S WHO

Beatrix
Palmer-Aronsten



I am please to introduce myself as the newest member of the Tissue Resource Centre team. The Schizophrenia Research Institute employed me in June 2011, in the position of a Research Assistant.

This position has a wide range of roles, from the clinical setting right though to sending out tissue requests to researchers. I am thrilled to be part of such an integral aspect of brain research, and I look forward to developing my knowledge along the way.

I have just completed my honours year gaining a Bachelor of Medical Science in 2010 and would like to thank the TRC team and the Schizophrenia Research Institute for giving me this great opportunity.