

RESEARCH NEWSLETTER

POSTDOCS ARE IMPORTANT PEOPLE!!!

Our postdoctoral researchers are an integral and core component of our research workforce. Most great medical research institutes depend on postdocs to drive their research agenda. The Faculty has over 135 postdoctoral research staff and we are keen to help them develop their careers and prepare them for a life in biomedical science. In order to improve the experience of our postdocs and obtain feedback on their needs and concerns, the Faculty organised a recent workshop on 15 April that was attended by over 70 postdoctoral research staff.

Professor Margaret Harding outlined the UNSW strategy to support early career researchers and post doctoral research fellows. Dr Laurent Rivory from the Research Strategy Office gave an overview of the research strategy related to ECRs. There are a large number of postdoctoral opportunities for postdoctoral fellows and these were outlined by Dr Gro Frolund (see article in this edition). Julie Tippet outlined the big picture as far as learning at UNSW is concerned, with particular reference to postdoctoral students. The Faculty has developed research pathways for postdoctoral fellows to help facilitate their career development. I outlined our plans to have all postdocs participate in the Professional Development Talent Management Scheme which would facilitate them obtaining Faculty grants and travel assistance. The Faculty is also aiming to improve networking amongst postdoctoral researchers and prospects for developing a social club were discussed. Mary Kavurma gave a wonderful talk about her journey through her post doctoral research years with its trials, tribulations and triumphs!



Mary Kavurma

As a result of this event, plans are currently underway to provide a support program for all postdoctoral research staff in the Faculty of Medicine and we plan to develop a more comprehensive and integrated program for career development. All Postdocs will now participate in the PDTM program and we will increase opportunities for research funding, mentoring and networking. Application forms and guidelines for research and travel grants will be posted on the Faculty website next week.

Denis Wakefield

Associate Dean Research

New initiative with NewSouth Innovations Pty Limited

Discovery, innovation and commercialisation of inventions are core business of the Faculty of Medicine. In order to improve performance in this area and after consultation with NSi, a new plan has been developed for improving IP notifications and commercialisation activity within the Faculty.

Dr Alfredo Martinez-Coll (see article in this edition) will assume the role of Commercialisation Manager, Faculty of Medicine, in an acknowledgement that his skill set is well suited for the intensive engagement activities required of the position. His first action will be to identify and systematically engage Faculty research leaders. The foundational work for this activity has already commenced. I would like to thank Dr Laura Issa for her hard work in trying to support researchers with IP notifications.



In her new role as Senior BDM, Dr Laura Issa will continue to service the Faculty of Medicine via specific engagement activities, but will have a strong focus on deal flow to attain new research funding for the Faculty during 2010 in addition to license revenues. Dr Jim Henderson will increase engagement efforts of senior Faculty representatives, such as Heads of School and Centre Directors. In addition, Dr Steve Brodie, will develop and assist Dr Martinez-Coll to implement a Faculty of Medicine specific marketing program including seminars and one:one meetings, submissions to Faculty Newsletters and other creative ways to increase awareness of NSi's commercialisation activities.

Peter Smith

Dean of Medicine

Dr Alfredo Martinez-Coll

Alfredo Martinez-Coll graduated with a B.S. in Biomedical Engineering (minor in artificial organ design) in 1986 from Louisiana Tech University (USA).

In 1995 Alfredo moved to Australia and joined the Cooperative Research Centre for Cardiac Technology (CRC-CT); obtaining his Doctorate from the University of Technology, Sydney in 1999, and completing his post-doctoral training with the Faculty of Engineering in 2003.

He has more than 16 years experience in biomedical research in Venezuela, the United States, and Australia covering design of artificial organs, cardiovascular and cerebrovascular physiology, membrane transport and oxygen transport to tissue.

Alfredo's main areas of interest are sustainable funding for science, entrepreneurship, innovation, project management in science and business development (all part of a number of submissions to the State and Commonwealth governments). Following a practical training scholarship in technology transfer and commercialisation in The Netherlands, Alfredo worked in the area of intellectual property and commercialisation across a number of Area Health Services in NSW from 2004-2006 before joining NSI.

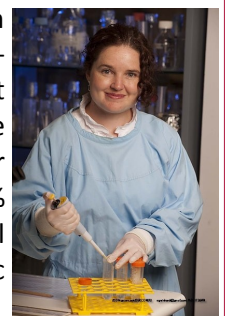
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Dr Phoebe Phillips - Postdoctoral Research Fellow

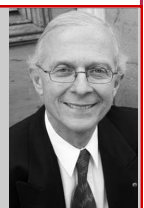
Dr Phoebe Phillips is a post-doctoral research fellow in the Pancreatic Research Group which is part of the Centre for Infection and Inflammation Research (CIIR). She first joined the Pancreatic Research Group as a Research Assistant in 1999 and completed her PhD in 2005 with Professor Minoti Apte. Phoebe's area of research for her PhD was related to pancreatic stellate cell (PSC) biology. These cells are now established as the key effector cells in pancreatic fibrosis. Following her PhD she completed her post-doctoral fellowship at the University of Massachusetts (USA). During this time she identified a novel pharmacological inhibitor for heat shock protein 70 (a protein which confers resistance to apoptosis in pancreatic cancer cells) called triptolide which is currently being tested in a phase 1 clinical trial in pancreatic cancer.

Following completion of her post-doctoral studies in the USA, Phoebe was awarded a fellowship by the Gastroenterological Society of Australia and returned to the Pancreatic Research Group. During this fellowship Phoebe identified a role for pancreatic stellate cells in pancreatic enzyme secretion via the synthesis of the neurotransmitter acetylcholine. In 2009 Phoebe was successful in obtaining a Career Development Fellowship from the Cancer Institute NSW and additional funding from NHMRC, Cure Cancer Australia, NSW Cancer Council and Ramaciotti. These grants provided Phoebe with essential resources to conduct independent research, resulting in her recognition by the Faculty of Medicine, UNSW with the award of the 'Deans Rising Star Award'. Phoebe's current research focuses on pancreatic cancer which is a devastating disease with a dismal prognosis. The five-year survival rate is less than 5% and most patients die within a few months of diagnosis. She is working on identifying novel therapeutic approaches including targeting the extensive scarring (fibrosis) which the Pancreatic Research Group has shown enhances pancreatic cancer progression.



PROFESSOR HENRY BRODATY (AO)

Professor Henry Brodaty of the UNSW School of Psychiatry has been invited to join the Scientific Advisory Board of the new EU Joint Program on Neurodegenerative Disease Research. This is a great honour, recognising Henry's prominent international research standing.



"If men could learn from history, what lessons it might teach us" - Samuel Coleridge

RESEARCH PROFILE: PROFESSOR ENRICO COIERA



Professor Coiera is the **Foundation Chair in Medical Informatics** and **Director of the Centre for Health Informatics (CHI)**, one of three Centres that have come together to form the Faculty's new **Institute for Health Innovation**.

Medical informatics is concerned with advancing the safety and quality of healthcare through the use of information systems and technology. Enrico has a long standing research interest in the science and technology of decision making, and started his research career with a PhD in Artificial intelligence (AI) at UNSW's School of Computer Science, after finishing a medical degree at Sydney University. Between 1990-1998 he worked at the **Hewlett-Packard Research Laboratory** in Bristol as a senior research scientist and manager, participating in the Internet revolution first hand.

Working with his research team at CHI, Enrico is now pursuing three separate research programs.

A program in **patient safety informatics**, supported in part by an NHMRC Program Grant, is examining how health service delivery can be made safer through the effective use of technology. A longstanding interest has been the impact of communication on clinical error, and Enrico has made significant contributions internationally to our understanding of interruption and multitasking on decision-making errors. Working with Dr Farah Magrabi, he is also looking at the unanticipated side-effects of technology, a rapidly emerging area for research, and one in which UNSW researchers have made significant international contribution. In a left-field paper co-authored with Professor Jeffrey Braithwaite, Enrico recently proposed a radical new model for regulation patient safety, based upon a 'cap and trade' model – an idea that has caused some controversy.

A second program in **consumer informatics** is exploring the impact of new technologies like Web 2.0 and 3.0 on the ability for consumers to enhance their participation in decisions about care with their clinical team. With support from the HCF Foundation, Enrico's team have built a new "facebook for healthcare" called *healthy.me*, which is undergoing trials over 2010.

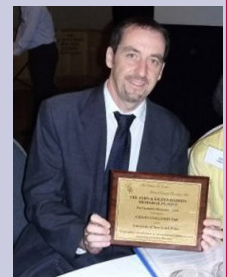
To develop new ways of exploiting the growing mass of biomedical research data, a third program in **translational bioinformatics** is developing new tools to support bench scientists and clinicians explore complex data sets. There is the very real possibility that artificial intelligence techniques will soon lead to the automation of some of the scientific discovery process. CHI researchers are for example developing methods to automatically 'understand' RCT papers, automatically generating summaries to assisting in managing the growth in the literature. Enrico's team, working with Vitali Sintchenko, has recently remapped the infectious disease space by automatically building a network of organisms and syndromes using the entire PubMed corpus. This network has helped for example to identify the role of previously unsuspected genes in infectious disease processes. Working with Dr Guy Tsafnat, Enrico has also shown how computational grammars, a classic AI approach to language understanding, can discover complex regulatory structures governing the transmission of antibiotic resistance genes.

Professor Coiera has been awarded a number of national and international awards for his technology developments in support of clinical decision-making, including a prestigious 2005 IBM Faculty Award (IBM Research Laboratories, US), and the 2006 Intel Don Walker award.

AWARD FOR OUTSTANDING RESEARCH IN GERIATRICS - JOHN & EILEEN HADDON MEMORIAL PLAQUE

Congratulations to Gilles Guillemin for the award of the John & Eileen Haddon Memorial Plaque from the Rebecca Cooper Foundation for outstanding research in geriatrics - (Tryptophan metabolism in neuroinflammatory and neurodegenerative diseases).

Dr Guillemin said "To be honest this was completely unexpected! It was a very pleasant surprise. The Rebecca Cooper Foundation has been regularly and generously supporting my research over the last few years. This year the Board of the Foundation chose me as the recipient for this award, more specifically for my work on Alzheimer's disease. This award came also with a \$2000 cheque to attend a scientific meeting or conference, plus my \$13,500 equipment grant. I really want to thank again the Rebecca Cooper Foundation for the recognition of my work and their support"



FULBRIGHT SCHOLARSHIP AWARD

Congratulations to Alison Langdon for the award of a 2010 Fulbright Postgraduate Scholarship that will allow her to spend a year at the Centre for Neural Science, New York University, to further pursue her research into the functioning of the human brain.

At your Service: Dr Gro Frolund, Researcher Development Manager



Researcher development

Do you need training or support in your research? Did you know that as a UNSW researcher, you have access to a diverse range of training specifically targeted at researchers and research careers, for free? Researcher development currently offers seven programs designed for the research career needs of early careers researcher, mid-career researchers and Centre Directors. To give a few examples, our programs cover topics such as how to create a research strategy, how to track the impact of your research, how to make best use of mentoring and how to build innovation into your research methodology.

Starting or re-starting researchers (ECRs):

Early Career Research@UNSW (<http://www.dvcresearch.unsw.edu.au/training.html>)

Mid-career researchers:

Future Research Leaders Program (<http://www.dvcresearch.unsw.edu.au/frlp.html>)

Women in Research Network (<http://www.dvcresearch.unsw.edu.au/wir.html>)

Centre Directors:

Centres Forum (<http://www.dvcresearch.unsw.edu.au/centres.html>)

Training open to all career levels:

Supervisor training, for supervision of higher degree students <http://www.dvcresearch.unsw.edu.au/supervision2010.html>

Strategic grant scheme information sessions, ARC and NHMRC (<http://www.dvcresearch.unsw.edu.au/workshop.html>)

Orientation to Research – for new staff (<http://www.dvcresearch.unsw.edu.au/orientation.html>)

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TRAINING WORKSHOPS:

Together with the Research Strategy Office we are developing a series of workshops to assist researchers in developing their grant/fellowship applications. The next workshops planned for 2010 will be:

August: NHMRC Project Grants #1

December: NHMRC Project Grants #2

December: Practitioner, Research and CDA Fellowships

**Researchers interested in the above should regularly check the Faculty of Medicine website for details which will be advertised in due course. **



PUBLICATION OF THE MONTH

Congratulations to the Children's Cancer Institute Australia (CCIA) who have had three manuscripts published in the high impact international journals *Nature* (IF 31.4) and *Nature Reviews Cancer* (IF 30.8) recently:

1) Schuster SC, Miller W, Ratan A, Tomsho LP, Giardine B, Kasson LR, Harris RS, **Petersen DC**, Zhao F, Qi J, Alkan C, Kidd JM, Sun Y, Drautz DI, Bouffard P, Muzny DM, Reid JG, Nazareth LV, Wang Q, Burhans R, Riemer C, Wittekindt NE, Moorjani P, **Tindall EA**, Danko CG, Siang Teo W, Buboltz A, Zhang Z, Ma Q, Oosthuisen A, Steenkamp A, Oostuisen H, Venter P, Gajewski J, Zhang Y, Pugh BF, Makova KD, Nekrutenko A, Mardis ER, Patterson N, Pringle TH, Chiaromonte F, Mullikin JC, Eichler EE, Hardison RC, Gibbs RA, Harkins TT, **Hayes VM** (2010). Complete Khoisan and Bantu Genomes from Southern Africa. *Nature*, **463**(7283): 943-947. **(IF31.4)**

2) **Fletcher JI, Haber M, Henderson MJ, Norris MD** (2010). ABC transporters in cancer: more than just drug efflux pumps. *Nature Reviews Cancer*, **10**(2): 147-156. **(IF 30.8)**

3) **Kavallaris M** (2010). Microtubules and resistance to tubulin-binding agents. *Nature Reviews Cancer*, **10**(3):194-204. **(IF 30.8)**

*CCIA authors in bold

UNSW Inventor of the Year 2010

Entries are now open for the UNSW Inventor of the Year Awards, please go to the website below for information. The Judging Panel this year will be:

Professor Les Field
Deputy Vice Chancellor (Research), UNSW

Professor Graham Davies
Dean of Engineering, UNSW

Professor Denis Wakefield
Associate Dean of Research, Medicine UNSW

Professor Merlin Crossley
Dean of Science, UNSW

Dr Colin Sutton
Non-Executive Director of NewSouth Innovations P/L

Mr Mark Bethwaite
Non-Executive Director of NewSouth Innovations P/L

Hurry!! Entries close 7 May 2010!!!

[Visit our UNSW Inventor of the Year website](http://www.unswinventorawards.com.au/)

<http://www.unswinventorawards.com.au/>



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