

### "That was the best event I've ever been to!" Andrew Denton



The front cover of the 90-page 'Spark of Genius' program featured the 42 'Genii', each of whom hosted a table of 10 at the gala dinner in Sydney's Town Hall.

#### 'Spark of Genius' raises *\$250,000 for research*

It is difficult to imagine that a more ■ eclectic assembly of talent has ever gathered together in Sydney.

At 7pm on Friday 24 March, 42 remarkable individuals and over 50 of Australia's leading corporations joined together with the Governor of NSW and 600 guests at Sydney Town Hall to focus on the importance of research into schizophrenia.

With Macquarie Bank Foundation as principal partner and Adam Spencer as MC, the event was staged as a celebration of the creativity and achievements of the human mind - in aid of those whose abilities in such areas are diminished by mental illness.

St. George Bank provided an electronic bidding system for auction items donated by the 42 'genii' - many of whom are represented by ICMI Speakers and Entertainers. Major partner smart Australia donated a brand new 'smart forfour' car for which guests competed by buying keys. Special thanks also to InterContinental Sydney for demonstrating their world class hospitality to our Sparks of Genius.

For a comprehensive list of corporations, organisations and individuals who made it all possible, please see back page.

With such tremendous support, 'Spark of Genius' is now set to become a regular fixture on Sydney's social calendar.

(See inside for more pictures...)



NISAD's Lee Drury presents a bouquet to David Helfgott after his performance.



Richard Neville, George Negus, Peter FitzSimons and



MC Adam Spencer gets the show on the road.

## **A New World Resource** for Schizophrenia Research

Australia's peak research funding body, the National Health and Medical Research Council, has awarded \$1.75 million to fund a NISAD-led proposal to

establish a national schizophrenia research bank.

The unique new facility will build on NISAD-initiated NSW infrastructure programs such as the Schizophrenia Research Register, the Hunter DNA Bank, and the Virtual Brain Bank, linking to related programs in WA and Queensland to create a 'one stop shop' for both Australian and international researchers.

Australian Schizophrenia Research Bank (ASRB) will be housed at the Centre for Mental Health Studies in Newcastle, and up to 15 research officers, IT specialists and technicians will be employed across NSW, WA and Queensland to develop and run the new facility. ASRB will initially aim to make available comprehensive cross-referenced data from 1,500 sufferers and the same number of healthy control subjects.

(More ASRB news overleaf...)



"Schizophrenia research has been hampered by the difficulty in achieving sufficiently large samples of sufferers and matched controls who have been well characterised in terms of clinical, cognitive and neuroanatomical evaluations. Such large and detailed samples are necessary to identify the causal role of multiple genetic factors. The new Australian Schizophrenia Research Bank will help facilitate this.

For example, it will be possible to specify certain sample characteristics of sufferers (such as cognitive profile, gender, symptoms) and determine whether these are associated with particular anatomical changes or gene expressions."

**Prof. Vaughan Carr** 

Scientific Director-NISAD

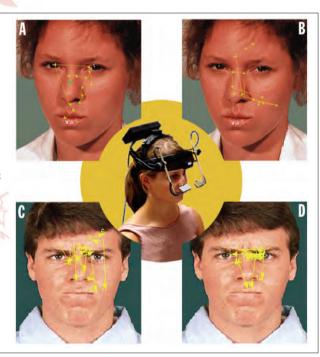
## SCAN PATH TRAINING FOR A BETTER LIFE

(A) A typical control subject's triangular scan path of a face image compared to (B) a schizophrenia subject's scan path.

(C) A schizophrenia subject's scan path of an angry face before scan path training. (D) the same subject's improved scan path after training.

(Centre Picture) A study participant wearing the EYELINK II gaze monitoring system.

Images (C) and (D) courtesy of Paul Ekman (www.emotionsrevealed.com)



 $F^{
m acial}$  recognition computer software used around the world to train Customs Officers how to identify suspicious travelers has provided an exciting breakthrough in the treatment of one of the major impacts of schizophrenia.

Misinterpreting the emotions and facial expressions of others (eg. seeing anger where there is joy) is one of the most socially debilitating symptoms of schizophrenia - caused by an inability to read subtle facial signals, and associated with abnormal visual scanning of faces.

A pilot study by a NISAD-supported team at the Macquarie Centre for Cognitive Science, led by Dr Tamara Russell and Dr Melissa Green, used the Micro Expression Training Tool (METT) system to see if it could assist people with schizophrenia to become better at facial emotion recognition.

Dr Russell said the technology would

provide a much-needed addition to what are currently limited treatments available to deal with the social problems associated with schizophrenia, which can make the difference between being able to work and being isolated. She explained that it has previously been demonstrated that people with schizophrenia severely restrict the amount of the face they scan leading to a misinterpretation of emotion.

"You and I scan a face in a triangle looking at the eyes, nose and mouth and then process very quickly the information about that person's expression", Dr Russell

"People with schizophrenia generally show a restricted scanning style which frequently leads them to process the wrong information. Our study shows now that we can train people to overcome that hurdle," she said.

Continued on back page...

### "I was moved to tears because I remembered what it used to be like.."

Among the many positive remarks received at 'Spark of Genius', the above quote says it all. It was said by Karen Harmon, a mental health nurse who had spent much of her career caring for patients in psychiatric hospitals in the years when patients were hidden away and mental illnesses were not openly discussed. While we still have a way to travel, the image of Sydney Town Hall full of NISAD supporters was testimony to Karen that we have moved forward.

A highlight of the evening was the appointment of Angela Greensil as NISAD's ambassador by Her Exellency Prof. Marie Bashir, Governor of NSW and NISAD Patron. Angela articulated the struggle of living with schizophrenia and very acutely reminded us why we were all there.

The success of the event was largely attributable to a group of corporate partners which included Macquarie Bank Foundation, ICMI, Smart, InterContinental Sydney, GE Lighting, ABC 702 Sydney, St.George Bank and Telstra Friends. The powerhouse, however, was the NISAD central office team, led by Lee Drury - a small group of people with enormous talent and commitment.

## Peter and Ellie Hunt come to NISAD's aid

NISAD Director and CEO of AMP, Andrew Mohl, introduced NISAD's work to business associate Peter Hunt, Chairman of Caliburn Partnership. It is with much gratitude that we acknowledge Peter and Ellie Hunt's decision to commit \$25,000 p.a. to a three-year sponsorship of NISAD.

### Peter Dempsey steps down from NISAD chair

NISAD has benefited enormously from Peter Dempsey's corporate expertise and leadership qualities since he accepted the role of Chairman in June 2003. He is succeeded by Peter Maher, Group Head of Financial Services, Macquarie Bank, and will continue to support the Institute as a Board member. Peter Maher has been Deputy Chair since 2003, and is looking forward to undertaking the Chairman's role in NISAD's future.

# Thanks again to Rotary for DNA Bank Support

The Australian Rotary Health Research Fund has provided second year funding for the NISAD-initiated Hunter DNA Bank for Schizophrenia and Allied Disorders. The existence of the DNA Bank played a vital role in obtaining the \$1.75 million from the NHMRC to develop the new Australian Schizophrenia Research Bank (ASRB) - which will expand NISAD's infrastructure elements into a nationwide resource.



Executive Director Debbie Willcox delivers Bernie Banton's auction item to the Town Hall.



Adam Spencer's favourite moment from the event.

## Dr Carmel Loughland to run ASRB

Dr Loughland's appointment as manager of the new Australian Schizophrenia Research Bank (see front page) was an easy decision. Carmel's long experience running the Schizophrenia Research Register and the Hunter DNA Bank ensures the ASRB's success.

NISAD has also appointed Rebecca Wilson as a Clinical Assessment Officer for the ASRB in Sydney, and will shortly be recuiting similar positions in Brisbane and Perth.

#### Update on 'The Chair'

Two international candidates for Australia's first University Chair of schizophrenia research were shortlisted and invited to Sydney in January to conduct seminars attended by NISAD scientists and others. Negotiations are now underway with the preferred applicant, and I hope to announce the appointee in the very near future.

#### **Forum News**

- The Mental Illness Fellowship of Australia has arranged for Major Sam Cochran, a US expert on police/mental health partnerships in crisis intervention, to speak at a number of capital city venues during Schizophrenia Awareness Week. The Sydney symposium is scheduled for 20 May, at the Masonic Centre, Goulburn Street. For bookings, please contact Pam Bruce (02) 9879 2600, or online at www.sfnsw.org.au.
- On 8 April I was the keynote speaker at the Mental Health Forum hosted by the Country Women's Association, Batemans Bay. More than 100 people attended this enlightening and informative day.

# Australian Psycholis Research Network

APRN, the national movement to establish an Australia wide program of clinical, neuroscience, and genetic research into the psychotic disorders, has launched a website explaining its proposals: www.aprn.net.au

#### explaining its proposal Page 2. HeadLines. May 2006

# A FAT Chance of Becoming Manic-Depressive

# First bipolar disorder risk gene found

NISAD's Dr Albert Chetcuti has collaborated on a study led by scientists at the Garvan Institute of Medical Research and the University of New South Wales, which has discovered the first risk gene specifically for bipolar disorder, also known as manic-depressive illness. The discovery has shown that people who have a particular form of this gene are twice as likely to develop the disease.

Dr Ian Blair, lead investigator of the study\*, says: "We are the first group in the world to take a multi-faceted approach to identify a bipolar risk gene - we used a number of families, unrelated patients, and therapeutic drug mouse models. Each of these three lines of investigation led us to a gene called FAT."

"We know that the FAT gene codes for a protein that is involved in connecting brain cells together, what we need to do now is find out exactly how it contributes to the increased risk of bipolar disorder," explained Dr Blair.

Bipolar disorder is a major psychiatric illness affecting around one person in every 50. Tragically, around one in six people suffering from the condition will

suicide. Mood-stabilising medications are typically prescribed to help control bipolar disorder. Lithium was the first mood-stabilising medication approved by the U.S. Food and Drug Administration (FDA) for treatment of mania. For decades it has been widely prescribed for treatment of bipolar disorder, yet no one knows for sure why it works.

Dr Blair's research has raised the possibility that lithium exerts its therapeutic affect by altering FAT gene expression, as well as the expression of genes encoding FAT's protein partners.

Lithium has a number of severe side effects that include tremor and weight gain. Kidney dysfunction may develop in a small proportion of patients when it is administered for long periods of time.

"Once we understand exactly what the FAT gene does, we will be able to develop better diagnostic tests for bipolar disorder. In the future, we hope our research will lead to new, targeted medicines specifically for bipolar disorder that don't have the unpleasant side effects that lithium has", said Dr Blair.

\* Blair IP, Chetcuti A *et al*: Positional cloning, association analysis and expression studies provide convergent evidence that the cadherin gene FAT contains a bipolar disorder susceptibility allele. *Molecular Psychiatry* 2006; 11: 372-383.



# Schizophrenia and Substance Use

# Breaking the Cycle of Cigarette and Cannabis Smoking

People with schizophrenia have consistently been shown to have very high rates of cigarette smoking. Up to 88 percent of all patients smoke, as compared to 25 per cent of the general population. Some studies have linked this high rate to the clinical characteristics of schizophrenia, suggesting that the gene for the alpha 7-nicotinic receptor may play a role in the pathogenesis of the illness and may also be responsible for the heavy smoking among patients. However, as this high smoking rate represents a significant health and financial cost to patients, other studies are exploring ways to help them quit.

Supported by NISAD, one such study conducted at the Centre for Mental Health Studies (CMHS), University of Newcastle, recruited 298 regular smokers with a psychotic disorder. Half the group participated in a 12-month intervention therapy program, and the other half in their usual care control program. The intervention program consisted of nicotine replacement therapy, plus motivational interviewing and cognitive-behaviour therapy (MI/CBT). The results showed that those patients who completed all sessions of the intervention program were 20 percent more likely to achieve abstinence or significant smoking reduction.

#### **Quitting Street Drugs**

A nother study<sup>2</sup> conducted at CMHS investigated whether an intervention program of motivational interviewing and cognitive-behaviour therapy was more effective than routine treatment in reducing cannabis, alcohol and/or amphetamine use. Similar to the smoking study, 160 substance using schizophrenia patients were divided into two groups, one of which received the 10-session MI/CBT intervention program.

While some temporary benefits were noted during participation in the program, there were no differences in terms of frequency of drug use between the treated and untreated groups 12 months after the treatment. These results indicate that MI/CBT alone is ineffective in aiding schizophrenia patients to break addiction to street drugs.

<sup>1</sup>Baker A, Richmond R, Haile M, Lewin T, Carr V, Taylor R, Jansons S, Wilhelm K. Randomized controlled trial of a smoking cessation intervention among people with a psychotic disorder. *American Journal of Psychiatry* (in press)

<sup>2</sup>Baker A, Bucci S, Lewin T, Kay-Lambkin F, Constable P, Carr V. Cognitive-behavioural therapy for substance use disorders in people with psychotic disorders. *British Journal of Psychiatry* 2006; 188: 439-448.

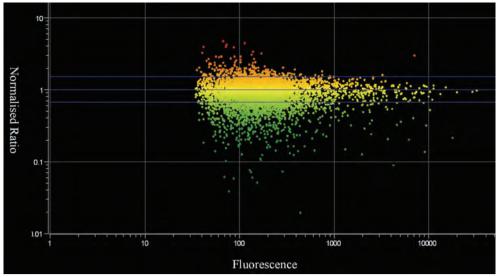


Fig.1: Graph showing the differences in expression of 6,000 genes from 14 schizophrenia participants and 14 healthy controls. Each coloured dot represents a gene, and its colour indicates whether the gene is upregulated (more expressed) or downregulated (less expressed) in schizophrenia subjects compared to controls. Green indicates less expression yellow gavel, and rad more expression.

### Two Genetic Keys to Schizophrenia

#### 1: Gene Profiling for Tailored Treatment

The symptoms of schizophrenia have long been separated into negative and positive types, and individual sufferers usually show a predominance of one type. Some patients, for example, show a diminution or loss of normal functions (negative symptoms), whereas others tend towards an excess or distortion of normal functions expressed in hallucinations and delusions (positive symptoms). Some scientists have proposed that a 'disorganised' or 'cognitive' type, indicating thought disorder, disorientation, and memory problems, be added as a third category but this has yet to be generally accepted.

NISAD's Nikola Bowden and a team of Newcastle scientists designed a preliminary investigation to discover if an individual's schizophrenia type could be identified from a genetic profile obtained from a simple blood sample. 14 patients and 14 matched controls took part in the study¹, which identified 18 brain-related genes significantly altered by schizophrenia (Fig.1). When individual gene profiles were classified by age, distinct gene expression profiles for subgroups of schizophrenia were identified for the first time.

Such gene expression profiling from blood samples may in the future provide a template for individually 'tailored' treatments, and larger scale studies on the same lines may lead to a diagnostic tool to assess at-risk status in the early phases of the illness.

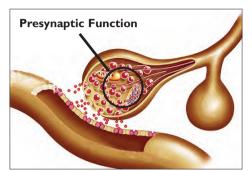


Fig.2: The billions of neurons in the brain communicate by sending chemical messages to each other across synapses.

#### 2: Genetic Abnormalities Found in the Amygdala

The amygdala is a part of the brain of special interest to schizophrenia researchers due to the key role it plays in emotion processing. While some studies have reported reduced tissue volumes and neural differences in the amygdala in schizophrenia, the genes involved in its dysfunction have yet to be identified.

Judith Weidenhofer and the NISAD affiliated team at the University of Newcastle examined gene expression in the amygdala<sup>2</sup> in postmortem brain tissue of seven matched pairs of schizophrenia and normal control subjects.

Among other differences, genes involved in presynaptic function (Fig.2) were found to be consistently dysregulated in the schizophrenia samples.

These results are the first evidence that genes involved in presynaptic mechanisms in the amygdala are implicated in the pathophysiology of schizophrenia.

1. Bowden A, Weidenhofer J, Scott R, Schall U, Todd J, Michie P, Tooney P. Preliminary investigation of gene expression profiles in peripheral blood lymphocytes in schizophrenia. *Schizophrenia Research* 2006; 82: 175-183. 2. Weidenhofer J, Bowden A,Scott R,Tooney P. Altered gene expression in the amygdala in schizophrenia: Up-regulation of genes located in the cytomatrix active zone. *Molecular and Cellular Neuroscience* 2006; 31: 243-250.



# NISAD Scientists win NARSAD 'Young Investigator Awards'

The US-based National Alliance for Research on Schizophrenia and Depression (NARSAD) is the largest non-government, donor-supported organization that distributes funds for brain disorder research.

The NARSAD Young Investigator Award Program offers up to US\$30,000 a year for up to two years to enable promising investigators to either extend their research fellowship training or to begin careers as independent research faculty.

NISAD congratulates Dr Tim Karl and Dr Melissa Green as award winners in 2006. Based at the Garvan Institute, Tim Karl uses animal models to study the effects of genes on brain function and behaviour, and is currently applying this technique to clarify the role of the neuregulin and neuropeptide Y genes in schizophrenia.

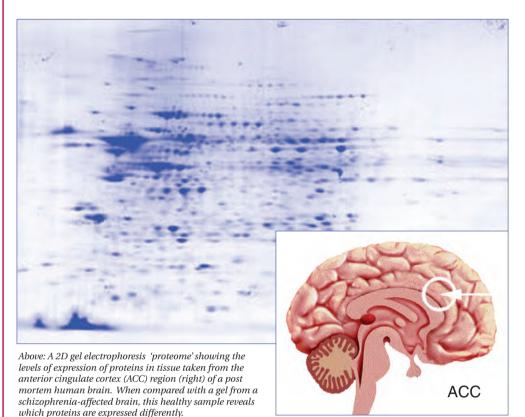
At the Macquarie Centre for Cognitive Science Dr Melissa Green is working with Dr Tamara Russell on a training program to remedy abnormal facial emotion perception in people with schizophrenia - as detailed on the front page.

# Why Proteomics is the New Buzzword in Worldwide Schizophrenia Research

The old idea that each of the human body's 30,000 genes produces a single protein which plays a role in biological construction has been discarded. Current evidence shows that thoughout life, when molecules are required, genes are transcribed first to the corresponding messenger ribonucleic acids (mRNAs), then translated to their protein counterparts - and that this process of transcription and translation is continually subject to modifications arising from genetic predispositions and environmental interactions. Thus it is now estimated that if the human genome contains 30,000 expressed genes, there may be the potential to express as many as one million different proteins - the building blocks of the body and brain.

The prospect of identifying what is now termed an individual's 'proteome' is daunting. Fortunately, the birth of 'proteomics', an umbrella term encompassing the many tools available to investigate proteins expressed within cells, fluids, tissues or organisms, has made this task more manageable. These proteomic methods have the power to display and quantify the functional expression of genes, enabling the measurement of disease-associated or phenotypic changes in proteins.

Schizophrenia, with its early developmental and later degenerative/atrophic components, is a particularly complex disorder. We know that multiple, largely unidentified genetic and environmental risk factors interact to lead to disease and disease progression. However, the underlying functional changes at the cellular level remain unknown. This is where the strength of a proteomics approach lies, allowing researchers to identify, quantify and compare the levels of thousands of proteins in different brain areas.



# 42 protein differences detected in a schizophrenia 'hot spot'

The brain area known as the anterior cingulate cortex (ACC) plays a fundamental role in cognition and attention, and has been a focus of neuroscience mental health research for some time. Its dysfunction has been directly linked to disorders such as obsessive-compulsive, bipolar and post traumatic stress, as well as to depression, autism and schizophrenia. All evidence identifies the ACC as a mental health 'hot spot' in the brain.

A NISAD-supported team at the University of Sydney has conducted the world's first proteomic analysis of the ACC in schizophrenia\*, using post mortem tissue from 10 schizophrenia patients and 10 normal controls. The results have identified 42 proteins in the ACC which are differently expressed in schizophrenia,

some of which exhibit a 200 percent greater abundance than normal.

The University of Sydney team were able to link all but two of the proteins to specific genes, and has classified them as affecting the synapses, neuronal signaling and other functions. Eight of the altered proteins are involved in energy metabolism within the brain.

Some of the identified proteins have previously been linked to schizophrenia in earlier studies. Others shed new light on the origins of the disease, and present new pieces to fit into the complex puzzle being completed by such research.

\*Clark D, Dedova I, Cordwell S, Matsumoto I. A proteome analysis of the anterior cingulate cortex grey matter in schizophrenia. *Molecular Psychiatry* 2006; 11: 459-470.



NISAD is a co-sponsor of of the ASC, which brings together schizophrenia researchers from around the world. ASC 2006 will highlight the latest research and give rise to new synergies with the potential for developing novel approaches to old problems in diagnosis, service delivery, drug use and optimising outcomes.

#### .Profile of a NISAD Scientist.....



#### Sinthuja Sivagnanasundaram

Senior Research Officer, Discipline of Pathology, University of Sydney.

y current research focus is on applying a proteomics approach to identify molecular factors and consequently neural networks and pathways underlying schizophrenia pathogenesis. I am using the proteomics methodology to profile the brain proteins from the hippocampus, prefrontal cortex and corpus callosum to identify differences between post-mortem schizophrenia and control brains. These are areas of the brain that have shown structural and functional abnormalities in individuals with schizophrenia.

What does NISAD mean to you? NISAD is a collective group of highly enthusiastic people with a wide range of expertise and skills striving to unravel the complexities of schizophrenia in a collaborative manner. Hopefully within a few years NISAD will be mapped as one of the important contributors to the advancement of schizophrenia research in the world.

What got you interested in researching schizophrenia? I was given a choice of two projects for my PhD. When I selected 'Genetics of schizophrenia' little did I know what I was getting myself into! The complexity of the disorder and the challenges it poses for a researcher has kept me hooked since then.

If you were not a scientist, what would you be doing? I would be exercising the creative and artistic side of my brain. It would be in the field of architecture or design, perhaps an interior designer.

What do you do when not researching? I have taken up rock climbing, which relieves the stress of research. Also I spend time socialising with family and friends and exploring Australia.



**Business and Government** Partners and Individual Supporters

**Principal Partner** 

**Major Partners** 













**Major Sponsors** 













**Government Partners** 

#### NSW@*HEALTH*



#### Corporations, Organizations and Individuals:

702 ABC Sydney, Abigroup, AMP Foundation, AMP Services, Aerialize, Astra Zeneca, Australand, Blue Scope Steel, Bonacci, Bovis Lend Lease, Bradcorp Holdings, Bright Print, Built Up Interiors, Bruce Oaklands (Citylink Construction Group), Comet Training, Construction Forestry Mining Energy Union (CFMEU), Coverforce, Dalma Formwork, Deacon, Dickson Rothschild, Doug Walters, Doug Hawkins (TVU), Dog Trumpet, Ernst & Young, Express Deco, Foresight Global Coaching Partnership, GE Lighting, Glen Boss, Hawker Britton, HD Projects, Hungerford Hill, Hunter New England Area Health Service, ICMI Speakers and Entertainers, InterContinental Sydney, Javier Encalada, Jill Wran, Judy Gibson, Jones Condon, Karabiner Access, Kevin Sheedy, KPMG, Lindt, Lundbeck, Macquarie Bank, Macquarie Bank Foundation, Macquarie Bank Sports, Manchester Unity, Margarete Ainsworth, Martin Place Chambers, McKesson Asia Pacific, Meridian Media, Nudie, Onsite Construction Group, Paynter Dixon, Ramsay Health Care, Richard Woodward & Associates, Sage Allan, smart Australia, St. George Bank, Staging Connections, Staging Rentals, Sticky, Sydney FC, Sydney Prop Specialists, Telstra Friends, The City of Sydney, The Forum Group, The Paleologos Family, Turning Point Solutions, Tony Bleasdale & Associates, Victor Valdes, Westfield, Winston Langley

#### Special thanks the our 'Sparks of Genius'

Adam Elliot, Adam Spencer, Allan Moss AO, Andrew Banks, Andrew Denton, Andrew Refshauge, Bernie Banton AM, Bill Granger, Clover Moore MP, David Helfgott, Dr Gael Jennings, Dr Jack Mundy AO, Dr Keith Suter, Dr Robyn Williams AM, Euan MacLeod, George Negus, Jackie Frank, James O'Loghlin, Jason Benjamin, Justice Marcus Einfeld AO QC, John Anderson, Julia Ross, Kerry Chikarovski, Kerry O'Brien, Linda Burney MP, Lisa Wilkinson, Margaret Thosby AM, Martin Coombes, Max Walker, Justice Michael Kirby AC CMG, Nigel Marsh, Peter FitzSimons, Professor Allan Fels AO, Pru Goward, Reg Mombassa, Richard Neville, Rob Carlton, Ron Barassi AM, Steve Mortimer OAM, Tim Jarvis, Tim Pethick, Tony

Special thanks to: Her Excellency Professor Marie Bashir AC, Governor of New South Wales, Paul McLeay MP representing the NSW Minister of Health, Gladys Berejliklian MP, Shadow Minister for Mental Health, and Angela Greensil, NISAD Ambassador - for sharing her life experience.

#### YOUNG SCIENTIST SCHOLARSHIP(S)

Last year's End of Financial Year Appeal to HeadLines readers aimed at raising \$30,000 to fund the first year of a 3-year schizophrenia research PhD scholarship.

#### The response was the best ever recorded: \$34,357!

After advertising and interviewing, we found we could use the money to help fund TWO scholarships, because both successful applicants were able to contribute partial funding from other university and government sources. So, thank you, HeadLines readers, for helping to start TWO new careers in mental health research!





Many thanks for your support! Says Mary-Claire Hanlon (left) and Kelly Skilbeck (right).

Thanks to HeadLines Tolling Hanlon has started her PhD scholarship at the Centre for Mental Health Studies in the University of Newcastle. She has begun work correlating data on the hundreds of MRI brain scans comprising NISAD's Virtual Brain Bank - focusing on quantifying and cross-referencing tissue reductions due to schizophrenia.

Also thanks to HeadLines readers, Kelly Skilbeck is working at the Department of Pharmacology at the University of Sydney, conducting a study of how stress in early life may impair brain development, causing increased risk of schizophrenia in later life.

Other PhD students who recently started with NISAD are Sharna Jamadar, who is working at the University of Newcastle on a study using fMRI and ERP to investigate deficits in goal-directed behaviour in schizophrenia patients, and how these deficits may relate to tissue reductions in specific brain areas; Sharon

Monterrubio at the University of Wollongong, who is investigating how stress, cannabis use and irregular fatty acid levels are related in schizophrenia, and Teresa du Bois at Wollongong, investigating how phencyclidine (PCP) can interrupt normal brain development in rats producing schizophrenia-like symptoms.

#### Congraduations!

even NISAD-supported honours Students successfully completed their degrees in 2005. Congratulations to Danielle Clark, Elizabeth O'Brien, Jenn O'Reilly (University of Sydney); Madeleine Hinwood, Gabrielle McQueen, Siobahn Quinn (University of Newcastle), and Natalie Potter (University of Wollongong).

#### **Summer Scholars**

NISAD awarded 8 summer scholar-ships: Katrina Weston, Ching-Wen Hsu and Julijana Eftimovska (Department of Biomedical Sciences, University of Wollongong), Mikail Rubinov (School of Psychiatry, University of NSW), David Van der Weyde (University of Newcastle), Caroline Beattie (MACCS, Macquarie University), Maryam Nesvaderani and Nicole Caixeiro (Department of Pathology, University of Sydney).

#### **SCAN PATH TRAINING**

Continued from front page.

In the study, people with schizophrenia and healthy participants were shown a series of face images, each expressing a particular emotion, and their scores for correctly identifying expressions were recorded. Using the METT, participants were trained to focus attention on relevant facial features in order to improve their emotion recognition accuracy. To verify actual changes in visual attention following training with the METT, patterns of visual scanning facial images were recorded with the EYELINK II gaze-monitoring system before and after training.

The preliminary results have demonstrated a significant improvement in emotion recognition after training with the METT for all participants. Importantly, people with schizophrenia started to look across the face in a less restricted fashion and also improved their ability to look more attentively at a person's face correctly identifying fear, anger, joy, surprise after previously confusing those emotions.

"This is a very exciting finding with significant implications. It has the potential to radically improve the lives of schizophrenia sufferers the world over," said Professor Vaughan Carr, Scientific Director of NISAD.

"We have been able to show for the first time that it is possible for people with schizophrenia to re-train their brains to properly scan faces and interpret subtle expressions - a crucial social skill which most of us take for granted"

"Emotions influence our behaviour - if someone smiles at us, we smile back. If someone makes us feel afraid, we run away. Sufferers of schizophrenia can easily mistake a smile for something quite different because of the way their brains process what they see. Thanks to the new training program, we can now help people with schizophrenia develop normal facial scanning skills - which improves their social interactions and employment options," said Prof. Carr.

The Macquarie University team will now recruit more schizophrenia subjects to participate in a much larger study, which will utilise video as well as still images. This work will be conducted in consultation with Dr. Carmel Loughland, at NISAD's University of Newcastle centre, who is conducting a similar study.

#### VINEFIRE to be lit for NISAD for the third time

hanks to James Kirby, Hungerford Hill's annual 'VineFire' event is to be dedicated to Thanks to James Kirby, Hungerioru rinis aimua. America NISAD for the third year in succession. So don't miss this chance to take a break in the Hunter Valley and attend the unique black tie barbeque on 9 September '06 held among the giant vats of the HH winery. Contact the winery on (02) 4998 7666 for booking details.



NISAD, 384 Victoria Street, Darlinghurst, NSW 2010. Fax: (02) 9295 8415 Web: www.nisad,org.au

