Focus on eye health wins NHMRC recognition

Flinders University Professor Keryn Williams’ 25-year mission to decrease the burden of blindness has earned her a major National Heath and Medical Research Council (NHMRC) Fellowship.

The five-year Research Fellowship was announced by Minister for Mental Health and Ageing, Mark Butler.

The fellowship will enable Professor Williams to explore the application of gene therapy and other methods to improve outcomes in the treatment of a range of eye diseases.

Professor Williams, who is Associate Leader of the Eye and Vision Collaborative Group at Flinders and Associate Head of Faculty (Research), said blindness exerts significant physical, emotional and financial constraints and hardship upon individuals.

“The World Health Organisation notes that, in terms of economic loss to the community, blindness is the most expensive of all causes of chronic disability,” Professor Williams said.

“Existing treatments of some conditions do not prevent blindness in all cases,” she said.

“Corneal graft failure is associated with rejection, inflammation and neovascularisation. Inflammatory eye disease and aberrant neovascularisation of the retina are also significant causes of visual impairment.”

Professor Williams will also: investigate the basis of susceptibility to retinopathy of prematurity, a common cause of blindness in low birth-weight infants; expand the evidence-base for outcomes of human corneal transplantation; and investigate the efficacy of interventions for keratoconus, or conical cornea.

Flinders Deputy Vice-Chancellor (Research), Professor David Day said the NHMRC Fellowship was a tribute to Professor Williams’ dedication to her field.

“As founder and Scientific Director of the Australian Corneal Graft Registry and founding member of the NHMRC Centre for Clinical Research Excellence in Evidence-Based Ophthalmology, Professor Williams has led a group researching causes of blindness that are common in our community,” Professor Day said.

“On behalf of Flinders and every patient whose sight has improved thanks to her pioneering efforts, I would like to extend my heartiest congratulations to Professor Williams,” he said.

Keryn.Williams@flinders.edu.au

Adapted from original article in Flinders News
Welcome to the first edition of Research Pulse for 2011. With the start of a new year we have much to be optimistic about.

On January 31 2011, Minister Carr announced the results of the Excellence in Research for Australia (ERA) assessment. ERA provides each of Australia’s universities with the data we need to better understand our research performance across world class rankings. The Faculty of Health Sciences at Flinders performed very well and I congratulate all our researchers on these results.

Our Faculty’s star ERA performance areas were led by Pharmacology and Pharmaceutical Science with a ranking of 5 indicating research performance well above world standards. We also did particularly well in Ophthalmology and Optometry, Oncology and Carcinogenesis, Cardiovascular Medicine and Haematology, and Medical Physiology with each of these areas of research activity assessed as above world standards (ranking 4). Congratulations to all those members of the Faculty who contributed to these outstanding results.

This ERA report reflects the way we were. It is based on data from 2003 to 2008. A further submission will be made by the University in 2012, based on our research activity in 2009 to 2010, which will allow us to start to look at trends and the impact of strategic investments by the university.

I would like to thank Professors Paul Ward and Neil Sims for leading the two clusters in our Faculty and to Denise Caretti for coordinating our ERA submission and communication.

A comprehensive list of recent achievements is included later in this edition including success in an NHMRC Development Grant led by Professor Graeme Young. In addition we have involvement in two of the three new national Centres of Excellence in Primary Health Care Research, one involving members of our Greater Green Triangle Department of Rural Health, and the other involving members of our Centre for Remote Health and our new Poche Centre for Indigenous Health in Alice Springs.

I look forward to working with all members of the Faculty throughout 2011 as we continue to build and expand our research capacity and expertise and our many contributions to local, national and global health care.

Professor Michael Kidd AM
Executive Dean
Faculty of Health Sciences
Flinders University

University awards promising early career researchers

We wish to congratulate Dr Ruth Sladek on being the Early Career Researcher in the Health Sciences faculty awarded a 2010 Vice Chancellor’s Award for Early Career Researchers. These awards were given to Early Career Researchers across all four faculties of the University. Dr Sladek was an NHMRC National Institute of Clinical Studies Scholar from 2004 to 2008, completing her PhD on understanding doctors’ cognitive processes and how this influences uptake of new research.

Her research interests lie in understanding the individual clinician and patient factors that influence the uptake of research into practice in healthcare.

After graduating Dr Sladek made a conscious decision to pursue a research career because it embodied many of the activities she enjoyed most. She finds it engaging because it is multi-facetted.

When asked why she chose Flinders to be part of her research she replied “I’ve had a long and positive association with Flinders through undergraduate studies in psychology, working at the Repat (a teaching hospital of Flinders) and getting to know many of its clinical, academic and research staff, and more recently through my PhD.”

She was delighted to receive the Award, and highly values the contribution it makes to her developing track record. When asked further, she replied “Initiatives such as this hopefully will help me to attract more competitive research grants, and to establish my career in a research field I really believe can make a difference”.

Dr Ruth Sladek

Ruth.Sladek@flinders.edu.au
As an Honours student at James Cook University, I fell in love with medical research. I wanted to find the magic bullet to cure patients with traumatic brain injury. Over the years however, the rose-coloured glasses have been thrown away and replaced with the truth along with a bit of cynicism!

After my PhD, I took on a post-doctoral position at Baylor College of Medicine (Houston, USA). This was the beginning of a great learning experience, and exposed me to a rich scientific culture, the opportunity to meet the names on scientific papers and to attend lectures by Nobel laureates. Most importantly, I had a mentor who supported my efforts all the way.

It was at this time that I developed an appreciation for the vasculature in the brain. While most people were focussed on neurons, the cerebral vasculature, for the most part, was ignored. This seems unbelievable given the fact that brain function ceases within seconds if cerebral blood flow is interrupted. Dysfunction of the cerebrovasculature occurs following stroke and trauma and is associated with insulin resistance, diabetes and hypertension.

Funding from the American Heart Association and the National Institutes of Health allowed me to establish my own laboratory and to bring in an array of new techniques. In January 2010, I accepted an appointment as Senior Lecturer in the Department of Human Physiology at Flinders University. My current focus is on a group of enzymes called sirtuins that were discovered just over ten years ago. In particular, sirtuin 1 (SIRT1) appears to be protective, being upregulated during calorie restriction (increasing lifespan) and downregulated during calorie excess (decreasing lifespan). Our goal is to identify the potential of SIRT1 as a target for treatment of insulin resistance in restoring cerebrovascular health. These efforts are particularly important in light of the fact that SIRT1 activators are entering clinical trials in humans.

Elke.Sokoya@flinders.edu.au
The Faculty of Health Sciences had the pleasure of hosting Andrew Lesenko, the 2010 South Australian winner of the Research Australia Youth Ambassador for Health Research Award on Wednesday 19 January 2011.

A high school student at Portside Christian College, Andrew Lesenko won the award for his essay titled Medical Technology will always affect all members of society. His essay focuses on medical technology and its impact on humanity. It also covers the issue of economics; the people who are investing in medical products and technology, and the crucial support of the government.

Andrew is passionate about research into medical technology that will assist people with disabilities or illnesses who do not have access to such treatment.

He plans to go on to study chemistry and to advocate for ongoing developments in medical technology as a socially responsible activity. He would like to promote closer links between secondary school students and professional scientists and he believes that research outcomes should benefit those people in society who are the most disadvantaged.

Andrew was extremely grateful for the unique opportunity to meet researchers at Flinders and experience first-hand the work done in our Clinical Pharmacology department.

**Faculty mentors National Youth Ambassador**

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Flinders University is a member of Research Australia and a sponsor of the National Youth Ambassador Program. As a result of winning this award Professor Michael Kidd invited Andrew to spend the day with researchers in Clinical Pharmacology, an area in which Andrew has shown great interest.
Top 10 health & safety suggestions for 2011 festivals

Dr Alison Hutton, senior lecturer at Flinders University School of Nursing & Midwifery and expert in population health has been researching young people’s risk taking behaviour at Schoolies festival and other large youth events.

She cites severely broken toenails, foot lacerations, sprained ankles, headaches, sunburn, slight dehydration or missing asthma medication as the majority source of problems at last year’s Schoolies festival. Only 24 per cent of cases seeking treatment involved alcohol.

Dr Hutton’s top 10 Health & safety suggestions for festivals

1. Travel
Consider transport, think ahead before starting, arrange bus tickets or plan carpooling.

2. Stay hydrated
Take water to drink to keep hydrated and snack bars for energy during the day. You want to be able to remember the festival.

3. Drinking sensibly
Remember drinking too much alcohol is risky: On average no more than five standard drinks.

4. Look after yourself
Think about what you need to stay comfortable including a hat, sunscreen, medication and sensible shoes, preferably closed shoes.

5. Stay in touch
Identify two friends who can support you while you’re at the festival. Swap mobile numbers and emergency contacts before leaving. Have a backup plan if your mobile runs out (eg. change for public phones).

6. Be safe
Check on friends if you’re spending time with new people and think about what you know about first aid. If you see a conflict about to happen, grab your friend and walk away.

Tips for parents of kids

7. Be available
If you know your kids are going to a festival of several days, don’t go away for the weekend and be contactable.

8. Talk
Ask your children if they have concerns that they want to talk through with you before they go.

9. Peer pressure
Your child might need some help coming up with safe “outs” for unwanted drinking or activities ie. “Maybe later - I have already had a few and need a break”. You can always ‘mash’ drinks - your friends won’t know that it’s only coke you’re drinking.

10. Parents of friends
Get in touch with other parents and talk about how to support the kids and each other.

Alison.Hutton@flinders.edu.au

Adapted from original article in School of Nursing and Midwifery News

Into the mouths of babes

A study published in the latest issue Nutrition & Dietetics by Flinders University researchers Gloria Koh and Associate Professor Jane Scott attracted widespread local and international media attention and showed that the diets of children as young as four weeks included biscuits, ice-cream and sugary drinks.

Gloria, a PhD candidate, Jane and colleagues from Curtin University tracked 587 women from two Perth maternity hospitals through regular phone interviews for 12 months to understand how new mothers fed their babies. They found that almost one in four mothers had introduced high fat, salt and sugar foods to their infants by six months of age, whereas health authorities recommend exclusive breastfeeding for the first six months.

Although the Breast is Best message is well accepted, with most Australian women initiating breastfeeding, there is a lack of consistent information related to when to introduce solids and what are appropriate foods. Food habits are developed early in life and track into adulthood. Parents have a relatively short window of opportunity during the weaning period to establish healthy eating habits. Research has shown that if parents miss this window, it can take ten or more repeated exposures before a toddler will accept a new food, making it difficult to get them to eat healthy foods such as fruits and vegetables.

Gloria.Koh@flinders.edu.au
The Faculty of Health Sciences congratulates members who have recently received research grants, awards or honours. The following list shows Chief Investigators who received grants from 4/11/10 to 9/2/11, as advised by the Research Services Office.

Bethany Community Support - Gambler's Health
Angus Forbes: CS Training & Mentoring to professionals working with Gamblers, $57,930.

Cancer Council SA
Peter Mackenzie: Regulation of drug and xenobiotic UDP glucuronosyltransferases, $89,508.

Cardiovascular Lipid Research Grants
Morton Burt: Effect of glucocorticoid dose on cardiovascular blood glucose in hypopituitary patients, $49,800.

Diabetes Australia Research Trust
Greg Barritt: Mechanisms of impaired calcium signalling in the liver in insulin resistance, $58,621.

Doutta Galla Community Health Services
Sharon Lawn: North West Region Chronic Disease & Mental Health Forum Victoria, $1,200.

FMC Lyn Wrigley Breast Cancer Research
Olga Sukocheva: The role of pro-inflammatory cytokines in development of multidrug resistance in antioestrogen-resistant breast cancer cells, $21,000.

Fiona Young, Kirsten Benkendorff, Vicki Edwards: Development of a novel anticancer hormone replacement therapy from a marine mollusc, $14,000.

Hunter Institute of Mental Health
Sharon Lawn: Self Management and Illness management Training, $1,200.

NHMRC Development Grants
Graeme Young, Michael Michael, Jonathan Gleadle, Steve Cole, Susanne Pedersen, Lawrence Lapointe: Development of a blood-based screening test for colorectal neoplasia; biomarker expression in circulating tumor cells and tumor-derived microvesicles, $496,201.

Office of Problem Gambling
Peter Harvey: Canadian Problem Gambling Index (CPGI) adaptations & validation for use with Aboriginal people in South Australia, $60,000.

Queensland University of Technology
Anthea Magarey: Dietary intake in children 6-24 months: Determinants and correlates of red meat intake, $92,690.

SA Health
Barbara Oerman: Living Well Program for Do it for Life Lifestyle Advisors, $7,700.

United BioSource Corporation
Konrad Pesudovs: Qualitative interview to understand patient experience and reported outcome measures for implantation of new Intraocular Lenses A-10235-000, $3,000.

WA Association for Mental Health
Sharon Lawn: Mental Health & Smoking Clearing the Air Workshop, $1,500.

DVCN Near Miss Awards
Peter Mackenzie: Regulation of enzymes that detoxify and eliminate fat-soluble chemicals, $30,000.

Julie Ratcliffe, Michael Sawyer, Terry Flynn, John Brazier, Katherine Stevens: Investigating adolescents’ preferences for multi-attribute health states for economic evaluation, $20,000.

Keryn Williams, Helen Brereton, Michael Michael, Doug Coster: Gene expression in retinopathy of prematurity, $30,000.

Robyn Meech: Control of muscle growth and repair, $30,000.


Xin-Fu Zhou, Yan Jiang Wang: Roles of p75NTR in Alzheimer's disease, $40,000.

Xin-Fu Zhou: Roles of Sortilin in APP trafficking, $30,000.

David Watson, Dorothy Keefe, Joanne Bowen, Damien Hussey, Anna Tsykin: Identification of biomarkers of response and toxicity to chemoradiotherapy for oesophageal tumours, $20,000.

Robert Rush, Mary-Louise Rogers: Treating Motor Neuron Disease with genes carried by targeting agents, $30,000.

Fran Baum, Colin MacDougall, Lionel Orchard, Lareen Newman, Dennis McDermott: Social Determinants of Health Policy Impact, $40,000.
A new initiative to improve the safety and welfare of children with parents who misuse alcohol or drugs has been developed by the National Centre for Education and Training on Addiction (NCETA) at Flinders University.

*For Kids’ Sake, A Family Sensitive Policy and Practice Toolkit* aims to minimise cases of child abuse or neglect by increasing collaboration between child and adult service agencies. The toolkit was launched at the Flinders University Victoria Square Campus on Thursday 16 December 2010 by the Health Minister John Hill.

NCETA Director, Professor Ann Roche said *For Kids’ Sake* would help build a bridge between the alcohol and other drugs (AOD) treatment and child protection sectors to improve cooperation and collaboration.

“The treatment of AOD abuse has changed over 50 years as the nature of the client has changed but the needs of the client’s children have never really been on the radar,” Professor Roche said.

“Research shows that parental alcohol and drug misuse is an important factor in the notification of child abuse and neglect, with the number of children in out-of-home care doubling in Australia in the past decade,” she said.

“The goal is to broaden child-focused services to be more parent sensitive and to expand specialist adult-focused services to be more child sensitive.

*For Kids’ Sake* comprises a workforce development resource; *Taking First Steps*, a survey report of AOD workers; a list of related resources; examples of Family Sensitive Policy and Practice already employed by some services; a workplace checklist; and a CD-ROM with electronic versions of these and additional materials.

“The toolkit contains a comprehensive list of ideas and practical suggestions that organisations can adopt to be more child and family sensitive. We also hope this issue will be included in some of the standard training programs,” Professor Roche said.

“We want to raise awareness that attending to the needs of AOD clients as parents is good for their children and good for them.”

For more information or free copies of the Kit please contact NCETA on 8201 7535.

The kit is also available for download from the NCETA website at: www.nceta.flinders.edu.au

Ann.Roche@flinders.edu.au

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**Research Higher Degree Completions**

We would also like to congratulate our **Doctor of Philosophy (PhD)** and **Masters by Research Students (MSc)** who graduated in December 2010.

- Greta David
- Ernest Aguilar
- Julie Ash
- Savio Barreto
- Sarah Brice
- Mark Brooke-Smith
- Beatriz Negrette Velasquez
- Deborah Smith
- Amr Abou Elnour
- Janine Bounds
- Catherine Mackenzie

**A Doctor of Science** was awarded to:

- Professor Doug Coster AO

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**Toolkit puts children of drug and alcohol users on the radar**

*Professor Ann Roche, Mr Allan Trifonoff & Honorary John Hill*
Knowledge exchange to improve primary health care and health

Associate Professor Ellen McIntyre was recently appointed new Director of the Primary Health Care Research and Information Service (PHC RIS) following the retirement of former Director Associate Professor Libby Kalucy. Ellen has been with PHC RIS for 10 years, starting as Senior Research Fellow, then Manager since 2005, and was Acting Director for the past six months.

Considering the current momentum of the health reform, the PHC RIS team is considering how they can best position the organisation to improve primary health care (PHC) and health in Australia. As a national knowledge exchange organisation, PHC RIS generates, manages and shares information and knowledge with the PHC sector - researchers, practitioners, policy makers and consumers – so is a pivotal part of this environment.

The PHC RIS team has already formed strong partnerships with many PHC organisations; partnerships which provide a sound basis for knowledge exchange. PHC RIS looks forward to expanding these with the current move into Phase 3 of the Primary Health Care Research, Evaluation and Development (PHCRED) Strategy – which focuses on building and using PHC research - the roll out of Medicare Locals and other health reform initiatives.

Associate Professor McIntyre elaborates: “The primary health care community has a wealth of knowledge and we need to use this to ensure our decision making is evidence-based. This knowledge is derived from research, experience and an understanding of what is possible and appropriate.

The annual national PHC Research Conference that PHC RIS has been convening since 1995 has been central in both strengthening and enabling the PHC sector to share their collective wisdom. Information about the 2011 conference is available at: www.phcris.org.au/conference/2011/index.php

Ellen.McIntyre@flinders.edu.au

Flinders University Research Centre for Disaster Resilience and Health

Professor Paul Arbon is the inaugural Professor of Nursing (Population Health) in the Faculty of Health Sciences at Flinders University, and established the Flinders University Research Centre for Disaster Resilience and Health (FURCDRH) in mid-2009. Since then, the Centre has employed a variety of activities to address the urgent need for more evidence-based solutions to the population health problems associated with catastrophic emergencies and disaster and to assist in building the resilience and preparedness of communities at risk. The establishment of the Centre provides the foundation for a coordinated research program providing up-to-date knowledge for health practice in disaster and an environment that facilitates the translation of research outcomes into practice. The FURCDRH also houses the International Council of Nursing accredited ICNP® program for Disaster Nursing, Dr Lidia Mayner is the inaugural Director. The current areas of focus of the FURCDRH include disaster, mass gatherings and community capacity building. The Centre has close affiliations with the World Association of Disaster and Emergency Medicine (WADEM), the International Council of Nurses (ICN) and the Torrens Resilience Institute.

Paul.Arbon@flinders.edu.au