

From Lindon Wing, retiring Dean of the School of Medicine



Professor Lindon Wing

As I am just about to depart from my role of the last nine years or so as Dean of the School of Medicine, I have been asked by the Editorial Team to provide a few passing thoughts about research in the Faculty. I have had the privilege of working with some very talented researchers in my School who continue to be responsible for generating 70% of the University's grant income and 70% of its published research output. We have always punched above our weight in research and I would hope we will continue to do so into the future despite the increasing competitiveness of research grant funding both nationally and internationally. But we need help!

The one area in which we have not done relatively as well is with research higher degree (RHD) students. Our senior researchers

continue to maintain that it is very difficult for us to attract the number of honours students and subsequent RHD students that our programs would warrant possibly because we do not control the undergraduate programs which generate them. This may be a less sustainable argument now that we have the Bachelor of Medical Science successfully established although more development is needed in this program to give it a fully medical flavour. These developments may then increase the yield of Honours and RHD students. It has certainly been interesting to observe that our Environmental Health program which is largely within the School of Medicine is our most successful at attracting honours students and converting these to subsequent PhD programs within the same Department.

There do seem to be cultural factors at present which militate against our success in attracting RHD students. Potential students perceive that there are limited subsequent career options in South Australia and they observe that there is limited tenure in the jobs that are available with relatively poor remuneration and research funding. In addition they perceive that research is not valued by the community and particularly at a political level, both nationally and in this State. Unfortunately their assessments are probably correct. South Australia has been attracting less of the national research dollar in recent years and there has been a brain drain of some of the State's brightest minds to better resourced centres interstate or overseas.

In the submission which our School is currently preparing to the SA Department of Health's Review of Health and Medical Research in South Australia, we make the point that despite being a very significant industry in South Australia, health and medical research receives limited State Government support (particularly compared to Queensland, Victoria, New South Wales and Western Australia). This tends to put us behind in regard to infrastructure, development funding and initiatives such as having a significant pool of postgraduate research fellowships within the State to attract and retain talented researchers in South Australia.

There is no reason why we cannot have a thriving health and medical research 'industry' in this State but to compete nationally our State government needs to find out what is happening interstate and make some positive strategic decisions to ensure that our 'industry' retains its vitality and thrives. There should be plenty of opportunity to attract the some of brightest minds of the next generation. South Australia remains one of Australia's best-kept secrets. We need some leadership from our politicians to ensure that we capitalise on our natural advantage as a great place to live and work and become a national leader in health and medical research, just as we are doing in the high tech areas of the defence industry.

Professor Lindon Wing, May 2007

Lindon is continuing his links with Flinders as Emeritus Professor in the Department of Clinical Pharmacology.

Research Ethics:

The new National Statement on Ethical Conduct in Human Research

Invited opinion by Wendy A Rogers

Associate Professor of Medical Ethics and Health Law, Department of Medical Education, School of Medicine, Flinders University.
Contact: wendy.rogers@flinders.edu.au

Human research in Australia is governed by guidelines issued by the National Health and Medical Research Council (NHMRC). All of us whose research involves human beings are required to comply with the guidance of the NHMRC on research ethics, and to submit our proposals to a Human Research Ethics Committee (HREC) for review. Although this is not, strictly speaking, a legal requirement, it is a fairly forceful requirement, as the NHMRC has the power to suspend all funding to any institution whose researchers do not comply. Initially the NHMRC research ethics guidelines applied only to health and medical research, but in the absence of national accepted guidelines for other areas of research such as social sciences, criminology or social psychology, the *National Statement* became the de facto guidelines for all research involving humans. In recognition of this, the 1999 version was endorsed by various other academies.

Developing research ethics guidelines

Research ethics is not a static field: the context of research changes, new populations or interventions are investigated, the law changes and so on. This requires substantial revision of the guidelines from time to time. I had the good fortune to be a member of the Australian Health Ethics Committee (AHEC) when the review of the 1999 *National Statement* started in late 2004. The ensuing two year process provided many many hours of meetings and reading, together with a detailed insight into the issues that concern, perplex and frustrate researchers of all disciplines around Australia. The working party charged with the revision consisted of some members of AHEC together with nominees from the Australian Research Council (ARC) and the Australian Vice-Chancellors' Committee (AVCC), as it had been decided to issue the revised *National Statement* as a joint publication of the three national bodies.

The first publication draft, released in late 2005, received 178 submissions (three folders, each the size of the Yellow Pages).

All members of the working party were required by law to read all submissions in preparing the second draft. This work took most of 2005, leading to the second consultation draft in late 2005. We had been quite pleased with our efforts in the first draft, but we received 184 submissions (another three phone books' worth) of comments and criticisms during the second consultation. Another year of meetings and revisions lead to working party's final draft, which was submitted to AHEC in late 2006. In the meantime, the membership of AHEC had changed substantially, so that most of us on the working party were no longer members. The new AHEC was faced with mastering the intricacies of research ethics in a very short time in order to make any final changes and approve the document. The ARC and AVCC also approved the document prior to its presentation to NHMRC Council. The final stage of the process involved the 2007 *National Statement on Ethical Conduct in Human Research* being tabled in the Federal Parliament and subsequently published in April 2007.

What's new?

So what have we got, after all of that work? At just over 100 pages, the new *National Statement* is substantially longer than the 1999 version. In part this is due to the inclusion of new material on:

- Risk (Chapter 2.1)
- Qualitative methods (Chapter 3.1)
- Databanks (Chapter 3.2)
- Human stem cells (Chapter 3.6)
- Women who are pregnant and the human foetus (Chapter 4.1)
- People who may be involved in illegal activities (Chapter 4.6)
- People in other countries (Chapter 4.8)
- Institutional responsibilities (Chapter 5.1)

The new material was developed largely in response to requests or problems identified by researchers and HREC members.

As well as these new chapters, there are substantial revisions to the chapters on general requirements for consent including waivers, children and young people, and research with Aboriginal and Torres Strait Islander Peoples.

Using the new National Statement

One of the weaknesses of the system of research review has been researchers' relative lack of familiarity with the *National Statement*. This has created a situation in which HRECs have appeared a bit like 'black boxes' to researchers. Research proposals are critiqued and occasionally refused immediate approval without the researcher necessarily understanding that the HRECs' responses are based on the *National Statement*. Yes, HRECs use the *National Statement* to review applications, but it is the responsibility of researchers to ensure that their proposed research meets the standards described in the *National Statement*. The process of research ethics review at Flinders can be greatly supported by researchers in the Faculty taking the time to download an electronic copy of the new National Statement from the NHMRC website <http://www.nhmrc.gov.au/publications/synopses/e72syn.htm> and consulting the relevant parts when preparing their next research application. The 2007 *National Statement* must be used exclusively from January 2008, so there is plenty of time to become familiar with it. The National Ethics Application Form will be revised later this year to reflect changes in the 2007 *National Statement*, in time for the January 08 start up date.

Ethics review of research can provoke strong feelings. It's important to remember why we have the practice: to protect participants from harms and to foster research that is of benefit to the community. I hope that the 2007 *National Statement* makes a positive contribution to the research efforts of the Faculty.

Flinders Research in Immune Strategies



Professor Nikolai Petrovsky

The Immune Strategies ASRI is the newest of Flinders University's Areas of Strategic Research Interest. It was created by researchers and clinicians at Flinders University and Flinders Medical Centre (FMC) with a common interest in immunology and infectious diseases research. Whilst still at an early stage, the Immune Strategies ASRI has been extremely active with members having already designed and conducted a number of cutting edge clinical studies at FMC, participated in a vaccine workshop and published research papers in leading scientific journals.

In particular, Professor David Gordon, the Director of Microbiology and Infectious Diseases at FMC and one of the two co-leaders of the ASRI, recently conducted a highly successful Phase I clinical trial of a novel vaccine against Hepatitis B. This vaccine was developed by the other co-leader of the ASRI, Professor Nikolai Petrovsky, Director of Endocrinology at FMC as part of a partnership with the FMC-based biotechnology company, Vaxine Pty Ltd. This successful study has recently been extended to include additional

arms and Professor Gordon is currently recruiting subjects not previously immunised against Hepatitis B, for entry into this study.

Professor Gordon will soon also be recruiting subjects for a clinical trial of a novel improved seasonal influenza vaccine study based on the same technology. This new flu study will be testing whether novel sugar-based influenza vaccines reduce the amount of influenza antigen required for effective vaccination. This study will be of paramount importance as it may enable limited vaccine supplies to be stretched much further in the event that Australia is hit by an influenza epidemic or pandemic. Professor Gordon has recently given a number of public lectures on the Avian Influenza threat and Pandemic influenza and is a leading Australian expert in this area.

Another influenza vaccine study is being planned by Immune Strategies ASRI member, Dr Dimitar Sajkov of the Respiratory Unit at FMC. This study is a vaccine trial focused on high risk patients with chronic obstructive airways disease, who are particularly at risk of hospitalization and illness in the event of influenza infection. The objective will be to see whether the protection conferred by the current commercial flu vaccines can be even further enhanced by addition of an appropriate adjuvant.

Another member of the ASRI, Dr Bob Heddle, a leading expert in allergy and a member of the Respiratory Unit at FMC, is planning a study of an improved venom desensitization treatment for patients with severe bee sting allergy. Many people in South Australia are allergic to bee sting and this is a major regional health issue. The study again relies on the addition of a novel sugar adjuvant to enhance the existing bee venom product. Success in the study may see this exciting new technology being applied to desensitisation treatments for many other allergy treatments, for example ant venom, cat, dust-mite and pollen allergies.

Members of the ASRI have received considerable

publicity from these successful clinical studies and recently have been approached by a leading international pharmaceutical company to discuss possible participation in international studies of improved vaccines to prevent diseases such as those associated with human papilloma virus (HPV). Recently released first generation HPV vaccines have been in the news lately with the Australian government announcing it will be spending 450 million dollars over the next 3 years paying for immunization of Australian women for prevention of common forms of cervical cancer.

Most recently, members of the ASRI organized a vaccine workshop in Adelaide supported by Vaxine Pty Ltd, with invited speakers from interstate and overseas discussing future strategic initiatives in vaccine research and development. This was an extremely productive meeting with discussion focused on how to overcome barriers to development of successful vaccines for worldwide problems such as malaria and shigella, two diseases that are responsible for millions of deaths each year and so far have resisted vaccine development.

The above activities cement the Immune Strategies ASRI's position as a growing regional immunology research centre. This should assist ASRI members in successfully applying for research funds and obtaining critical resources. One of the key objectives of establishing the Immune Strategies ASRI was to enhance the capability for translational immunology research within the Flinders precinct, and it has clearly been a resounding success in this regard given its recent clinical trial successes. Other future plans of the Immune Strategies ASRI include regular regional vaccine workshops, hosting a visiting speaker program and further promoting the reputation of Flinders as a leading centre of immunology and infectious diseases research.

**Contact: Professor Nikolai Petrovsky,
Co-Leader, Immune Strategies ASRI
nikolai.petrovsky@flinders.edu.au**

First Honours students for Health Sciences Paramedic Degree Program

In 2007, graduating students from the Bachelor of Health Sciences (BHS) Paramedic Degree Program have taken up the opportunity to pursue Honours degrees for the first time. The three pioneering students are Kylie Dyson, Louise Roberts and Danni Spencer. This is an exciting time for the Paramedic program and a positive direction towards creating quality research within the pre-hospital environment.

Kylie's project will follow the development of SA Ambulance Service's new Bicycle Response Unit (BRU). The BRU will attend community events where traditional ambulance access is difficult and response times are extended. The bicycles enable ambulance personnel to negotiate crowds quickly whilst carrying the necessary equipment and provide rapid assessment and intervention to patients but not transport. There is currently very little literature worldwide on this subject therefore meetings will be held with other BRUs in Australia to gain insight into how BRUs operate and get some comparative data. This study will explore the experiences of paramedics involved in SA Ambulance Service's BRU with the aim of making recommendations to service providers. In addition patient satisfaction surveys and community view questionnaires will be conducted in order to understand whether patients are happy to be responded to by bike and identify what the public thinks of the Bicycle Response Unit. A comparison will be made between the response times of the BRU and traditional ambulances to establish whether a BRU can improve response times at community events. This project will be supervised by Professor Carol Grbich from Flinders University and Rob Elliott from SA Ambulance Service.

Louise Roberts aims to investigate the implications of the changes in mental health policy and national policy direction to mental health over the last ten years for the emergency services, in particular paramedic practice. Decreased reliance on stand alone psychiatric hospitals, combining mental health services with the general health systems and a greater emphasis on a community based system of treatment and support has led to a marked increase in the number of people living in the community with a mental illness. Louise will use existing data collected by SA Ambulance Service, a survey and focus group discussions with ambulance personnel to estimate: the percentage of SA Ambulance Service caseload involving people presenting with disturbed behaviour; the resources available; and how ambulance personnel use their training and view their role when managing a

patient suffering a possible mental illness. Her research aims to show the extent to which mental health cases are becoming a part of ambulance workload, the impact this is having on their practice, and the resources, training, policy and procedures to be considered to manage the workload in this area. Louise's supervisors are Dr Julie Henderson, Research Fellow, School of Nursing and Midwifery, Flinders University and Dr Hugh Grantham, Medical Director, SA Ambulance Service.

Danni Spencer, who is currently employed as a Paramedic Intern with SA Ambulance Service, will be conducting her Honours project part-time under the supervision of Professor Harry Owen (Head, University Department of Anaesthesia and Pain Medicine and Director, Clinical Skills and Simulation Unit, Flinders University) and myself. Danni's project involves identifying key areas for training bystanders (those without any prior first aid or medical training) to assist victims of motor vehicles accidents as 'first responders' until trained help arrives. The project explores whether such training could help to prevent further injury or unnecessary deaths. The project will also investigate adult learning styles to ensure that when training is undertaken, maximum information retention is achieved and that information can be easily recalled when required.

**Cindy Hein, Topic Coordinator & Lecturer,
Bachelor of Health Sciences (BHS) Paramedic Program,
BHS representative on the School of Medicine Honours Committee
Contact: cindy.hein@flinders.edu.au**



(L-R): Cindy Hein; students Kylie Dyson, Louise Roberts and Danni Spencer; Assoc Prof Eileen Willis (Head of Department, Paramedic & Social Health Sciences, School of Medicine).

Revising a 19th Century health information tool for the 21st Century

The WHO International Classification of Diseases (ICD) - the global standard for medical and health statistics - is familiar to many people in the health sector. For more than a century the ICD has been the basis for international statistical summaries of causes of death and has been used for many other purposes. For the past twenty years or so, clinical modifications of the ICD have been used to summarise hospital inpatient data in Australia and an increasing number of other countries. The ICD has been revised tentimes since Jacques Bertillon and others drafted the first 'International List' of causes of death in the early 1890s. The current version, ICD-10, was written in the 1980s and adopted by all WHO Member States in 1990.

A lot has happened since then: new diseases (e.g. SARS), new understanding of disease mechanisms (e.g. the genetic basis of many malignancies), and changed specification and definition of conditions (e.g. the 4th revision of the Diagnostic and Statistical Manual of Mental Disorders, DSM). Of equal importance, most of the history of pervasive computerisation and all of the history of the World Wide Web have occurred since the publication of ICD-10. Electronic patient records, health data linkage, and the challenges of finding ways for classifications to work with terminologies in computerised information management systems were marginal issues when the

Research on Alcohol & Other Drugs

The National Centre for Education and Training on Addiction (NCETA) was established in 1992, and is one of three national research centres for Alcohol and Other Drugs (AOD). NCETA is an internationally recognised research centre that works as a catalyst for change in the AOD field. The Centre's mission is to advance the capacity of human services organisations and workers to respond to alcohol and other drug related problems. The following projects are some example of NCETA's current activities:

Co-morbidity Training for the AOD Workforce

Funding of \$1.9M from the Commonwealth Department of Health and Ageing (DoHA) has been provided to NCETA in order to administer and finance a scholarship program designed to enhance the capacity of the AOD workforce to respond to the mental health issues of clients of AOD services. This program will run for two years and will focus on providing co-morbidity training to AOD workers employed in the non-government sector.

Review of Drug Detection and Screening in Schools

NCETA has received a grant of \$80,000 from the Australian National Council on Drugs to examine the efficacy and impact of drug detection and screening measures in schools. The key objectives of the review are to examine the positive and negative impacts and implications of the range of drug detection and screening measures currently available for schools in Australia; and to assess the viability and effectiveness of alternatives to drug detection and screening programs for schools in Australia. Public submissions are currently invited. Closing date: 27 July 2007. Please visit our website www.nceta.flinders.edu for further information.



Cultural Drivers of Alcohol Use among Australian Adolescents

A recent funding grant of \$550,000 from Drinkwise Australia has enabled NCETA to undertake a two year research project concerning the alcohol consumption patterns of Australian adolescents aged 14-24 years. The principal aim of this project is to explore the cultural drivers of risk-taking behaviours that result in 'low risk', 'risky' and 'high risk' alcohol use among adolescents and young adults.

Drug and Alcohol Use among Australian Workers

NCETA recently published a report on the alcohol consumption patterns of Australian workers and the impact these patterns have on workplace safety and productivity using data from the 2001 National Drug Strategy Household Survey. Building on this project, NCETA has received funding of \$67,000 from DoHA to conduct a similar analysis of 2004 National Drug Strategy Household Survey data that also includes an examination of illicit drug use.

Dissemination and Implementation Strategies Project

This project aims to identify and evaluate the dissemination and implementation strategies that are most likely to be effective in encouraging uptake of innovations by workers in the AOD field. It involves a systematic review of effective dissemination strategies that are likely to increase the uptake and implementation of innovations (e.g. programs, tools, guidelines) by frontline health and human service workers associated with the AOD field. This project is self-funded by NCETA.

For more information please contact NCETA on 08 8201 7535, nceta@flinders.edu.au or visit www.nceta.flinders.edu.au.

NCETA Staff (L-R): Kristen Gordon, Vinita Duraisingam, Dr Peter Lawrinson, Hiroe Terao, Chelsea Todd, Amanda Tovell, Lisa Lawton, Stacey Appleton, Toby Freeman, Prof Ann Roche (Director) & Paula Wilson

ICD-10 was written but are of central importance now.

In addition to changing the roles that the ICD must be able to serve, these technological advancements have enabled a new way to develop the 11th revision. On 16 April 2007, the WHO launched a major on-line project to revise the ICD through an Internet platform.

The WHO has established a web-based system through which any user can enter suggestions to improve the ICD. The new application is called "ICD-10 Plus" (<http://extranet.who.int/icdrevision>). Users can also see what others have proposed and discuss these topics through a blog. These suggestions will be reviewed by

expert groups and formulated as an ICD-11 draft, which is the second step in the revision process.

The draft will be formulated using "wiki" software to jointly author the next version.

The 11th revision of the ICD will be designed to operate in electronic health systems. This will require a lot of work "under the bonnet", formalising definitions and relationships.

Despite these major changes, the aim is for ICD-11 to be usable in the same settings as ICD-10 and its clinical modifications, without major disruptions due to the version change.

The Steering Group for the revision is chaired by Dr Christopher Chute, Professor of Biomedical Informatics at the Mayo Clinic

College of Medicine in the USA.

I am also a member of the Steering Committee and Chair of the Technical Advisory Group for the sections of the ICD on injury and the external causes of injury. The first meeting of the Steering Group took place in Japan from 16 to 18 April 2007.

Associate Professor James Harrison, Director, Research Centre for Injury Studies and National Injury Surveillance Unit
Contact: james.harrison@flinders.edu.au

For further information on revision of the ICD contact Dr Robert Jakob, Medical Officer, WHO, Geneva. Email: jakobr@who.int

Understanding the function of astrocytes in the brain

Astrocytes are a major cell population in the brain, greatly outnumbering the neurons that transmit nerve impulses. Astrocytes were originally thought to do little more than provide structural support for neurons. However, investigations over the last 25 years have revealed a diverse repertoire of activities essential for most aspects of normal brain function. Some of the better characterised roles of astrocytes are to provide chemicals essential for neuronal survival and function, release messengers to modulate the activity of neurons and provide protection against various forms of cell damage.

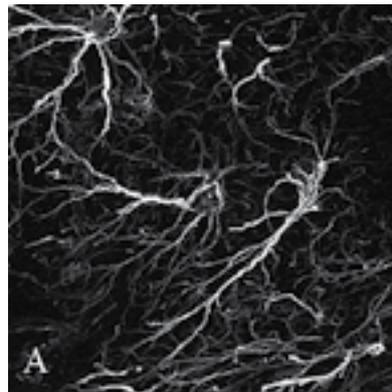
Manipulation of the properties of astrocytes offers considerable potential for treating nervous system disorders, but this is so far largely untapped. Our research group in the Department of Medical Biochemistry and the Neuroscience ASRI is investigating the roles played by these cells in stroke. The studies are providing new insights into responses of astrocytes during a stroke, and how they contribute to development of the tissue damage underlying the debilitating long-term consequences of this disease. The research involves a collaboration with Professor Michael Nilsson and his group at Göteborg University in Sweden.

Studies of astrocytes in the complex environment of the brain are currently constrained by the limited ability to separate the functions of these cells from other cell populations. A major focus of the studies at Flinders has been to develop approaches to overcome these limitations. Taking advantage of aspects of metabolism selectively associated with astrocytes, initial studies found that the majority of these cells survive for many hours despite the severity of losing local blood flow, the immediate cause of a stroke. More importantly, the astrocytes rapidly regained key functions if blood flow was restored. Thus, promoting the protective properties of astrocytes is likely to be a valuable treatment strategy to reduce brain damage.

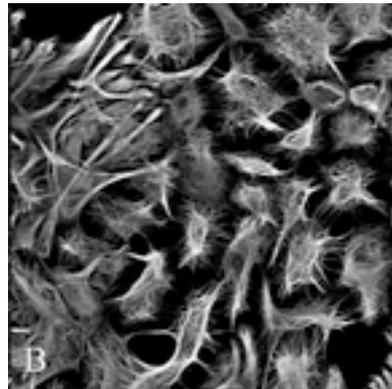
Development of an additional approach to investigate astrocytic function by selectively manipulating the expression of genes in these cells is the focus of a collaboration with Dr Håkan Muyderman and Professor Robert Rush in the Neuroscience ASRI. Håkan Muyderman originally came to my group as a visiting postdoctoral researcher from Göteborg University and is now a Mary Overton Research Fellow funded by the FMC Foundation. This research, which is supported by a NHMRC

project grant, is based on recent successes by Professor Rush and his group in selectively modulating functionally important genes within a subpopulation of neurons. Successful adaptation of these techniques to target astrocytes will provide a novel means to characterize the normal function of astrocytes and the contributions of these cells to stroke and other diseases.

Professor Neil Sims,
Department of Medical Biochemistry
Contact: neil.sims@flinders.edu.au



A. Astrocytes in the brain identified using an antibody that binds to a protein localized within these cells.



B. Astrocytes growing in cell culture. Investigations of these highly enriched cell preparations complement the studies of astrocytes in the more complex environment of the brain.

Visiting Swedish scholar contributing to stroke research

Josephine Malmevik is currently working with Dr Håkan Muyderman in the Department of Medical Biochemistry and Centre for Neuroscience as an Honorary Visiting Scholar. Approaching the end of her Computational Molecular Biology course at Skövde University in Sweden, she spent one semester in 2006 writing her Master's thesis at the University of Newcastle. This research was on the effects of ageing on transcription factors found in dopaminergic neurons in the brain. During this visit to Australia Josephine met Dr Muyderman at the Australian Neuroscience Society conference and she was offered the opportunity to visit his laboratory at Flinders. Back in Sweden for a few months, she gained some laboratory experience at Göteborg University looking at the effects of certain drugs on expression of glutathione peroxidase 1 (Gpx1).

Since arriving in Adelaide at the end of January, she has been working on constructing a plasmid/antibody construct to be used in astrocyte gene therapy. The aim is to see the effects of up-regulation and down-regulation of Gpx1 in a model of stroke.



Josephine Malmevik in Dr Muyderman's laboratory

Career paths in health and medical research – Konrad Pesudovs –

Associate Professor Konrad Pesudovs has successfully chartered a path from his initial training as an optometrist to a full-time career in medical research. While running a private optometry practice he completed a PhD in the Department of Ophthalmology at Flinders University in 2000. Konrad's research career was boosted by a National Health & Medical Research Council (NHMRC) Sir Neil Hamilton Fairley Overseas Fellowship for postdoctoral training. Recently Konrad has received a prestigious NHMRC Career Development Award to continue his research at Flinders University and Flinders Medical Centre. He was also awarded \$2M as Chief Investigator on the NHMRC Centre for Clinical Research Excellence Grant which funded the Centre for Clinical Eye Research - he is Deputy Director of the Centre. Here Konrad gives some insights into the motivation, challenges and rewards associated with his research career to date.

What first stimulated your interest in research?

KP: As far back as I can remember I wanted to know more about how or why things were the way they were and I was always sceptical about unconvincing explanations. As an undergraduate Optometry student I was always distracted by what was not known, and I was troubled by the sometimes flimsy connection between the evidence base and clinical practice. I was determined to do a PhD, although I spent two years in private practice before I started.

How much did your optometry experience shape your research questions?

KP: My research activity to date could largely be described as bringing optometry to ophthalmology. While the two professions have a deal of common ground, optometry tends to be more expert in optics and the measurement of vision. Research collaboration involving both optometry and ophthalmology has been unusual, but we made it happen, allowing me to apply some of these optical and visual skills to outcomes of ophthalmic surgery.

Did your overseas research experiences alter your scientific or career aspirations?

KP: I had two very different overseas experiences. My time in Bradford changed my path when we decided to develop a quality of life questionnaire for refractive surgery outcomes using Rasch analysis. This opened up a huge field of research, and I now spend much of my time developing, re-engineering or applying questionnaires for ophthalmology outcomes measurement.



Associate Professor Konrad Pesudovs

My time in Houston shaped the research questions in optics that I currently work on. For my career, this position was even more valuable as I met many important US-based experts that led to conference invitations, editorial board memberships etc.

What brought you back to Flinders to further your research career?

KP: To conduct broadly-based research into the optical, visual and patient-reported outcomes of ophthalmic surgery requires a well equipped setting with a large surgical throughput, the willingness to be organised for this type of activity and with keen participant surgeons. This takes a lot of work, but I believed that I could build the right environment here. The awarding of an NHMRC Centre for Clinical Research Excellence grant has gone a long way towards making this happen.

What advice do you have for others embarking on a research career?

KP: Of course the currency for the early career researcher is publications. I've always written a lot and this has left me near the front of the pack each time I have been up for grant funding. While grant success is vital, it doesn't make a career. My advice for the early career researcher is to think creatively about their options and to get out there, go to meetings, meet and talk to as many people as possible and make things happen. It never ceases to amaze me how many of my colleagues' careers have been shaped by an opportunity arising out of a single chance meeting.

What has been your most satisfying achievement in research?

KP: I usually embark on a research project for myself and to answer the question of interest is satisfying in itself. But to make a career, one's work has also to impact others. Being awarded an NHMRC Career Development Award suggests that others think that what I have done has been worthwhile also. The CDA allows me to get paid to do the research that I want to do; getting to this point in my career is my most satisfying achievement.

What is the big question in your field of clinical eye research that you hope to answer?

KP: There is one issue in ophthalmology with Noble Prize potential - the prevention of presbyopia (need for reading glasses in middle age). I have some ideas about this which I would like to explore in the next few years. This will involve spending time in the foreign surroundings of a lab, but I'm up for it!

Interviewed by Judy Morris.

Major Research Grants Awarded

Research Pulse publishes details of significant (over \$100,000 total) grants awarded to members of the Faculty of Health Sciences as we hear about them. New for this edition are the following:

M Battersby: An analysis of training and information options to support chronic disease prevention and self-management in primary health care. Australian Government Department of Health & Ageing, \$463,017

M Battersby, S Lawn, R Reed, K Grimmer, S Kumar, G Misan, M Heardfield: Development of a framework to guide the integration of chronic disease self-management into undergraduate curricula. Australian Government Department of Health & Ageing, \$272,833

J Coveney, P Ward, F Verity, G Wittert, G Jolley, G Tsourtos, C Gericke, E Sanders, M Powers: Socio-economic status and overweight/obesity: supply of and access to (un)healthy food. Department of Health, \$446,273

D Currow, T Shelby-James, D Rowett, J Plummer, G Gourlay, S Eckermann, A Abernethy: Palliative Care Clinical Studies Collaborative. Australian Government Department of Health & Ageing, \$8,900,000

J Dunbar, P Reddy: Chronic disease management of co-morbid depression, heart disease and diabetes. Beyondblue, the national depression initiative, \$465,000

K Reynolds, H Owens, P Williamson: ISim – a realistic intubation simulator using virtual reality technology. ARC Linkage Project, \$195,000

A Schoo: Statewide Allied Health Workforce Education Program. Department of Human Services, Victoria, \$306,283

G Tsourtos, P Ward, F Baum, J Coveney, P Delfabbro, T Winefield, H Scherer: Exploring resilience and coping in relation to smoking within 'at risk' populations. Department of Health, \$345,730

J Wakeman, M Dollard, S Dunn, S Knight, M MacLeod, G Rickard: Back from the Edge: Reducing and preventing occupational stress in the remote area nursing workforce. ARC Linkage Project, \$481,686 over 4 years.

W Zhang, J Klein: Establish an integrated functional skin test platform for cosmetics and cosmeceuticals. The Klein Research Institute Ltd, \$340,000

Pharmacology for health professionals

The second edition of *Pharmacology for Health Professionals* (Mosby/Elsevier Australia) by Associate Professor Kathie Knights (Department of Clinical Pharmacology) and Associate Professor Bronwyn Bryant was published recently. This popular text (the first edition sold more than 17,000 copies) is written specifically for the Australasian region. The second edition reflects local generic drug names, availability and clinical uses, along with local aspects of scheduling, drug legislation and ethical issues. New to the second edition is a chapter on Envenomation and Antivenoms, 'Drugs at a Glance' tables, world anti-doping agency guidelines for drug use in sport and updated epidemiological data on the health and welfare of Australians.



Associate Professor Kathie Knights with her book and Professor Roy Goldie.

From the editorial team

The Research Pulse Editorial Team comprises Inge Kowanko, Judy Morris and Karen Siegmann. You may have noticed some small changes in this issue of Research Pulse eg author attribution. We welcome your feedback and suggestions for articles, eg research success stories and experiences, opinion pieces, photos of researchers in action, articles about how your research makes a difference, achievements of postgraduate students. We are also interested in increasing the distribution of Research Pulse, particularly to collaborating organisations outside Flinders. Please send your ideas to karen.siegmann@flinders.edu.au

research pulse is an initiative of the Faculty of Health Sciences at Flinders University. Comments and suggestions for future articles are welcome.

Contact – karen.siegmann@flinders.edu.au

Editorial Team – Inge Kowanko, Judy Morris, Karen Siegmann

Design – Flinders Press

CRICOS Registered Provider • The Flinders University of South Australia • CRICOS Provider No. 00114A