SCHIZOPHRENIA RESEARCH INSTITUTE

BRAINWAVE

SCHIZOPHRENIA RESEARCH INSTITUTE VOLUNTEERS

2011 Edition

International Genetic Study Findings

The Australian Schizophrenia Research Bank has played a key role in a global study that investigated genetic variants associated with schizophrenia. The study replicated findings from previous genetic research and made important new discoveries.

This is the Bank's first contribution to an international study that involved over 51,000 individuals, and marks an important step in the quest to uncover the genetic changes contributing to brain abnormalities in schizophrenia. When cases of bipolar disorder were added to the study sample, some shared genetic susceptibility for both schizophrenia and bipolar disorder were found.

The study by the Schizophrenia Psychiatric Genome-Wide Association Study Consortium used blood samples from a large number of international projects, including the Australian Schizophrenia Research Bank, and is published in the high-quality journal Nature Genetics. The findings identified five genomic loci that are newly associated with schizophrenia and confirmed two genomic loci previously identified in schizophrenia.

"Our involvement in this global collaborative study is a first for the Australian Schizophrenia Research Bank, and one that marks the beginning of a more extensive contribution to the international research community," said Prof. Vaughan Carr, CEO of the Schizophrenia Research Institute.

Thank You To Our Volunteers

As the Australian Schizophrenia Research Bank continues to grow and reach its goals, the scientists and clinicians at the Schizophrenia Research Institute, along with our colleagues and affiliates at other institutes and organisations, are realising the significance of having access to this valuable resource.

The Bank has reached a critical milestone, opening to international and commercial researchers. This means research and investigation into schizophrenia using the Bank's information will continue to increase, and the dataset of brain scans, blood samples and clinical information will be utilised in a way that will continue to improve understanding and management of schizophrenia.

To each and every one of the volunteers with the Bank, we thank you for taking part and assure you that this resource is making a real difference to the ongoing study of this illness. We anticipate that these efforts will lead to greater understanding, better treatments and perhaps one day, a cure.

In This Issue

Dr Carmel Loughland, Manager, Australian Schizophrenia Research Bank

Bank Update

The Bank now has over 1700 volunteers, with nearly 1200 who have completed the assessment program. This includes nearly 700 schizophrenia cases.

This is a fantastic commitment from each and every one of our volunteers. Every volunteer is contributing to a research resource that provides a unique dataset, opening a world of possibilities to further schizophrenia research in the quest to understand this illness.

The data provided by all of our Bank volunteers is now able to be used by researchers across Australia and the world. From July 2010 all non-commercial Australian researchers were able to request access to the Bank's data collection and from July 2011, international researchers and commercial entities are able to apply to use the data and recruit volunteers.

The Bank is now reaching its goals as it serves as a starting point for researchers seeking a quality dataset for ongoing schizophrenia research.

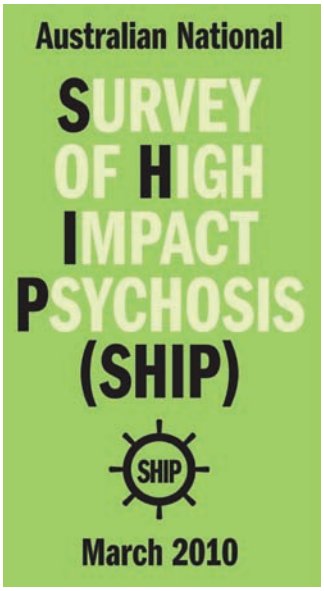
Survey of High Impact Psychosis

The Bank is collaborating with the Survey of High Impact Psychosis (SHIP), a large-scale national survey of psychosis. As an adjunct to the survey, blood samples have been collected for storage with the Bank.

The SHIP survey included a physical health assessment with testing for cardiovascular risk factors and an assessment of cognitive function. Information was also collected on services for people with psychosis and areas of unmet need.

This valuable partnership will enable the Bank to acquire additional blood samples, diagnostic and demographic data from the SHIP participants who gave their consent to be included. This is an invaluable opportunity to grow the Bank's resources, enhance its national profile and open up new opportunities for scientific collaboration.

Results from the SHIP analyses will be published this year and the data will become available for use by other researchers in 2013. SHIP is funded by the Australian Government Department of Health and Ageing.



What research is supported by volunteer programs?

By volunteering with programs such as the Australian Schizophrenia Research Bank and Using Our Brains, volunteers are contributing to the current and future pool of medical research by providing scientists and researchers access to standardised data.

There are five key resources that researchers are able to draw upon:

- Brain Scans
- Blood Samples
- Information on clinical and cognitive functioning
- Volunteers interested in taking part in further research
- Brain Tissue - through the brain donor program

Social cognition and schizophrenia

Volunteers from the Bank took part in a study by the University of NSW and the Schizophrenia Research Institute that investigated whether social cognition impairments affect the capacity for empathy (i.e. feeling what other people feel), and the impact on social functioning.

Dr Melissa Green, Institute Scientist, Senior Lecturer, University of NSW.

Participants with schizophrenia and a healthy control group completed cognitive assessments that tested their ability to identify basic emotional expressions, as well as subtle social cues indicating sarcasm, sincerity, and deceit, from a series of social exchanges played out by trained actors, and presented in video clips of real-world scenarios.

The participants also completed questionnaire measures of empathy, and were interviewed to measure their level of functioning within the domains of work, relationships with family and friends, overall level of satisfaction with life, and participation in recreational activities.

The study found that people with schizophrenia have more difficulty identifying negative emotions in others, as well as understanding complex social exchanges involving sarcasm and lying. These difficulties did not relate to problems with empathy, but were related to participation in social interactions and work function.

The findings have implications for the remediation of specific social cognitive deficits – via strategies to recognise the emotional states of others and understand sarcasm and lying – which may facilitate improvements in social functioning.

By helping people with schizophrenia in these areas, there is an increased likelihood these individuals will have greater opportunities for more meaningful social relationships and increased prospects in their working lives.

Using Our Brains

The Schizophrenia Research Institute's *Gift of Hope* brain donor program has joined with the *Using Our Brains* program at the University of Sydney. The Institute remains a major partner of the program and brain donors will continue supporting research into schizophrenia and schizoaffective disorder.

The merging of these programs will simplify the operation of brain donor programs and mean that similar clinical and lifestyle information is available for all donors in these programs. The function of the programs will remain the same.

People who were formerly enrolled through the *Gift of Hope* program will become part of *Using Our Brains*. Nothing else will change, and the program will continue to operate as before. Thank you to all the donors and their families for their valuable contribution to our quest to discover more about schizophrenia.

If you have any questions about the program contact Sarah West, Donor Liaison Officer, T: (02) 9351 2410 or visit www.braindonors.org

Sarah West, Using Our Brains Donor Liaison Officer

More volunteers needed

The Bank continues to grow our program but we are still in need of more volunteers to take part.

We not only need people with schizophrenia, we are seeking additional healthy controls volunteers who do not have an immediate family history of schizophrenia.

If you know someone who may be able to help, please have them call 1800 639 295 to see if they are eligible to take part.

Studies Currently Recruiting

The following studies are currently recruiting, please contact the Bank's Central Office on 1800 639 295 to find out if you are eligible to take part:

Cognitive and affective symptoms of schizophrenia intervention

This clinical trial at the Schizophrenia Research Laboratory will test a medication that has been used for other illnesses but may also improve thinking, socialising and independent living skills in people with schizophrenia.

Imaging genetics in schizophrenia and bipolar disorder

This University of NSW study is examining the shared genetic susceptibility for these conditions, including disturbances in cognition and brain function that may be common to these disorders and the 'hybrid' schizoaffective disorder. Participants will complete an assessment, undergo a brain scan and give blood and saliva samples.

Pilot Study: Olfactory challenge test as a possible biomarker in schizophrenia

The University of Newcastle is assessing if a modified version of the 'Olfactory Challenge Test', which may detect Alzheimer's disease in its earliest stages and has the potential to assist in the identification of individuals at high risk of developing schizophrenia. Participants will be interviewed and participate in a test of their sense of smell.

Communicating news of schizophrenia

This study by the Hunter New England Area Health Service (Mental Health) aims to develop a training program for mental health clinicians who are discussing prognoses with patients and their families with schizophrenia and other mental illnesses. Individuals diagnosed with schizophrenia, or family members/carers of individuals with schizophrenia are invited to participate in an interview exploring experiences of diagnostic and prognostic discussions and their views on effective strategies.

Auditory predictive modeling in schizophrenia and healthy controls

This University of Newcastle Study will look at how people with schizophrenia respond to changes in sound as a way of examining brain processing of expected events. Participants will complete an interview to assess diagnosis/symptoms, and brief reading and computer-based learning tasks. In a separate session, their brain activity will be measured using EEG while they are completing simple listening tasks.

Impaired anticipation of sensory events in schizophrenia.

This study by the University of Newcastle will examine whether mismatch negativity (a brain measure linked to biological brain changes and functional impairments in daily living that is changed in schizophrenia) can teach us about the vulnerability to developing schizophrenia or whether it is only apparent after onset of the illness. Participants will be asked to complete interviews, a hearing test, and questionnaires. In a second session, EEG testing will be undertaken as participants complete a listening task.

Social phobia and uncommon beliefs

This Macquarie University project aims to explore the common features between individuals with social phobia and schizophrenia. Participants will complete questionnaires.

Cognition, Connectivity and the Positive Symptoms of Psychosis

This project at the University of Melbourne will explore the development and maintenance of hallucinations and delusions. Participants will complete a questionnaire and an interview.

Social and non-social cognition in schizophrenia

This study at Macquarie University is exploring the causes of social difficulties that people with schizophrenia can experience, and how these might be linked to cognitive function and understanding others' intentions. Participants will be asked to complete computer-based tasks and an interview.