



HEADLINES

Shining a Light on Schizophrenia



JULY 2009

Trial Continues to Give Hope

Professor Cyndi Shannon Weickert, her drive for research and her personal story of her twin brother were the focus for the ABC's Australian Story in May breaking this year's record as the most viewed show with over 1million Australians watching.

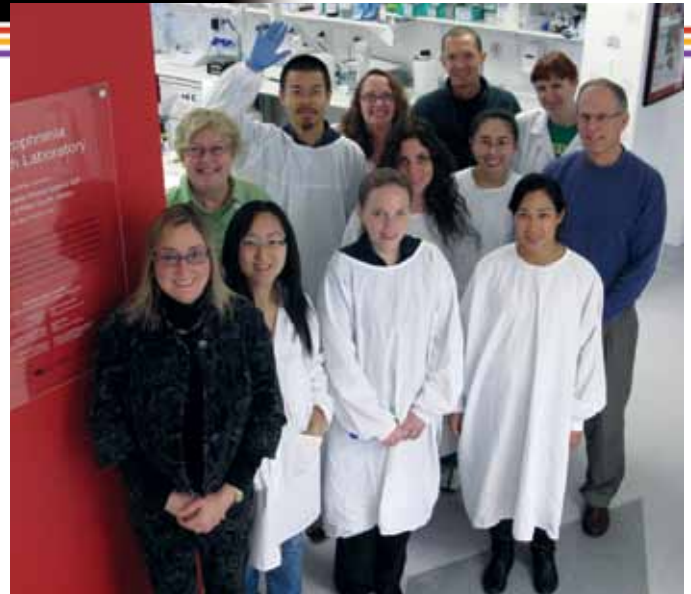
Professor Shannon Weickert is the Macquarie Group Foundation Chair for Schizophrenia Research and was recruited by the Schizophrenia Research Institute and partners to set up the Schizophrenia Research Laboratory* in 2007. In just over 2 years she has already translated her science from the benchtop to the patient and the Institute's first clinical drug trial commences this year.

"We now know that this brain receptor doesn't work in the normal way for people with schizophrenia. With this drug trial we can begin to stimulate it and try and get the neurodevelopmental program back on track. For some patients we could see improvements in language and memory," she explains.

The trial will commence in July with an initial group of 12 volunteers. A total of 88 male and female patients with schizophrenia will ultimately receive this new therapy in addition to their ongoing medication. For six weeks, patients will take a drug called raloxifene, a hormonal modulator that stimulates the oestrogen receptor in the brain. The aim is to learn how this hormonal modulator can influence thought processing in schizophrenia and determine whether it could be used as a novel therapeutic treatment for cognitive problems in patients.

This drug is already used for cancer and osteoporosis and this is the first time it will be used in males with schizophrenia and in patients with schizophrenia under 40 years of age.

The Institute would like to acknowledge healthcare call centre experts McKesson Asia Pacific, who kindly donated teams of



Professor Cyndi Shannon Weickert and the Schizophrenia Research Laboratory team.

personnel to help the Institute cope with the huge number of calls received from volunteers wishing to join the trial.

Many thanks to all our supporters who have kindly sent a gift since the broadcast. We are still raising funds for Cyndi's work and every donation counts. Congratulations also go to Cyndi and her team for being the only Australian researchers in 2009 to receive not just one but two Neuropathology Research Grants from the Stanley Medical Research Institute in the USA.

NSW Health Supports Clinical Trial

NSW Health provided the initial funding to establish Australia's first ever Chair of Schizophrenia Research and recruit Prof. Shannon Weickert to Sydney. The Institute is extremely grateful to NSW Health for once again supporting this research with further funding of over \$200,000 for the next three years to support the clinical trial.

*The Schizophrenia Research Laboratory is a joint initiative of the Schizophrenia Research Institute, University of New South Wales, Prince of Wales Medical Research Institute, the Macquarie Group Foundation and is supported by NSW Health.

Schizophrenia Awareness 2009 has seen the greatest increase in schizophrenia awareness for years.

Professor Cyndi Shannon Weickert's feature on ABC's Australian Story resulted in over 1,000 people contacting the Institute and 295,000 hits to the Institute's website – over six times the usual monthly average. The work of Institute researchers on MMN was featured in the Sydney Morning Herald; supporters' stories were in The Age and Sun Herald, and our patient Ambassador Angela Greensill was featured in the Brisbane Times and Sun Herald.

The 'SwearStop' campaign raised over \$30,000; was covered by 36 newspapers, 4 newswires, 37 radio stations, and featured on Channel 7's Sunrise program with Mel and Kochie. All combined, our total audience reach was over 27 million.

Congratulations and many thanks to Christine Grey, our chief SwearStopper, who raised \$4,550 for the Institute. Many thanks to Ogilvy PR Health and Ramsay Health Care for sponsoring this campaign.



SwearStop Ambassadors, Lifesavers Hoppo and Corey.

The Institute is grateful to our wonderful new ambassadors, celebrity chef Ben O'Donoghue, Bondi Rescue lifesavers Hoppo and Corey, Sydney FC footballer Terry McFlynn, Jonathon Welch and Glenn Wheeler. All the above media can be viewed at www.schizophreniaresearch.org.au



Prof. Vaughan Carr
Chief Executive Officer

The Global Value of Our 'Bank'

The Australian Schizophrenia Research Bank is poised to play a valuable role on the stage of global research. However, this is a complex and challenging task, which is also being undertaken in other countries with greater populations. As a reminder of this, the journal *Nature* recently reported findings of Genome-Wide Association Studies (GWAS) conducted on a total of 8,000 cases of schizophrenia and 19,000 controls. Although combined results from three studies showed that a segment of genes on chromosome 6 coding for proteins involved with immune functions were significantly associated with schizophrenia, surprisingly, none of the previously identified susceptibility genes were confirmed and no clear genetic markers of schizophrenia emerged. What can the Australian Schizophrenia Research Bank contribute in this context? As well as the ability to confirm or refute these findings, and to contribute our data to international databases, the Bank has several important dimensions. Diagnoses are rigorously determined and we have the capacity to apply several different diagnostic systems. Clinical and demographic characterization is comprehensive and multi-dimensional. Cognitive functioning is systematically assessed, and brain structure is measured using MRI scans. Our Bank therefore has the capacity to identify more uniform subgroups of schizophrenia according to diagnostic, clinical, cognitive and structural criteria. It is important to treat schizophrenia not as a single disease entity but as a syndrome comprising two or more entities or relatively homogeneous subgroups. By enabling different approaches to the data, the Bank places the Schizophrenia Research Institute in a strong position to make significant contributions to future discoveries of the genetic aspects of schizophrenia.



The core ASRB investigators (L-R): Prof. Ulli Schall, Kathryn McCabe, Prof. Bryan Mowry, Prof. Frans Henskens, Dr Carmel Loughland, Prof. Stan Catts, Prof. Vaughan Carr, Prof. Chris Pantelis, Prof. Rodney Scott, Prof. Pat Michie and Prof. Assen Jablensky.

Australia's Largest Brain Research Project

The Australian Schizophrenia Research Bank is grateful to all our volunteers. This vast project of gaining a rich research bank of up to 4000 people will be officially open for access by Australian researchers in July 2010.

With over 1,000 enquiries, volunteer assessment is now well underway and to date more than 650 people from across Australia have completed the assessment program, which includes MRI brain scans, blood samples and detailed clinical information.

As the bank continues to grow into a valuable data and sample resource for research in schizophrenia, we are pleased to announce another level of research support that it will provide. Based on the Institute's successful Schizophrenia Research Register, which has supported close to 100 projects in NSW since 1998, researchers will also be able to apply to the bank to recruit schizophrenia patients and healthy controls for other research projects. This will significantly increase our capacity to support schizophrenia research across the nation. Without the generous support of our volunteers and supporters, this exciting project would not be possible.

Viertel Foundation Supports Australian Schizophrenia Research Bank

The Sylvia and Charles Viertel Charitable Foundation has been a long-term supporter of the Schizophrenia Research Institute over the last ten years, and once again the Foundation has come to the aid of schizophrenia research with a grant of \$210,000 over three years to provide funding for a second Clinical Assessment Officer for the Bank in Queensland. Anna Stiller has joined Sandra Diminic in the Brisbane office, which will greatly enhance the capacity for recruitment and assessment of volunteers in Queensland.

New Steps Towards Schizophrenia Diagnosis

Researchers at the Schizophrenia Research Institute are closer to finding a new way of detecting schizophrenia. In a recent study to be published in *Schizophrenia Bulletin**, scientists have focused on a specific brain response, called mismatch negativity (MMN). Results in schizophrenia patients show a deficiency in MMN is linked to a thinning of the brain's grey matter in regions that govern communication, social cognition and planning of tasks. At present schizophrenia diagnosis can only be made after intensive psychiatric assessment and can be hard to distinguish from other conditions in its early stages. As MMN is specific to schizophrenia and not present in other illnesses like bipolar disorder, this sound test may prove to be a biological index for the disease. Institute scientists are now investigating MMN in young people judged to be at risk of developing schizophrenia. These new findings provide further evidence of MMN's link to clinical outcomes and its potential use as a non-invasive diagnostic measure and open up new avenues of focus such as cognitive remediation and neuroprotective treatments for schizophrenia. The link between MMN and schizophrenia was originally discovered by Schizophrenia Research Institute scientists in 1991 and has since been investigated by researchers globally.

What is MMN?

MMN reflects a memory trace that contains a record of recent regular sounds in the environment and allows the brain to respond to something different being introduced to a sequence of information, such as ssssssssssssssdsssssssssd. Tests are conducted on people who listen to a sequence of sounds where an irregular (or deviant) sound is introduced – this produces the MMN response.

* Rasser P, Todd J, Thompson P, Michie P, Ward P, Johnston P, Case V, Tooney P, Schall U. Grey matter deficits, mismatch negativity and outcomes in schizophrenia. *Schizophrenia Bulletin* (in press).

Welcome to Our New Board Members

The Institute is delighted to welcome two new board members, Jill Wran and Chris McDiven. Both women bring wide experience from the not for profit, government and business sectors.

Jill Wran is a well known contributor to the not for profit sector with twenty five years honorary service to a variety of arts organizations and the cultural life of New South Wales. She is Chairman of the Historic Houses Trust and also chaired its Foundation for five years. A Council member of the University of New England, she joined the inaugural board of NSW Cultural Management (Sydney Theatre) in 2003.

Jill is a former member of the boards of the NSW State Conservatorium of Music, the Sydney Symphony Orchestra, the Centennial and Moore Parks Trust and the Sydney Opera House Trust. She is an honorary Vice-President of the Australian Institute of International Affairs.



Jill Wran

Chris McDiven is a Company Director and manages a family property and investment trust. She was Federal President of the Liberal Party of Australia from 2005 until 2008, the first woman to hold this position in the Party's 60 year history.

Immediately prior to her election she served for nearly 5 years as the State President of the Party's NSW Division.

A qualified teacher, she is President of the School Council of Kambala School, an Anglican school for girls in Rose Bay, NSW. She is also a board member of the



Chris McDiven

Association of Independent Schools (NSW).

Chris has had an involvement with a wide range of community organisations and her previous board positions include The Australian Sports Foundation, The Keep Australia Beautiful Council, National Foundation of Australian Women and the Powerhouse Museum Fund-raising Committee.

She was also an Ambassador for the Breast Cancer Network 'Field of Women LIVE'.

Adolescents' Vulnerability with Cannabis Use

Although one of the Institute's newest centres, the group led by Dr Katerina Zavitsanou at ANSTO's Radiopharmaceutical Research Institute has quickly gathered momentum. After several years with the Institute's centre at the University of Wollongong, Katerina established an independent research group when awarded an ANSTO Senior Research Fellowship. Through a funding partnership with ANSTO, the Institute now employs two post-doctoral Research Officers under Katerina's guidance: Dr Victoria Dalton joined the Institute in 2007 from Ireland, and Dr Mathieu Verdurand has arrived more recently from France – bringing expertise from around the world.

Research at this centre is investigating how cannabis use can lead to psychosis development, focusing particularly on the period of vulnerability during adolescence. This work aims to pinpoint the mechanisms underlying schizophrenia and drug-induced psychosis, and is using animal models to shed light on what makes some individuals more susceptible to developing psychotic disorders.

Nuclear Technology for Brain Research

ANSTO's unique, cutting-edge facilities allow investigation of the brain's messaging system through radiopharmaceutical labelling, which can map the distribution and highlight the action of specific neurotransmitters and receptors throughout the brain.

In a recent study*, autoradiography was used to examine brain changes in rats following administration of drugs targeting cannabinoid CB1 receptors, thereby mimicking the main actions of marijuana or hashish. Short and long-term treatment with a cannabinoid CB1 receptor agonist had a profound and complex effect on the densities of these receptors throughout the brain. Strong decreases in cannabinoid CB1 receptor binding were seen in several areas of the brain involved in emotion and learning/



The ANSTO team L-R: Hongqin Wang, Dr Victoria Dalton, Dr Mathieu Verdurand, and Dr Katerina Zavitsanou.

memory. These findings indicate that in certain brain regions, the effects of cannabis are only evident after repeated, long-term use. Recent studies also indicate that the adolescent brain responds differently to cannabinoid administration than the adult brain.

The team is continuing this research by examining other neurotransmitters, including the serotonin and dopamine systems, to determine how they are affected by cannabis use. In ongoing research, these affected systems will then be explored in-depth using the cutting edge imaging technology PET/SPECT to examine changes in the action of these neurotransmitters in the living animal brain.

The research team at ANSTO is bringing us closer to understanding schizophrenia and the role of drug use in psychosis development.

*Dalton VS, Wang HQ, Zavitsanou K. HU210-induced downregulation in cannabinoid CB1 receptor binding strongly correlates with body weight loss in the adult rat. *Neurochemical Research* 2009; 34: 1343-53.

Research Volunteer Tackles City2Surf

27 year old graphic designer Kathleen Smith is not a runner but she plans to walk the Sun Herald City2Surf on 9th August to raise \$2,000 for schizophrenia research.

Kathleen was diagnosed with schizophrenia in April last year - which came as a shock to her and her husband. Luckily the medication has worked well, and after researching the disease on the Institute's website, she decided to join the Australian Schizophrenia Research Bank to be part of Australia's largest brain project.

Being part of the research was important to Kathleen. "Research conducted now will bring better treatments in the future for me, and even the children we'd like

to have", she said.

Although Kathleen doesn't usually run, her husband, her great supporter has been a regular jogger. Unfortunately due to an accident last year, running is no longer an option.

"I'm doing it for my husband because he can't, and I'm doing it for everyone who suffers from this illness. I know what it's like because I've lived it too, and I feel that because I am lucky enough to function so well, this gives me a chance to make a difference....and the idea of walking for a purpose - to raise money for Schizophrenia Research - seemed like a very exciting thing to do."



Kathleen Smith

The Institute wishes Kathleen the best of luck and encourages everyone to sponsor her at http://city2surf.everydayhero.com.au/kathleen_smith

Judy Gibson's Bequest Club

Have you ever considered leaving a gift in your Will to the Schizophrenia Research Institute?

In one single act of generosity, you could make a huge difference to future generations suffering from schizophrenia.



Judy Gibson along with her late husband Jack have been loyal supporters of the Institute since its inception. By joining Judy in confirming a bequest to the Schizophrenia Research Institute, you will become a member of **'The Judy Gibson Society'**. Membership benefits include personal invitations to tours, morning teas and information sessions.

If you would like a **Bequest Brochure**, more information or to confirm your bequest, please call Helen Connealy on 02 9295 8692 or email h.connealy@schizophreniaresearch.org.au

Corporate Fundraising

The **ASX Reuters Charity Foundation** has again chosen to support the Schizophrenia Research Institute this year. Part of the foundation's fundraising includes the ASX Regatta and they are looking for corporate sponsors for this fun sailing day. The event is on Friday 16th October and the Institute is grateful for the foundation's ongoing support. For more

information visit www.asxreutersregatta.com.au

Scholarship in Honour of Richard Pratt

The death of Richard Pratt is a great loss to medical research. In honour of his personal commitment and generosity to our research the Institute will soon launch

The Richard Pratt Scholarship in Schizophrenia Research

This postgraduate scholarship will commence in 2010 and will assist a young Victorian researcher to establish a career in schizophrenia research.

Further details will be provided on the Institute's web site in coming months.



Richard Pratt

Different Ways of Giving

The Institute is very fortunate to have a range of generous friends. As well as the much needed financial gifts we receive there are a number of key businesses who support us by offering their services *pro bono*.

Ogilvy PR Health dedicated hours of professional help in promoting our SwearStop campaign with top class results.

McKessons Asia Pacific offered multiple teams to answer calls after the ABC Australian Story ran. And **KPMG** consistently offer their services *probono* for our annual audit.

In this stretched economic climate we extend our thanks to these teams for their creative thinking, energy and commitment.

Our Thanks

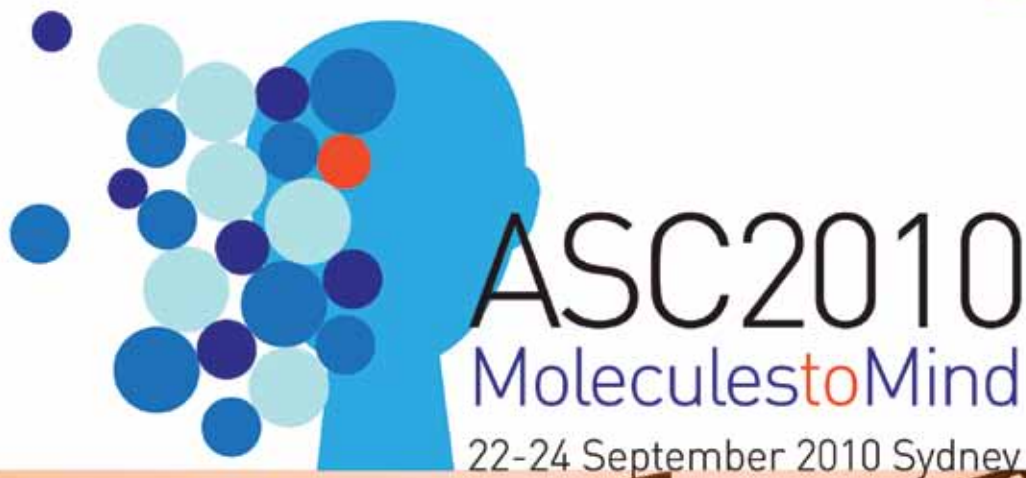
In Memoriam

We offer our condolences and send thanks to the families who have asked mourners to donate to the Institute in lieu of flowers and in memory of their loved ones.

- **Ben Hawdon**
- **Carl Ranthe**
- **Daniel Beck**
- **Kaukab (Kathy) Chedra**
- **Kristian Burfield-Mills**
- **Reginald George Clilverd**
- **Scott David Shannon**

The Institute also offers our condolences to one of our PhD students Sharon Monterrubio, whose brother Dennis Lamont Smith, who was a volunteer for our research, died recently.

Apologies for the error in the last issue of HeadLines, William Lewis did not suffer personally from schizophrenia but supported the Institute's work during his life. He very generously donated his brain to medical research, a gesture we are extremely grateful for. We offer our condolences to his family.



Australasian Schizophrenia Conference 2010

The Schizophrenia Research Institute will be hosting the 11th Biennial Australasian Schizophrenia Conference (ASC2010) at the Sheraton on the Park hotel in Sydney on 22-24 September 2010. This is the major schizophrenia focused medical research conference in the region and we are expecting over 300 psychiatrists, medical practitioners, psychologists, research scientists, clinical educators, nurses and other mental health workers to attend. A potential public forum is also being discussed.

The theme of the conference will be 'Molecules to Mind', which reflects the broad perspective required to achieve a greater scientific understanding of schizophrenia, understanding that will make a tangible difference in the lives of people with this illness. The theme reflects the quest for improved knowledge of the molecular and cellular processes involved, better appreciation of the structure and function of the brain in this disorder, new insights into the role of social and other environmental influences in contributing to schizophrenia, and to discover how new knowledge at each of these levels may be translated into better therapies and preventative interventions.

A range of internationally renowned scientists from Europe, Asia and the USA will be presenting at the ASC2010 conference. In addition, Australian researchers will be invited to present their own work across the 'Molecules to Mind' spectrum in a way that will complement the presentations of our international guests.

Special workshops with strong clinical themes will be available to highlight the translational capacities that have developed recently, and how both sound evidence and theory can inform innovative therapy.

This conference has carried the name 'Australasian' for some time and the ASC2010 meeting will be particularly focusing on encouraging participation from our colleagues in Asian countries. This can only serve to enrich the research and knowledge base in the region and also provide enhanced opportunity for the development of international collaborative opportunities.

The scope of ASC2010 is broad, as broad as the interests and expertise of the clinicians and scientists who work on the challenge that is schizophrenia, and whose goal is to be of help to the brave people who struggle personally with this illness every day of their lives.

Further details about the conference can be found at the Institute's web site www.schizophreniaresearch.org.au

OUR PARTNERS:



Australian Government

National Health and Medical Research Council

Macquarie Group Foundation



MANY THANKS to our government and major corporate supporters who have renewed their commitment to us and donated recently (January-June 2009)

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The Schizophrenia Research Institute is the only national medical research institute solely dedicated to discovering the ways to prevent and cure schizophrenia. A registered charity throughout Australia, we rely on donations to continue our work - www.schizophreniaresearch.org.au or (02) 9295 8688.

Please help by completing and mailing this form to Schizophrenia Research Institute, 405 Liverpool Street, Darlinghurst, NSW 2010, or fax to (02) 9295 8689, or simply call (02) 9295 8688.

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