

# Healthy Development Adelaide (HDA)

A Research & Innovation Cluster in South Australia

[www.adelaide.edu.au/hda](http://www.adelaide.edu.au/hda)

## Newsletter

Volume 7, Issue 4  
August 2011

### Upcoming Events...

- 28-31 August**  
The annual Endocrine Society of Australia scientific meeting will be held in Perth, Australia.
- 14-17 September**  
The International Federation of Placenta Associations (IFPA) annual meeting will be held in Geilo, Norway.
- 18-21 September**  
The Developmental Origins of Health and Disease (DOHaD) 7th annual Congress will be held in Oregon, USA.
- 25-29 September**  
The Australian Society for Biochemistry and Molecular Biology (ComBio) annual meeting will be held in Queensland, Australia.
- 7-9 October**  
The Society for Reproductive Biology (SRB) annual meeting will be held in Queensland, Australia.
- 20-22 October**  
The Australian & New Zealand Obesity Society (ANZOS) annual meeting will be held in Adelaide, Australia.

Further information at  
[www.adelaide.edu.au/hda/events](http://www.adelaide.edu.au/hda/events)

### UPCOMING HDA EVENTS AUGUST & SEPTEMBER

#### 7TH ANNUAL HDA ORATION

THURSDAY 25 AUGUST, 5.30-7.30PM

PROFESSOR JOHN LYNCH

DISCIPLINE OF PUBLIC HEALTH, UNIVERSITY OF ADELAIDE

*WHY ARE ECONOMISTS SO INTERESTED IN EARLY CHILDHOOD  
HEALTH AND DEVELOPMENT?*

REGISTRATION: ANNE.JURISEVIC@ADELAIDE.EDU.AU

#### 2ND ANNUAL FOOD INDUSTRY FORUM FOR NUTRITION RESEARCH

MONDAY 29 - TUESDAY 30 AUGUST, SEBEL PLAYFORD, ADELAIDE

CO-HOSTED BY THE NUTRITIONAL PHYSIOLOGY RESEARCH CENTRE (UNISA)  
AND HEALTHY DEVELOPMENT ADELAIDE

*EARLY BIRD REGISTRATION CLOSE 5PM MONDAY 8 AUGUST;  
DISCOUNT REGISTRATIONS FOR AFGC, NSA AND HDA MEMBERS.*

REGISTRATION: FORM TO TANYA.VERNIK@UNISA.EDU.AU

#### EATING FOR TWO

*A COMMUNITY FORUM ON PREGNANCY & NUTRITION*

TUESDAY 27 SEPTEMBER, 5.30-7.30PM, ELDER HALL, NTH TCE

CO-HOSTED BY FOODPLUS RESEARCH CENTRE (UNIVERSITY OF ADELAIDE), ROBINSON INSTITUTE (UNIVERSITY OF ADELAIDE), WOMEN'S & CHILDREN'S HEALTH RESEARCH INSTITUTE, AND HEALTHY DEVELOPMENT ADELAIDE

REGISTRATION: [WWW.EVENTBRITE.COM/EVENT/1818259463](http://WWW.EVENTBRITE.COM/EVENT/1818259463)

For further info and full programs (speakers, venue and registration details)  
go to: [www.adelaide.edu.au/hda/events](http://www.adelaide.edu.au/hda/events)

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The Foundation of a Healthy Society

Winner in Excellence in Research Collaboration ... SA Science Excellence Awards 2009 ...

## MEMBER PROFILE - DR AMY SLATER

SCHOOL OF PSYCHOLOGY, FLINDERS UNIVERSITY

Volume 7, Issue 4

NEW MEMBER



I am a registered psychologist currently working as a Postdoctoral Research Fellow in the School of Psychology at Flinders University.

My broad area of research is

body image, specifically body image in children and adolescents.

My PhD research focused on gender differences in adolescent sport participation and the role of body image within this.

I am currently working on an ARC funded project entitled "Growing Up Too Quickly? Body objectification in adolescent and pre-adolescent girls (teens and tweens)" with Professor Marika Tiggemann.

Some of our current research projects are investigating the

role of the Internet on how adolescent girls feel about themselves and their bodies, the advertising content on websites aimed at teenagers and also work on the premature sexualisation of girls.

Previously I worked at the CSIRO, as part of the Healthy Weight and Wellbeing Team for Children, where I co-authored the 2009 book "The CSIRO Wellbeing Plan for Kids".

Clinically, I have worked in both community and hospital settings with children and families with

speech and language difficulties, developmental delay, attachment and relationship concerns, autism, post-traumatic stress disorder, as well as chronic illnesses cancer and diabetes.

I also work as a psychologist in the Child and Adolescent Sleep Clinic at Flinders University helping children and families experiencing sleep disorders.

8201 2106  
amy.slater@flinders.edu.au

## HDA TRAVEL GRANT

RECIPIENT CONFERENCE REPORT 2011



**Dr Denise Furness**  
The Robinson Institute,  
University of Adelaide

The 7th Asia Pacific Conference on Clinical Nutrition was themed "optimizing clinical nutrition in adult/paediatrics and dietary supplements/vegetarianism".

The conference was held in Bangkok and brought together clinicians, scientists, dieticians, nutritionists and hospital pharmacists to acquire knowledge and practical expertise on key topics including: clinical nutrition in inflammatory diseases, allergy and immunology; micro/macronutrients in clinical practice, dietary supplements, nutraceuticals and vegetarianism in clinical nutrition; clinical nutrition and metabolism; and commercial and infant formulas in clinical practices.

This conference clearly demonstrated the linkage between food and health. The meeting presented data relating to nutrient intake in poor and affluent countries as well as in a clinical setting. The three things that stood out to me were food security, obesity and malnutrition.

As this was an Asian Pacific conference there were many speakers from developing countries and the topic of malnutrition, was a major theme throughout the meeting, which was very new to me. In contrast there were many talks on obesity and programs that have been developed to help overweight individual lose weight, regain confidence and improve health, which was not new to me. These two topics "obesity and malnutrition", made me question if Scientists are really the ones to fix these problems - half the world is sick from eating too much food, while other half is sick because they don't have enough food, it doesn't make sense. It's a sad problem and I feel it's more political than scientific.

The highlight of the conference was the presentation given by Mark Wahlqvist, from Australia. He discussed the role of the clinical nutritionist in food security for communities and households. I was amazed and shocked to learn about how climate change and global economics are impacting our food supply and how big an issue food security is for Australians and the world. This presentation made a huge impact on me because I was not aware of the serious problems that we will be faced with in the very near future.

I was pleased to learn more about vitamin supplements, in particular about fish oil and its health benefits. Without a doubt research has shown that those with inflammatory diseases benefit from fish oil capsules, but studies have not shown any health improvements in healthy individuals with fish oil capsules. However, studies have shown that eating fish twice a week does provide benefits even in healthy individuals.

There were many talks during the meeting reinforcing that whole foods are best for optimum health. In addition, I learnt during a lunchtime symposium held by a Japanese group about the fifth basic taste. This taste is known as "umami" and is the taste of amino acids. The presentation was interesting, but I did not enjoy the tasting section, despite speaker being confident that we would enjoy the tasting samples. Yuk!

Toward the end of the meeting there were some fantastic talks on nutritional genomics, which is my area of research. Unfortunately there were many concurrent sessions running simultaneously, meaning that I missed out on many sessions that I would have liked to attend. In addition, the conference did not run as smoothly as I expected, but despite this I enjoyed the meeting and thought the content was excellent.

I presented on maternal dietary factors in relation to pregnancy outcome and received wonderful feedback. I thank HDA for supporting my travel to the Conference.

## RECENT HDA EVENTS

### ASMR and HDA Scientific Networking Event: Strategies for Successful Networking

On 10 June, HDA co-hosted with the Australian Society for Medical Research (ASMR - SA branch) a scientific networking event on *Strategies for Successful Networking* at the Science Exchange, Adelaide. The event attracted ~100 students and early career researchers interested in gaining tips in successful networking from some of Adelaide's senior experts that included Professor Caroline McMillen (Deputy Vice Chancellor & VP: Research & Innovation, UniSA), Dr Beverly Muhlhausler (Senior Research Fellow, Foodplus Research Centre, University of Adelaide), Dr Alison Mastrangelo (Adjunct A/Professor, University of Adelaide; Principal Consultant, LinkingU) and Mr Daryl Stillwell (Managing Director, Stillwell Management Consultants).



pic 1 to r: 1. Mr Daryl Stillwell.  
2. Prof Caroline McMillen. 3.  
Attendees networking

### HDA Thematic Evening: Micronutrients in Pregnancy: It's the little things that count

On 14 July, HDA hosted its third Thematic Evening for the year on *micronutrients in pregnancy: it's the little things that count* to an audience of ~150 people. The event was sponsored by Nutrition Society of Australia (SA branch) and chaired by Dr Alison Coates from the Nutritional Physiology Research Centre at UniSA.

Speakers included Dr Denise Furness (Robinson Institute, University of Adelaide) on *Folate in pregnancy: friend or foe?*; Dr Jo Zhou (Women's & Children's Health Research Institute / Foodplus Research Centre, University of Adelaide) on *Iron in pregnancy: a double edged sword*; Prof Tony Perkins (Head, School of Medical Sciences, Griffith University) on *Selenium in pregnancy: does it matter?*; and Prof Claire Roberts (Robinson Institute, University of Adelaide) on *Vitamin D in pregnancy: too much and too little*.



The talks can be viewed at [www.adelaide.edu.au/hda/news](http://www.adelaide.edu.au/hda/news)

next HDA Thematic Evening - Thursday 20 October  
Program out mid September

## HDA TRAVEL GRANT RECIPIENT CONFERENCE REPORT 2011



### Carly Moores CSIRO Food and Nutritional Sciences, and Flinders University

The Changing Landscape of the Cancer Genome conference was held in Boston's historic Back Bay, Massachusetts June 20-25<sup>th</sup>. The meeting was organised by Keystone Symposium on Molecular and Cellular Biology and was held during their 40<sup>th</sup> meeting season. The meeting brought together a little under 500 participants with many contributing to the scientific programme which consisted of 50 oral presentations held in plenary format, as well as 3 poster sessions.

During the conference I presented progress results from my PhD project in one of the poster sessions. My poster contained results from a cross-sectional study which showed that serum vitamin D was positively associated with telomere length in middle-aged people, and that plasma zinc was negatively associated with telomere length in this same population. The poster sessions were allotted a generous 2.5 hours and this permitted for casual and relaxed discussion of the scientific content. It was great to liaise with experts in the field and with fellow students from other parts of the world. It was an extremely valuable experience, for which I am so grateful the contributions of HDA made possible.

The meeting highlighted the efforts and progress of TCGA or The Cancer Genome Atlas to accelerate understanding of the molecular basis of cancer using ever improving and affordable genome analysis techniques and technologies. The primary aim of TCGA is to improve the ability to diagnose, treat and prevent cancer. Speakers discussed sequencing platforms, algorithms and limitations for both whole genome and exome sequencing project approaches. This is increasingly pertinent information as sequencing becomes more affordable for individual laboratories and as the data generated by TCGA Research Network are widely accessible for all researchers through shared public databases.

Although I was disappointed there wasn't more discussion of telomeres over the five days, I found the programme on the final day to be the most exciting. These final sessions were focussed on 1) looking beyond the genome into the epigenome and the transcriptome – as the first steps of oncogenesis may be epigenetic – and 2) using acquired genomic information to target cancer treatment regimens and to accelerate drug discovery and development.

I found the conference to be an invaluable experience which I felt both motivated me as an aspiring scientist and inspired me on a personal level. Like many others, cancer has certainly touched my life and it is uplifting to see how the efforts of many people worldwide are contributing to the growing body – and promise – of cancer research.

## HDA TRAVEL GRANT

### RECIPIENT CONFERENCE REPORT 2011

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**Dorota Zarnowiecki** (*HDA Scholar*)  
Nutritional Physiology Research Centre,  
University of South Australia

The 10<sup>th</sup> Annual Meeting of the *International Society for Behavioral Nutrition and Physical Activity (ISBNPA)* was held in Melbourne from 15-18<sup>th</sup> June, bringing together international researchers interested in promoting research and policy related to healthy eating and physical activity. This meeting was largest ever held by ISBNPA with over 600 delegates attending this conference. Thanks to a travel grant provided by HDA I was able to attend this meeting.

This conference provided opportunity for researchers from diverse range of backgrounds in nutrition and physical activity to share their research. Presentation themes included behavioural research around understanding predictors of diet, physical activity and sedentary behaviours, as well as research into underlying biological and physiological mechanisms of obesity and health. Research topics ranged from invitro to adulthood and from individual to community and policy research. While it was fantastic to listen to presentations in my own field of nutrition research, I thoroughly enjoyed listening to presentations from diverse areas which have further broadened and inspired my own work.

Pre-conference workshops provided insights into the use of technology to advance measurement of dietary assessment and physical activity. Current technological developments include utilising the internet, smart phones, body sensors and personal video cameras to record food intake and physical activity. The

plenary presentations explored current hot topics, including socio-economic disadvantage and health, mass media and diabetes management. A particularly thought provoking plenary presentation addressed how unsustainable eating habits and sedentary behaviours may be contributing to environmental problems, and how health promotion in population at large could contribute to reducing environmental challenges we are facing, such as climate change.

Closing the conference was an entertaining yet contentious debate questioning whether “we should invest our nutrition and physical activity promotion efforts on youth rather than ageing population”. Two expert teams of eminent nutrition and physical activity researchers went head to head on this controversial topic, and amid the chaos of name calling, home videos and rap music, important issues were raised about urgency of treating current health problems of our ageing population versus focusing efforts on youth to prevent development of these same health problems in the future.

A personal highlight for me was meeting some of my ‘research idols’ at the early career mentoring lunch, where PhD students and early career researchers were able to choose a mentor to share lunch with, and discuss their research. I was also privileged to receive an oral presentation to present some work from my PhD at this conference. It was a daunting yet thrilling experience to look out over the sea of faces during my presentation and see many accomplished researchers in the field, including past and present presidents of ISBNPA, sitting in audience listening to my work. I would like to thank HDA for providing me with the opportunity to attend this conference. At this late stage of my candidature, it was an invaluable opportunity to meet with leading researchers from around the world.

## HDA TRAVEL GRANT

### RECIPIENT CONFERENCE REPORT 2011



**Dr Nathan O'Callaghan**  
Nutritional Genomics Group,  
CSIRO Food & Nutritional Sciences

During June, I attended the 7<sup>th</sup> Asia Pacific Conference of Clinical Nutrition (APCCN) held in Bangkok, Thailand. Over 500 clinicians, dietitians, nutritionists, scientists attended the meeting to discuss and share knowledge and expertise on: enteral/parenteral nutrition; clinical nutrition in inflammatory diseases; allergy and immunology; micro/macronutrients in clinical practice; dietary supplements and nutraceuticals in clinical nutrition; clinical nutrition and metabolism; and commercial and infant formulas in clinical practices.

Here I describe some snapshots and comments from my participation in the conference. The opening of the conference was a presentation by Prof Mark Wahlqvist, AO. He highlighted the growing global concern about food availability, food security and about ensuring all in the global community have access to quality foods to prevent disease and optimise health; these themes were a constant throughout the meeting. Another theme that re-occurred was around need to recognise that dietary and nutrition requirements differ significantly through different stages of life.

This was highlighted as a gap in our current science base and delivery through health care professionals. Several talks turned spotlight onto this issue, with clinicians begging for us, as researchers, to provide a body of substantive and rigorous scientific evidence for them to use in the clinic and the community.

A session was devoted to maternal nutrition – and while there was a focus on using nutrition to better manage specific clinical outcomes, the final talk in session was of particular interest to me, discussing diet and nutrition to optimise health in neonates and children. Other highlights that were of particular relevance to my work were plenary lectures on ‘nutritional genomics of fatty acid metabolism in relation to clinical outcomes’ and understanding oxidative stress and how nutrition can modify health outcomes’.

I am grateful to the sponsorship HDA provided me; it has enabled me to attend the conference, presenting my work, maintaining some ongoing working relationships as well as developing new opportunities for collaboration and co-operation, both within Australia and the Asia-Pacific region. Following the conference I was invited to give a presentation at the Faculty of Medicine, Srinakharinwirot University. Here I was able to present and discuss my work, specifically our current projects investigating the links between nutrition and genome health in children.

## SAHMRI LAUNCHES NEW RESEARCH THEMES

### Media Release - 7 June 2011, SAHMRI

The South Australian Health and Medical Research Institute's (SAHMRI) purpose of delivering and translating innovative health and medical research into real outcomes for patients and the community was reaffirmed with its research themes revealed.

SAHMRI's Executive Director announced that **Cancer, Heart Disease, Healthy Mothers, Babies and Children, Nutrition and Metabolism, Mind and Brain and Infection and Immunity** are the themes at the forefront of SAHMRI's preliminary research focus. Making the announcement this week, Professor Steve Wesselingh said that the process to develop the themes involved an extensive assessment of South Australia's research strengths and community needs.

"The data collected throughout the process was reviewed by the SAHMRI Research Committee and the Board to determine South Australia's research strengths and to identify important gaps" Professor Wesselingh said. Through collaboration and innovation, SAHMRI will lead the way in new discoveries, treatments and improved health for the entire community. In response to the growing need for improved, affordable and more accessible health care, SAHMRI will focus on delivering real health reform back to the community.

"This week's announcement strengthens SAHMRI's purpose of translating research into real solutions for the entire community, including new drugs, products and treatments for every day health problems. Additionally, SAHMRI recognises the importance of research into in-

igenous health and will embed this focus across all of the research themes.

Through collaboration with the three South Australian universities, the South Australian Government and the health and medical research community, SAHMRI's Executive Director will now appoint research theme leaders, refine the new research themes and develop a formal research strategy for the institute.

Chaired by Professor John Hopwood, the SAHMRI Research Committee includes Steve Wesselingh and twelve of Australia's top health and medical scientists enlisted to develop the preliminary research strategy for SAHMRI. Professor Hopwood, who is also South Australia's Scientist of the Year and the 2009 recipient of the prestigious CSL Florey Medal for his significant achievements in biomedical science and human health advancement, said the SAHMRI Research Committee brings together some of the world's greatest research minds.

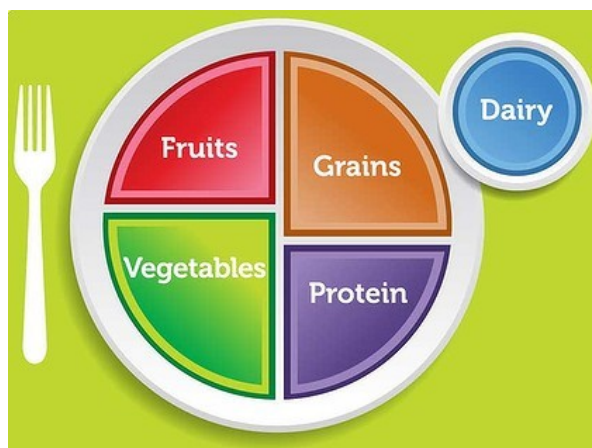
"The SAHMRI Research Committee is unique in Australia and perhaps in the world in terms of the depth and diversity of scientific knowledge and endeavour combined into one team," Professor Hopwood said.

The establishment of SAHMRI will provide national and international opportunities for South Australia to strengthen its position in the health and medical research sector. The co-location of the SAHMRI with the new Royal Adelaide Hospital (RAH) is a once in a lifetime opportunity to combine the best practice in health care delivery, education and research.

*For more info on SAHMRI's research themes visit [www.sahmri.com](http://www.sahmri.com)*

## HEALTHY EATING PYRAMID OUT, PLATE IN

### News Release - 4 June 2011, Sydney Morning Herald



The US government has ditched its two-decade old pyramid model for healthy eating and introduced a new plate symbol half filled with fruits and vegetables to urge better eating habits.

The colourful design, called MyPlate, was unveiled by first lady Michelle Obama.

The plate icon is sectioned into four parts, with fruits and vegetables making up one half and grains and proteins filling the other half. A dairy drink is included alongside.

The graphic replaces the food pyramid, released in 1992, which showed that fats and oils were located at the upper tip and should be used sparingly, while whole grains made up the base of the diet with six to 11 servings daily. But critics maintained the pyramid design was too hard for the general public to understand.

A total of 26.7 per cent of the US population is obese, and no single state has been able to meet the 15 per cent obesity limit set by the US government, according to 2009 data from Centres for Disease Control and Prevention.

A White House taskforce found last year that close to one-third of children in America are overweight or obese, and obesity rates among youths have tripled since 1980.

Mrs Obama said the MyPlate icon would be useful in the fight against childhood obesity, but would not be limited to that age group. "It's an image that can be reinforced and practised at breakfast, lunch, and at dinner, no matter how old we are," Mrs Obama said.

## BULLYING AMONG STUDENTS ON THE DECLINE

### Media Release - 10 June 2011, UniSA

Despite widespread public perception that bullying among school children is on the rise, in most countries it is actually on the decline. A newly published review conducted by Professor Ken Rigby from the University of South Australia and Professor Peter Smith at Goldsmith College, London, has revealed that in published reports obtained from 27 countries between 1990 and 2009 approximately 75 per cent reported a significant drop in student reported bullying. (11% reported increase in occasional bullying).

Anti-bullying expert and lead researcher Prof Ken Rigby from UniSA's School of Education says growing public awareness and media attention has created a distorted view of the problem, but stresses more still needs to be done to combat the problem. "Mainly I think the perception is due to the considerable raising of alarm about bullying and its effects over the past 15 years or so, and the increase in the reporting of serious incidents," Prof Rigby says. "Stressing serious effects of bullying is one understandable way of getting attention to the problem. Unfortunately doing so distorts picture and takes attention from many positive things that can be done, and are being done around world, to address problem more effectively."

"All this does not mean that the problem has been solved – far from it. The reductions in bullying following the use of sound anti-bullying programs are quite modest in size – around 20 per cent. There is still much more to be done, and much more can be done by applying knowledge that's been accrued in recent years."

He says the increased uptake of anti-bullying programs and greater awareness and reporting of mental health problems caused by bullying such as anxiety and depression may have contributed to the inaccurate public perception. While traditional forms of bullying – defined as repeated aggressive behaviour involving an imbalance of power between perpetrators and their target – are in decline, prevalence of cyber bullying is less clear.

"Findings relating to cyber bullying are much less conclusive. We were able to locate only two studies relating to trends in the prevalence of cyber bullying," he says. "The findings reported in England suggest that cyber bullying, specifically the use of abusive text messages and emails, increased rapidly as cyber technology became more and more accessible to students; but that more recently it has not become more prevalent. More research needs to be done before any conclusions can be drawn; this is particularly important as development and use of newer cyber technology may lead to an increased capacity of students to engage in range of cyber bullying forms and corresponding rise in its prevalence."

## SCHOOL STUDENT BEHAVIOUR STUDY KICKS OFF

### Media Release - 17 June 2011, UniSA

For the first time in 20 years South Australia is about to get an important new understanding of student behaviour in all of its schools. A special \$500,000 Australian Research Council project led by the University of South Australia in collaboration with Flinders University and a coalition of principals' associations and education sectors over the next three years is set to kick off this month with an initial survey of over 20,000 teachers across South Australia, including government and non-government schools.

Project leader, UniSA's Dr Anna Sullivan, says the first phase of the research will provide quantitative data on the state of student behaviour in our schools and help support policy development and the kind of teaching theory and practice that will deliver better student outcomes and encourage teachers to remain in the profession by helping them to effectively engage their students.

"Surveys conducted in the past focussed squarely on problem students and student behaviours, but we want to look at the issues more deeply and examine the link between student engagement, student behaviour and academic achievement," Dr Sullivan says. "We are very keen to build evidence base for future policy development, so we are looking at student behaviours as part of what we are describing as social ecology of school and classroom. "We are also aware that any assessment of student behaviours must be looked at more broadly than just usual talking in class, aggression and disruption, to include more passive disengaged behaviours that impact on learning."

Dr Sullivan says historically some of the most significant research done on school discipline was conducted in

South Australia in the early 1990s with a survey of more than 3000 teachers – one of the largest Australian studies ever conducted of teachers' views on discipline. "This early research will be invaluable because although we are moving beyond scope of those studies, we will have capacity for some useful comparisons and longitudinal perspectives," she says. But she says the similarities with the previous research end there.

"A lot has changed in 20 years," Dr Sullivan says. "The school leaving age has increased, there is increased inclusion of students with special needs into mainstream education, there have been vast changes in technology and a host of other sociological factors have shifted including changes to immigration demographics and an increasing complexity in students' home backgrounds. "In this first phase of our research we are hoping to get a better measure of how engaged students are in the classroom. From research carried out both in Australia and internationally we have a strong indication that in any year about 40 per cent of students are not engaged productively in the classroom. "Of that group about 20 per cent are low level disruptive or actively uncooperative, but an equal number are completely disengaged."

"These are the students that don't rock the boat but have just turned off. They generally get little attention because they are not a problem in any obvious way, they cooperate and are not aggressive. "They stay 'under the radar' but are not getting much out of their time at school." Dr Sullivan says the aim of the study will be to look at the links between behaviour, learning and teaching considering the full range of environmental factors from curriculum and resources, the physical learning environment, and issues surrounding and influencing student and teacher behaviours.

"The study will be an invaluable resource for the future and we are hoping to get strong buy in from teachers around the state."

# ATTENTION TO MENTAL HEALTH BOOSTS ACADEMIC PERFORMANCE

Volume 7, Issue 4

## Media Release - 21 June 2011, Flinders University

Australian primary school students whose mental health and wellbeing improved through KidsMatter showed better academic performance equivalent to having up to six months extra schooling, an independent evaluation by Flinders University has found.



Researcher Dr Katherine Dix (pictured) used the NAPLAN data from the *MySchool* website and the KidsMatter Implementation Index to see if a relationship existed between how well a school implemented KidsMatter and academic performance. Her analysis, published recently in the British journal *Child and Adolescent Mental Health*, demonstrated that there was a significant positive relationship.

“There’s strong evidence internationally that a child’s social and emotional wellbeing affects his or her academic performance,” Dr Dix, chief analyst of KidsMatter Primary

evaluation team from Flinders’ School of Education, said.

“Our study demonstrates that the application of school-wide mental health promotions similarly affects learning outcomes,” she said.

“The availability of the NAPLAN data, collected during the first KidsMatter implementation in 2007 and 2008, provided a well-founded basis for our analysis.

“It enabled us to directly compare the mental health outcomes and academic performance for each of the 100 schools which took part in KidsMatter.

“After controlling for differences in socioeconomic background, the study showed the difference between students in high- and low-implementing schools was equivalent to a difference in academic performance of up to six months extra schooling by Year 7.”

Dr Dix said that while many nations were mounting school-based mental health initiatives, the quality of program implementation needed to be sustainably monitored for the full benefit of the programs to be realised in the longer-term.

## METHAMPHETAMINES AND BRAIN DAMAGE

### Media Release - 21 June 2011, UniSA

UniSA scientists are researching whether chronic methamphetamine use causes damage to regions of the brain associated with bipolar disorder, schizophrenia and movement disorders such as Parkinson’s Disease.

They believe long-term use of methamphetamine – known as ‘ice’ or ‘crystal meth’ – may be the source of irreparable central nervous system damage.



Dr Chris Della Vedova from UniSA’s School of Pharmacy and Medical Sciences says methamphetamine use in Australia is the highest in the English-speaking world.

“What’s so concerning about methamphetamine is it’s so heavily used in Australia – with approximately 20 per cent of Australians aged 20-24 years having used methamphetamine,” Dr Della Vedova says.

“This illegal stimulant is an addictive drug that increases alertness, motor activity and mood. However, repeated use can cause violent behaviour, paranoid psychosis, brain damage and even death. It’s quite concerning the type of damage that can occur with regular use, particularly in teenagers where the cortex of the brain hasn’t fully formed yet.”

Dr Della Vedova and his colleagues Professor Jason

White and Dr John Hayball are particularly interested in the effects of methamphetamine use on the immune system.

“When you get a bacteria or virus, the immune system kicks in and kills it off. What we think happens with these drugs is that part of the immune system thinks there’s something dangerous it needs to take care of ... but when it can’t kill a virus or bacteria it can cause damage to your own cells, which in this happens in the brain and central nervous system,” he says.

Dr Della Vedova says damage that occurs to the brain from heavy methamphetamine use remains after stopping use of the drug and effectively ages the brain.

“In one study, researchers found that even in individuals who hadn’t used the drug for some time, the brain damage observed was equivalent to that seen over 40 years of normal ageing,” he says. “We’re interested in the effect chronic methamphetamine use has on regions of the brain that are associated with Parkinson’s Disease, bipolar disorder and schizophrenia.”

The researchers need current and former methamphetamine users to take part in their study. Participants can be assured the study is completely confidential and names are not used. It involves a visit to City East Campus, where participants will give blood, receive an ultrasound of their brain, and answer a basic health and drug survey. They will be reimbursed \$15 per hour for their time. Anyone interested in taking part should contact Dr Della Vedova on (08) 8302 2267 or email [chris.dellavedova@unisa.edu.au](mailto:chris.dellavedova@unisa.edu.au)

# IVF 'VANISHING TWIN' LINKED WITH BIRTH DEFECTS

Volume 7, Issue 4

NEWS  
NEWS  
NEWS

## Media Release - 6 July 2011, University of Adelaide

A significant discovery by University of Adelaide researchers shows that the loss of a twin during early pregnancy explains the increased risk of birth defects in multiple IVF pregnancies.

The annual meeting of European Society of Human Reproduction and Embryology in Stockholm today will hear A/Professor Michael Davies explain how the "vanishing twin" phenomenon is linked to a nearly two-fold increased risk of congenital malformation in the surviving baby, and a threefold increase in multiple birth defects.

The phenomenon occurs when there are fewer babies born than detected in early pregnancy by ultrasound - often reducing from twins to single babies but also possibly from triplets to twins.

A/Professor Davies is co-director of the Research Centre for the Early Origins of Health and Disease at the University of Adelaide. He says the discovery will now pave the way for researchers to investigate factors that influence embryo development and loss.

"This has significant potential for advancing our understanding of the origins of congenital malformation, not just after infertility treatment, but also in natural pregnancies," A/Professor Davies says.

"It is difficult to study what factors in early pregnancy might cause congenital malformation, such as heart and skeletal defects and cerebral palsy. This is because, in the general population, the majority of miscarriages - including vanishing twins - occur in the early days and weeks of pregnancy, often before the woman is even aware she is pregnant.

"However, in women undergoing fertility treatment, early pregnancy is much easier to study because doctors know exactly when eggs were fertilised and transferred to the woman's womb. The first ultrasound scans are usually carried out around six to eight weeks. This is followed by

close monitoring with pregnancy tests and ultrasounds from the very beginning."

A/Professor Davies and his University of Adelaide colleagues studied data from all assisted reproductive technology (ART) cycles that took place in South Australia between January 1986 and December 2002, linking them to registry data on birth defects and cerebral palsy.

They identified cases in which a foetus had been lost by comparing routine six-eight week ultrasound data - which shows the presence of an empty foetal sac - and the number of babies actually delivered. These results were compared with single, successful pregnancies. A total of 7462 IVF babies were delivered in South Australia in this 16-year period. In those multiple pregnancies where only one twin survived, 14.6% of babies born had congenital malformations. The presence of an empty foetal sac at six weeks nearly doubled the risk of a malformation and nearly trebled the risk of multiple malformations.

A/Professor Davies also looked at pregnancy loss after the first six-eight week ultrasound and found a link with birth defects in the surviving twin as well, but not as important as early loss.

"To our knowledge, this appears to be the first association of very early loss of a co-twin and a range of congenital malformations. It demonstrates that the quality of embryos in IVF twins is related. Where one fails to develop, it appears to be an important indicator of the health of the survivor."

A/Professor Davies says the results show without doubt that the quality of embryos is paramount in a successful pregnancy.

"This will have important implications for fertility treatment. Twinning continues to be high-risk pregnancy for mother and baby in any situation, but creating and using multiple embryos of lower quality may also increase risk of both miscarriage and birth defects.

"This breakthrough should help us pinpoint the factors relating to embryo quality and therefore drastically reduce the risk of birth defects in IVF babies. It's plausible that these same factors will operate in natural pregnancies," he says.

## ARC-LINKAGE GRANTS AWARDED TO HDA MEMBERS

Prof Tanya Monro, *A/Prof Jeremy Thompson, Dr Robert Gilchrist*, Prof Andrew Abell

2011-2014 \$420,000

Collaborating Organisation: Cook Medical Australia Pty Ltd  
Administering Organisation: University of Adelaide

### Nanosampling sensors for real-time embryo monitoring

The health potential of every individual is established early in life, during the period when the oocytes mature and embryos are formed. This project will develop a photonic sensing platform capable of monitoring embryos as they develop, which will lead to new insight into earliest stages of life and improved assisted reproduction technologies.

*Prof Barbara Pocock*

2011-2015 \$343,171

Collaborating Organisations: DEEWR, NSW Department of Services, Technology and Administration, SafeWork SA  
Administering Organisation: University of South Australia

### A study of flexibilities that enable workforce participation and skill development and use, and their implications for work-life outcomes in Australia

Project will examine how improved flexibility can assist reconciliation of work and caring responsibilities, higher levels of employment participation and increasing skill development and utilisation across Australian workforce, underpinning more productive economy and improved wellbeing for Australian workers and families.

# JBI Convention - Mission: Impossible?

## Evidence-based practice & the future of global health

Volume 7, Issue 4

Joanna Briggs Institute (JBI) International Convention will be held at the National Wine Centre in Adelaide on 7-9 November. The event will include presentations from participants from over 40 countries in the plenary sessions, and an array of launches and special events. Around 19 keynote and plenary speakers with some listed below:

- Prof Jonathon Craig, Co-Chair Cochrane Collaboration / Paediatric Nephrologist, Children's Westmead Hospital, Sydney
- Dr Neil Packenham-Walsh, Coordinator Health Information For All 2015 / Co-Director of Global Healthcare Information Network, Oxford, UK
- Dr Ian Graham, Vice-President of Knowledge Translation and Public Outreach Portfolio, Canadian Institutes of Health Research
- Prof Jack Needleman, Department of Health Services, UCLA School of Public Health, USA
- Prof Robbie Foy, Institute of Health Sciences, University of Leeds / Chair of UK Society for Behavioural Medicine
- Prof Carmen Lawrence, School of Psychology, University of Western Australia / former Federal Minister for Health and Human Services and Minister assisting Prime Minister on Status of Women
- Prof Rhonda Griffiths, Dean Nursing and Midwifery, University of Western Sydney

For more information on the program go to [www.joannabriggs.edu.au](http://www.joannabriggs.edu.au) or contact Dr Zoe Jordan by phone 8303 4880 or email [zoe.jordan@adelaide.edu.au](mailto:zoe.jordan@adelaide.edu.au)

## YIA Semi-Finals

Come and join us at the 2011 YOUNG INVESTIGATOR AWARD...excellence in science communication where 8 semi-finalists will vie for the finals in October.

**Semi-finals - Scientific Presentation**  
Tuesday 20 September, 11am to 3pm

Flinders University, city campus (182 Victoria Square)

[Come and support our early career researchers!](#)

YIA, now in its 12th year, is highly successful event rewarding excellence in SA's young researchers in science and their ability to communicate and 'sell' that science.

Full details can be found at [www.cywhs.sa.gov.au/yia](http://www.cywhs.sa.gov.au/yia)

\* No RSVP required.

## HDL D Seminar

Health, Disability & Lifespan Development seminar on **Proximal mental health effects of concurrent infertility problems in a general population sample.**

**Dr Kate Fairweather-Schmidt** (HDA Member)

Research Fellow, Freemasons Foundation Centre for Men's Health, University of Adelaide

Tuesday 16 August, 12.15 - 2.00pm  
Room 526/527, Hughes Building, University of Adelaide North Terrace campus

Sandwiches/coffee from 1.30pm. RSVP by 12 August to [juliet.summers@adelaide.edu.au](mailto:juliet.summers@adelaide.edu.au)

The prevalence of infertility among couples is projected to increase as childbearing is further delayed and obesity rates increase. Relative to female partner, little is known about mental health status of the male partner among couples who currently experience infertility problems. The study objective is to provide descriptive statistics for male and female groups with and without current infertility problems; and to elucidate psychosocial factors associated with experiencing current infertility problems for each gender.

## Dare to Dream Dinner

**Dare to Dream Dinner** - This is a special event designed to help premature babies get the best start to life!

*This event is hosted by the Robinson Institute and the Children's Research Centre at the University of Adelaide.*

**When:** Friday 2nd September

**Where:** National Wine Centre, Adelaide

**Time:** 7.00pm pre-dinner drinks for 7:30pm dinner

**Cost:** \$165 per head (inc GST)

**Dress:** Cocktail

**RSVP:** Monday 22nd August

**Group bookings welcome: tables of ten available!**

Your attendance will help fund ongoing research into the healthy brain development of preterm children, who have been shown to experience varying degrees of motor dysfunction as a result of their premature birth.

Researchers at the Robinson Institute and the Children's Research Centre have produced the first physiological evidence that this motor dysfunction can affect preterm children much longer than previously thought.

Dare to Dream Dinner aims to support the development of new therapies that will help preterm infants overcome motor and cognitive delays and reach their full potential at school and in later life.

Learn more about the campaign or register online at:

<http://www.everydayhero.com.au/event/daretodream/>

For further information, contact Alissa Nightingale on 8313 1334 or Jane Clayton on 8313 1411.



**Prem Baby Alex, born at 23 weeks.**



## Group Programs for Body Image Concerns

### *A new initiative for the prevention of eating disorders*

#### What is the purpose of the research?

Poor body image is a significant concern for many young Australians and is also a recognised risk factor for the development of eating disorders. The need for successful prevention and early intervention for these problems has been highlighted; however, efforts to date have gained only moderate success. My research is trialling a new approach aimed at helping young women with body image problems.

#### What will the research evaluate?

Two group programs will be evaluated to determine which is useful in helping young women feel better about themselves, and ultimately prevent eating disorders.

The programs are:

- 1. The Acceptance Mode:** A program that teaches how to apply principles of mindfulness and acceptance to body-related concerns, developed at Flinders University by Melissa Atkinson and Professor Tracey Wade.
- 2. The Body Project:** A program that teaches how to resist sociocultural pressures to be thin, developed and evaluated in the US by Eric Stice at University of Texas.

#### What happens during the study?

If eligible, participants will be randomly allocated to one of three groups: either one of the two group intervention programs, or to a monitoring group. Both group interventions involve attending a 1-hour group session at Flinders University each week for 3 weeks, facilitated by a provisional psychologist. The third group is a monitoring (control) group, where participants will complete assessments only and then receive the material from both group programs at the end of the study. Questionnaire assessments will be administered online at 4 points over a 6-month time-frame and will take approximately 45 minutes.

#### Who can participate?

Females aged 17 to 25 who can read and write English and who struggle with body image or have concerns about their weight or shape.

#### Where can I get more information?

Please contact Melissa Atkinson:  
Ph. (08) 8201 3435, or email [melissa.atkinson@flinders.edu.au](mailto:melissa.atkinson@flinders.edu.au)

*This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (Project Number 4957)*

## Seminal Fluid and Women's Health

Researchers at the University of Adelaide and Women's and Children's Hospital think semen has some special qualities in helping to ensure a healthy pregnancy and want to know more.

They are studying the contribution semen makes to a woman's reproductive health, and to explore the possibility of new treatments for infertility and miscarriage.

If you are interested in this study and

- are aged 18 - 45
- has had a tubal ligation
- are in a sexually active relationship



Contact Helen Alvino by ringing 0419 843 418 or email: [helen.alvino@adelaide.edu.au](mailto:helen.alvino@adelaide.edu.au) for more information.

All inquires will be treated with confidentiality.

Partners include the Women's and Children's Health Research Institute, and the Research Centre for Reproductive Health within the Robinson Institute at the University of Adelaide.

*This research has been approved by the Women's and Children's Hospital Research Ethic Committee.*

## ARCH Clinical Trials

The following are some of the trials currently recruiting from the Australian Research Centre for Health of Women and Babies, Robinson Institute, University of Adelaide.

**IDEAL:** Investigating the use of dietary and lifestyle advice for improving the health outcomes of women with borderline gestational diabetes and their babies.

**PROGRESS:** Assessing whether the use of vaginal progesterone pessaries in women with a history of previous spontaneous preterm birth will reduce the risk and severity of respiratory distress syndrome, so improving their infant's health, without increasing maternal risks.

**ASTEROID:** Comparing the benefits and harms associated with two treatments, dexamethasone and betamethasone, to provide reliable information about which antenatal corticosteroid is best for women and babies at risk of preterm birth.

**LIMIT:** Assessing whether the implementation of a package of dietary and lifestyle advice to overweight and obese women during pregnancy to limit weight gain is effective in improving maternal, fetal and infant health outcomes.

For further trial enquiries contact:

[pat.ashwood@adelaide.edu.au](mailto:pat.ashwood@adelaide.edu.au) or [andrea.deussen@adelaide.edu.au](mailto:andrea.deussen@adelaide.edu.au)  
[www.adelaide.edu.au/arch/research/clinical-trials](http://www.adelaide.edu.au/arch/research/clinical-trials)