More than a network

The IHMRI Research Network was launched on 9 December 2009 and growth during its first year has been steady.

The IHMRI Research Network is a community of academic researchers, clinicians and others in the health sector with a common interest in advancing health and medical research. It supports the sharing of information, connection of individuals and organisations around common research interests, and facilitates collaborative research initiatives.

Now over 500 members strong, this collection of professionals from healthcare and medical science has seen some promising partnerships form and in many cases, progress to successful collaborations.

Achieving our vision of better health services and a healthier Illawarra community is critically linked to strong partnerships via the Network.

At the end of November, the IHMRI Research Network had:

- 350 members;
- 120 individual associates and 26 organisation associates; and
- 15 national collaborators and 4 international collaborators.

Now that the Research Network has been established, maintaining and improving engagement with all members is our challenge.

One of the issues we are looking to address is diversity within the network. Members range from privately operating cardiologists, to mental health support

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News

Building community

The new IHMRI building has received recognition as a development that demonstrates excellence in providing community benefit, picking up Highly Commended in the Property Development Award from the Australian Property Institute (NSW Chapter). As part of its annual Excellence in Property Awards, the API said the IHMRI building was “realised on time and on budget [and] provides a focal point for all health and medical research within the Illawarra”.

OH&S Award

Congratulations to Dr Kellie Ridges, IHMRI’s Operations Manager, Laboratory and Clinical Research, who has been recognised for leadership in occupational health and safety. For her ongoing initiative in this area, Kellie was a joint winner of the Safety Leadership Award in the UOW Workplace Health and Safety Awards on 25 October. Kellie’s commitment to OH&S was particularly apparent during the move of administration staff, laboratory equipment and research staff into IHMRI’s new building.

Second OSMR grant welcomed

The NSW Office of Science and Medical Research (OSMR) has granted IHMRI $679,931 under its Medical Research Support Program for the 2010-11 financial year. This funding follows a comparable, inaugural OSMR grant in 2009-10. “This grant will allow IHMRI to continue to implement an effective strategic and administrative program to drive our overarching vision, without affecting current research funding blocks,” according to Chief Operating Officer, Sue Baker-Finch.

Nutrition’s healthy

Twenty-eight student research projects were presented to the annual School of Health Sciences Nutrition Research Day on 3 November. Posters reflecting the research projects undertaken were displayed outside of two lecture theatres running concurrent student presentations. Topics were varied and included studies on malnutrition in elderly patients following falls in hospital, dietetic interventions for children with diabetes and nutritional intakes of Meals on Wheels recipients. The day, coordinated by the Smart Foods Centre, also included a working lunch meeting of nutrition research supervisors, which evaluated the year’s research projects and undertook planning for 2011.

Conference collaboration on personality disorder

The fourth annual conference on the Treatment of Personality Disorder: Consolidating collaboration was held in early November at the Northfields Clinic. Hosted by the UOW Clinical Psychology program and the SESIAHS Specialist Psychological Service, the conference aimed to provide an opportunity for professional development through a series of presentations on current issues in the borderline personality disorders field and to provide a networking occasion for participants.

Illawarra Mental Health Awareness Expo

Almost 200 members of the community attended the inaugural Illawarra Mental Health Awareness Expo on 12 October to discover more about 25 local mental health support and treatment services.

The Expo was an idea generated from the first Illawarra Mental Health Roundtable in June and aimed to address the lack of awareness of the variety of mental health support available, both in the community, and between organisations in this area.

A major success of the day, which was coordinated and hosted by IHMRI, was the overwhelmingly positive responses from support services that participated in the event. Organisations involved included Mission Australia, Alcoholics Anonymous, Lifeline, Uniting Care Ageing, ARAFMI, Northfields Clinic, the IDGP and a number of units of SESIAHS.

In a follow-up survey, the majority of organisations rated the event as ‘Extremely Helpful’ in three areas:

- Educating the public about the range of local mental health services;
- Educating the public about what each service has to offer; and
- Networking with other mental health professionals.

The Expo was followed by the third IHMRI Seminar Series of 2010 by Professor Christos Pantelis from the University of Melbourne. Professor Pantelis detailed one area of his research – using MRI to assess brain changes in adolescence associated with early psychosis.

SESIAHS was a major contributor to information provided on the day. A profile of some of the mental health services provided by SESIAHS follows on page 5 and in Nurse Jenny Lane’s profile on page 6.
Cancer Carers visit

IHMRI hosted a visit by 40 members of the Illawarra Cancer Carers on 24 November, which saw the University of Wollongong presented with a donation of $100,000 for cancer research. The volunteer group have raised over $2 million for cancer support, treatment and research in the Illawarra over the past 20 years. Following an update by Professor Philip Clingan on the progress of the Flurodex drug development project, the President of the Illawarra Cancer Carers, Sue Maidman, and Cancer Carers volunteer Keith Wilson, presented Professor Clingan and Associate Professor Marie Ranson with a cheque for $100,000 for University of Wollongong cancer research.

Introducing

October was a big month for the growing team at IHMRI, including the appointment of Dr Andrew Bonney as Scientific Director for the Primary Care and Rural Health theme, and Dr Paul Keller as Scientific Director of the Infectious Diseases theme.

Dr Andrew Bonney
Scientific Director, Primary Care and Rural Health theme

Dr Andrew Bonney is a general practitioner, Senior Lecturer in General Practice at the Graduate School of Medicine and an active research member of the Centre for Health Initiatives at the University of Wollongong. He has been in clinical practice on the NSW south coast since 1992 as a GP to a rural town and Aboriginal community. He has been involved in undergraduate and post-graduate general practice education since 1997. He spent six years as program director for the Koori Health Program in the Shoalhaven Division of General Practice.

Andrew completed a Master of Family Medicine (Clinical) degree through Monash University, and is undertaking doctoral research through the Centre for Health Initiatives at the University of Wollongong. He has been published, and had conference papers accepted, both nationally and internationally on aspects of primary care, and is on the review panels of national and international primary care and medical education related journals.

His research focus is on inter-personal aspects of patient care, and their impact on behaviours and health care systems. He was chief investigator on a national study into the responses of older patients to general practice trainees. However, he maintains a broad range of research interests in primary health care, and is currently involved in projects as diverse as the use of web-based social networks for GP training and health promotion for residents of aged care facilities.

This November, Andrew presented two of his research papers accepted at the 38th North American Primary Healthcare Research Group Annual General Meeting in Seattle.

andrew.bonney@uow.edu.au

Also joining the IHMRI team in October...

Mahnaz Fanaian
Project Manager, Treatment of Personality Disorders Research Project

Mahnaz joins IHMRI with experience in project management including cardiovascular prevention research, diabetes management and mental health services. Her role will be to drive the delivery of the $2.5 million Treatment of Personality Disorders Project with partners IHMRI, SESIAHS and Justice Health.

Kelly Hutchison
Project Administration Assistant – Treatment of Personality Disorders Research Project

Kelly started in October as part of the team which will coordinate the $2.5 million Treatment of Personality Disorders Project – a NSW Government tender awarded to an IHMRI and SESIAHS partnership in May. Kelly's role will be to facilitate and coordinate all administrative elements of the project.

Anita Markovski  Building Services, IHMRI

Anita began in October as the full-time building services and reception officer. Anita has significant experience in office management and coordination. Anita's role is to raise any building maintenance requirements with the University, order office supplies, receiving and coordinating deliveries and reception duties.

Patty Bate-Charlton  Clinical Trials Nurse

Patty joined the IHMRI Clinical Research and Trials Unit in early October and has since been working to implement guidelines and procedures for prospective clinical trials. Patty was Senior Operating Theatre Nurse at Wollongong Hospital for more than a decade before joining IHMRI, and we are extremely pleased to have her skills and experience on board.
More than a network

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coordinators; from medical research professors to PhD students. At one end of the Research Network membership spectrum are those who know the processes and protocols of research intimately; at the other are those who know the delivery of health treatments and patient needs inside out.

A second challenge is that Research Network members are amongst the most time poor people in the workforce. Having the time to also engage with IHMRI through participating in research meetings and projects is a big expectation of people with full diaries.

Discovering more about why, when, where and how members want to interact with colleagues in the network is our next step to overcoming some of the barriers to engagement.

In December, every network member was emailed a link to an online survey to provide us with feedback on how we may be able to improve your experience of being a network member. Information we have gathered includes when you prefer events to be held, what research projects you would be most interested in participating in and the reasons why you haven't been able to attend meetings in the past.

This information is assisting our team to create a Research Network that is as valuable as possible for all members, ensuring that once we have engaged members in our research meetings and projects, their involvement remains relevant and effective.

Finally, I’d like to take this opportunity to thank you all for being involved in the foundation year of the Illawarra Health and Medical Research Institute Research Network. I wish all of our members a safe and pleasant holiday season and look forward to working with you in 2011.

Professor Don Iverson

don_iverson@uow.edu.au

Congratulations

Strong result for IHMRI in NHMRC major grant round

Research into Alzheimer’s disease, schizophrenia, improvements in antipsychotic drugs and protein aggregation in the brain leading to disease were big winners in the NHMRC Project Grants announced on November 12.

IHMRI researchers feature prominently in the grants received by the University of Wollongong, with funds to take a number of research projects at the Institute to the next level.

“It’s obvious that developments such as the Graduate School of Medicine and the Illawarra Health and Medical Research Institute are now starting to take effect,” Deputy Vice-Chancellor (Research), Professor Judy Raper, said.

The recipients of the NHMRC grants at UOW are:

- Dr Chao Deng
  Total funding: $359,182 over 3 years
  Understanding the mechanisms of functionally selective drugs: implication for new generation antipsychotic drugs

- Professor Brett Garner and Dr Tim Karl
  Total funding: $440,312 over 3 years
  Defining the function of apolipoprotein-D in Alzheimer’s disease

- Dr Justin Yerbury and Dr Leila Luahesi
  Total funding: $390,812 over 3 years
  Investigating the propagation of protein aggregation in amyotrophic lateral sclerosis

- Dr Nadia Solowij, Professor Rodney Croft, Dr Juanita Todd, Dr Francesca Fernandez, Emeritus Professor Patricia Michie, Professor Philip McGuire and Professor Robin Murray
  Total funding: $499,006 over 3 years
  Vulnerability markers in the association between cannabis and schizophrenia

- Professor Nicholas Dixon, Professor Gottfried Otting and Associate Professor Aaron Oakley
  $570,048 over 3 years
  Targeting lagging strand DNA replication in model and pathogenic bacteria

IHMRI researchers involved in collaborative grants led at other institutions which were announced as part of the NHMRC round are Dr Todd Mitchell and Professor Roger Truscott.

Congratulations to all IHMRI researchers involved in these major grants.

ARC Discovery

A number of IHMRI Research Network researchers are members of successful 2010 ARC Discovery Projects funding (the following lists IHMRI Research Network Members in each project only):

- Associate Professor Joseph Ciarrochi, Associate Professor Stuart Johnstone
  A longitudinal study into the development of personal vulnerabilities and well-being in adolescence

- Dr Christopher Magee, Professor Don Iverson
  Short sleep as a cause of obesity: a longitudinal examination of Australian children and adults

- Associate Professor Jennifer Beck, Dr Michael Kelso
  Fragment-based screening approaches for new antibiotics directed against the bacterial sliding clamp

- Professor Anatoly Rozenfeld, Dr Marco Petasecca, Dr Susanna Guatelli, Associate Professor Peter Metcalfe, Associate Professor Martin Carolan
  Unified platform for real time QA in radiation therapy in brachytherapy based on high resolution silicon detectors (Magic Plate)

- Associate Professor Tony Okely, Dr Dylan Cliff
  Determinants of children’s physical activity and sedentary behaviour: a follow-up study from early childhood

DART Grant

Congratulations also to Professor Xu-Feng Huang who has been awarded almost $60,000 from Diabetes Australia Research Trust in its 2011 grant round.
Small grants recipients
The inaugural IHMRI small grants round has resulted in $65,000 being awarded to 13 collaborative projects following 26 applications. All applications for the small grants were reviewed by the relevant theme directors and then assessed by a panel comprising of Professor Nick Dixon, Professor Noel Tait, IHMRI Executive Director Professor Don Iverson, IHMRI Deputy Executive Director Professor Wilf Yeo and Chief Operating Officer Sue Baker-Finch.

“The calibre of applications has been most impressive and many represent exciting new collaborations that we hope will lead to future competitive grant success in innovative areas of research stimulated as a result of IHMRI’s initiatives,” Professor Iverson said.

Projects funded on this round are:
- Development of novel anticancer strategies for treating pancreatic cancer: targeting a tumour’s sweet spot: Danielle Skropekta, Haibo Yu, Marie Ranson, Phil Clingan
- Activation of the PI3K1/Akt/mTOR growth signalling pathway and regulation of the anti-apoptotic protein TCTP in colon cancer: Ulrich Bommer, Jiezhong Chen, Alistair Lochhead, Mortez Aghmesheh
- Determining the association between nutritional status and physical and cognitive functioning and health care use in older patients: Karen Charlton, Jan Potter, Marriana Milosovilejc, Barbara Meyer
- Metabolic and damage biomarkers to identify the influence of diet on mechanisms of ageing and degenerative disease: Andrew Jenner, Brett Garner, Todd Mitchell, Xu-Feng Huang
- Partial mitochondrial genome deletions and their role in asthma: Mark Dowton, Andrew Jones, Ron Suyter, Stephen Lilioja
- The role of chromosomal instability induced by insulin/PI3K/Akt pathway in obesity-related colon cancer: Jiezhong Chen, Stephen Lilioja, Marie Ranson, Paul Else
- Rapid topical delivery of anti-infective drugs for prevention and treatment of disease: Jason McArthur, Roy Himes, Simon Moulton, Nick Adams
- Understanding the role of genetic variation in Interleukin-1 beta (IL-1b) gene with obesity and Type II diabetes: Yinghua Yu, Ulvi Budak, Zhixiang Wu, Francesca Fernandez
- Understanding the underlying mechanisms behind the reduced body weight gain after consumption of shiitake mushrooms – a rat study: Barbara Meyer, Jiezhong Chen, Xu-Feng Huang, Arthur Jenkins
- Oxytocin levels during gestation – implications in labour complications and schizophrenia: Theresa Larkin, Chris Georgiou, Elisabeth Frank, Nagesh Pai
- Preliminary investigations of factors affecting weight gain in adult schizophrenic patients attending a Clozapine clinic in the Illawara: Judy Mullan, Elisabeth Frank, Francesca Fernandez, Deanne Condon-Paolini, Kelly Newell, Nagesh Pai
- Improving the clozapine induced metabolic side-effects by treatment with muscarinic M3 receptor agonist cevimeline – A pilot study: Chao Deng, Nagesh Pai, Xu-Feng Huang, Katrina Weston-Green
- An improved breast tumour immunotherapy by delivery of anti-IL10 antibodies using multifunctional nanomaterials: Kosta Konstantinov, Xiaosong Liu, Xiaolin Wang

Service Profile
This profile of the SESIAHS Family & Carer Mental Health Program was developed for the Illawarra Mental Health Awareness Expo.

SESIAHS Family & Carer Mental Health Program
Team
- Family & Carer Consultant: Megan Green
- Area Coordinator: Toni Garretty
- VMO Psychiatrist: Dr Annemaree Bickerton
  (two days per month)

The SESIAHS Family and Carer Mental Health Program team drive the development and delivery of group initiatives to increase skills and improve the practice of clinicians when connecting with carers, to achieve optimal engagement with families and carers. Through education and case reviews, the team encourage medical staff to provide carers and families with a range of options, including assistance with navigating the system, support, information and education regarding illness, medications and appropriate referral pathways. To strengthen this sustainable, capacity building approach, the Family and Carer Consultant also provides individual support to clinicians and often works in tandem on the more complex family and carer issues.

Both the Family and Carer Consultant and Area Coordinator deliver ongoing education sessions to families and carers to enhance knowledge and build coping skills, while the entire team offers Mental Health Community Forums to increase awareness and reduce stigma.

A recent change to funding has seen a new partnership with Aftercare develop to open referral pathways. Experience has demonstrated that a shared approach by health and the NGO’s when working with families and carers delivers better outcomes for all.

Suicide Prevention
As part of their work, the Family & Carer Mental Health Program also have established a suicide prevention initiative, working with the Wollongong Suicide Prevention Network and Wollongong Police.

The topic of suicide continues to provoke a variety of emotional responses among members of the community. Yet it is a known fact that Australia loses more people to suicide than motor vehicle accidents every year.

The partnership with the Wollongong Suicide Prevention Network and the Wollongong Police aims to raise community awareness and provide support to people who may be at risk of suicide and their family and carers. The Network has developed a new resource information pack covering prevention and postvention, which local police have been utilising for some months. From October 2010, these packs will also be available throughout SESIAHS Mental Health Services for both consumers and carers.
The $20,000 was made available through the IHMRI 2010 Dementia Grants Program which supports research projects in any aspect of dementia that has the potential to advance the prevention or treatment of dementia or improve the quality of life and experience of people with dementia.

Four applications were received for the grant round, and two were awarded by the assessment panel comprising of Professor Nick Dixon, Professor Noel Tait, Professor Wilf Yeo, Professor Iverson and IHMRI Chief Operating Officer Sue Baker-Finch.

Executive Director Don Iverson has acknowledged the generosity of donors to the University of Wollongong in announcing two $10,000 grants for research into dementia.

“The support from these donors is indicative of the appreciation held within our local community of the good work being done by our IHMRI researchers,” Professor Iverson said.

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Four applications were received for the grant round, and two were awarded by the assessment panel comprising of Professor Nick Dixon, Professor Noel Tait, Professor Wilf Yeo, Professor Iverson and IHMRI Chief Operating Officer Sue Baker-Finch.

The successful research projects are:

- The impact of fruit flavonoids on memory and cognition in older adults with mild to moderate dementia
- Establishing the pathological mechanisms of TDP-43 in frontotemporal dementia and motor neurone disease
- The role of dietary fruit flavonoids in reducing the risk of developing dementia in older adults
- Developing innovative treatments for dementia

It is hoped that the support of these donors, and others, such as the Illawarra Cancer Carers, is the start of an expanding program of donations that will further medical research being undertaken at IHMRI, Professor Iverson said.
Research Network News

It has been a fantastic year of growth for the IHMRI Research Network since its launch on Wednesday 9 December, 2009. We’ve seen membership grow to more than 500. Over the coming year we hope to add value to membership of our Network through establishing even stronger research connections and better tailoring of events.

Research Network Survey: We want your feedback about membership of the Research Network this December. Distributed to all of our members by email, we hope that you can spare a few minutes to give us your opinions in this anonymous survey. Also find the link on the IHMRI Central blog.

Upcoming Events

IHMRI has finalised the dates for its 2011 Seminar Series (Tuesday evenings) and Networking Evenings (Wednesday evenings). Speakers will be finalised over coming months and advised through email, online and through Research Network events.

These dates are:

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<tr>
<th>2011 IHMRI Seminar Series</th>
<th>2011 Networking Evenings</th>
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<tr>
<td>Tuesday 15 February</td>
<td>Wednesday 2 March</td>
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<td>Tuesday 17 May</td>
<td>Wednesday 1 June</td>
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<td>Tuesday 9 August</td>
<td>Wednesday 7 September</td>
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<td>Tuesday 18 October</td>
<td>Wednesday 30 November</td>
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The IHMRI Research Network is integral to the ongoing success of IHMRI and its research program. Our unique status at the nexus of medical research and clinical treatments relies on input from all perspectives. We hope that in 2011, members of the Research Network will continue to get involved and bring a broad range of perspectives to our mission of excellence and innovation in health and medical research.

We wish each and every member of our staff and Research Network a healthy, happy and relaxing festive season and look forward to seeing you at our research meetings and events in 2011.
The shape of things to come

Molecular chaperones as agents of the ageing process

Like a personal trainer can keep us ship-shape as we age, so too do a class of proteins in the body, known as chaperones.

There are a number of different types of chaperones in the body, their role to ensure that all of the other proteins in the body that keep us fighting fit are of perfect molecular form.

As we age, the ability of proteins to fold and function perfectly reduces; as does the ability of chaperones to keep up their job of quality assurance.

Over time, the misshapen proteins form clumps, or aggregates, around the body. In the brain, these protein aggregates cause devastating diseases including Parkinson's disease and motor neurone disease (MND). Dementia is also a consequence of protein aggregation in the brain and is one of the fastest growing sources of major disease burden in Australia.

A research team led by Dr Heath Ecroyd and Dr Justin Yerbury, from the Illawarra Health and Medical Research Institute, is investigating how chaperones contribute to the onset of age-related neurological diseases and ageing in general, as well as how they might offer opportunities for prevention and treatment of these diseases.

They are focused on a particular type of chaperone, small heat-shock proteins, which play a ‘surveillance’ role in the body, identifying which proteins are falling out of shape, and dispatching fellow chaperone proteins to assist them in keeping their molecular form.

Using an animal model of motor neurone disease (MND), the researchers are examining the role these chaperones play in a healthy brain, how this role changes in an ageing brain, and what the chaperones are – or aren’t – doing at the onset of the disease.

Looking at the differences between disease onset and a significant deterioration in health, which may occur many years after diagnosis for many of the age related neurological diseases, it is hoped will provide significant insight into why these chaperones seem to fail us as we age.

“People with a genetic mutation that is associated with MND are not born with the disease - the average age of onset is around 50 years,” Dr Yerbury says. “Using this model, we can examine the function and form of the chaperones at each stage of the life cycle and investigate the changes that lead to the sudden onset and progression of MND during ageing.”

The researchers are studying the chaperones from two angles: the “numbers game” – whether ageing throws out the fine balance between chaperones and deforming proteins; and functional deficiency – whether or not the chaperones themselves become inoperative as we age.

Their ultimate goal is to identify opportunities for the development of therapeutic treatments, which can be honed to benefit patients suffering from these diseases of our age.

This work has been made possible through a grant from the Illawarra Retirement Trust Research Foundation. Dr Justin Yerbury holds a Bill Gole Postdoctoral Fellowship, funded by the Motor Neurone Disease Research Institute of Australia.

Technical know-how

The experience of setting up IHMRI’s new PC2 research laboratories from the perspective of our team of technical officers was the subject of a presentation at the TechNet 2010 conference at Flinders University, Adelaide in December.

Senior Technical Officer, Linda Deitch, and Technical Officers Katie Hall and Clare Atkinson, described the move and settling in to the new IHMRI building in their presentation, Setting up PC2 labs in a new facility.

TechNet is a network for laboratory technical staff that shares information, skills and ideas among its members. The first TechNet conference was held in 1998, with the theme for the 2010 conference ‘Broadening the network’.

In their presentation, the IHMRI team detailed the various processes and procedures that were necessary in setting up the operational PC2 laboratories, the challenges that unfolded once the researchers moved in and a look at how the laboratories are working six months since the move.

The move included the purchase and installation of specialist biomedical and various assorted laboratory equipment for the transfer of established research groups from within the University to the state-of-the art research facility.

“It explored the highs and lows, giggles, and grumbles from the perspective of the three of us,” Linda said. “Hopefully the insights we provided were helpful to other technical staff facing a similar mammoth task, and even for those in established facilities who - perhaps foolishly - dream of a starting from scratch.”