

2006 Annual Report



The 2006 Annual Report is now available on our [website](#) and a hardcopy of the report will be sent to each Network group shortly.

Apart from general information about the Network, the report includes the 2006 financial statement, information about Network activities, and it outlines what our funds were used for last year. The 2006 report also highlights how different Network groups were able to benefit from their involvement in the NGED. 2006 saw a number of Network activities bear fruit with the first publications and grant income being reported that have resulted from collaborative projects facilitated through the NGED.

Acknowledging the Network

One of the main objectives of Research Networks is to encourage interdisciplinary approaches to research and to promote and facilitate new collaborations.

The ARC/NHMRC funding we receive is dependant upon our performance as a Network. To secure future funding we must meet our objectives and the key performance indicators associated with them.

In our annual report we are required to address the key performance indicators and list the number of

- Newly established collaborations
- Publications associated with these
- Publications that have resulted from your attendance at a conference, workshop or interchange supported by the NGED
- New grant income as a result of Network initiatives
- Other benefits / outcomes from your association with the Network.

To help us with the above, please remember to acknowledge the NGED accordingly by adding the ARC/NHMRC Research Network in Genes and Environment in Development to the 'Acknowledgements Section' of your publication.

Please advise us of any new collaborations, linkages, grant income, and publications; any technology transfers or any other benefits you have had as a member of the Network.

2007 Programs

The Network offers a number of programs to promote interdisciplinary research and research training. Network programs are reviewed on a regular basis, which can result in changes to award rules, deadlines and application forms. The Interchange Program Group is currently updating the award rules and application forms for a number of programs, which we hope to have finalised and on our website by mid/end March. Please familiarise yourself with the award rules of the program scheme you are applying for and ensure that you download the latest application form from our website. You will be advised by email once the new forms and award rules are on the web.

Late applications or applications submitted using the wrong application form will not be considered for funding.

Awards / Prizes / PhD Completions

Kieran Short was awarded his PhD from the University of Adelaide on 2nd February 2007. The title of his thesis was "Detailed characterisation of the Opitz syndrome protein MID1, its homologues and molecular interactions".

Ms Chew-Li Soh was awarded the Department of Anatomy & Cell Biology Prize for her First Class Honours in the Bachelor of Biomedical Sciences program, Monash University. Her project title was: "An RNAi based approach to investigate MID1 and MID2 gene function during lip and palate morphogenesis in chicks". Chew-Li also received a Faculty Postgraduate Excellence Award in conjunction with an APA scholarship to continue towards a PhD which she will undertake with Prof Richard Boyd at MISCL.

Dr Mathias Francois, IMB, UQ, Brisbane won the poster prize at the Lorne Cancer Conference, which was held from February 8th to 10th, 2007. Here is Mathias' abstract:

SOX18 initiates lymphatic development in mice by direct activation of *Prox1* expression

The lymphatic system is essential for tissue fluid homeostasis and plays a key role in tumor metastasis. Genetic studies in mice have identified the homeobox gene *Prox1* as a master regulator of lymphatic endothelial cell fate and demonstrated that VEGF-C is essential during developmental lymphangiogenesis, but the link between these key molecules, and hence the regulatory steps in establishing the lymphatic system during development, remain to be identified. We show here that the HMG domain transcription factor SOX18 regulates lymphatic endothelial cell specification. Mice carrying mutations in *Sox18* displayed edema, correlating with defects in lymphatic patterning. Conversely, SOX18 over-expression stimulated *Prox1* transcription in transgenic mice and in differentiating ES cells, and induced blood vascular endothelial cells to express lymphatic markers. Chromatin-immunoprecipitation and reporter assays demonstrated that SOX18 directly activates *Prox1* transcription in a VEGF-C-dependent manner. *Prox1* expression was compromised in *Sox18*-mutant embryos, confirming the importance of SOX18 for *Prox1* expression *in vivo*. Our results identify *Sox18* as a transcriptional initiator of lymphatic development in the embryo.

Lab News



James Armitage has recently joined Prof John Bertram's group in the Department of Anatomy and Cell Biology at Monash University, being the recipient of a NHF postdoctoral fellowship. James completed PhD studies at the University of Melbourne and Howard Florey Institute, highlighting the importance of dietary omega-3 polyunsaturated fatty acid intake during pregnancy, reporting hypertension in offspring of pregnant rats deprived of these fatty acids during gestation and suckling. He continued this research theme in his first postdoctoral position in Prof Lucilla Poston's laboratory in London (KCL), focusing on the role of maternal fat intake in the developmental programming of offspring cardiovascular and metabolic dysfunction. James returned to Australia in 2005 to a second postdoctoral position at the Baker Heart Research Institute and has expanded his studies to examine how the hypothalamus, in promoting increased sympathetic vasomotor tone, may contribute to the genesis of obesity related hypertension. He is currently studying the role of the sympathetic nervous system in obesity related hypertension both from a developmental programming aspect but also early in the onset of adult obesity.

James can be contacted by email to James.Armitage@med.monash.edu.au

Vacancy

RESEARCH OFFICER (Garvan Institute of Medical Research)

The Epigenetics Group within the Cancer Research Program at the Garvan Institute of Medical Research in Sydney is seeking a postdoctoral scientist to work on a new NH&MRC Project investigating the epigenetic influence of maternal folate deficiency, other dietary deficiencies, and folate supplementation on fetal, neonatal and adult development of offspring. This is a joint project with the University of Adelaide and will involve molecular analyses in rat experimental models as well as in some human based studies.

The project aims to identify epigenetic signatures associated with folate deficiency or supplementation which can either be used as biomarkers that reflect maternal diet during pregnancy and predict adult onset diseases such as diabetes and obesity, or have functional significance in the development of these diseases.

We are seeking a Research Officer to undertake the molecular aspects of this project at the Garvan Institute. Applicants should have a PhD in genetics/molecular biology or related disciplines and preferably some postdoctoral experience in epigenetic research. The successful candidate will be a self-starter and possess excellent communication skills.

For further information please visit the [NGED website](#) or contact [Associate Professor Marie Dziadek](#)

NGED ECR Forum

The NGED ECR Committee has organized an ECR Forum coinciding with the annual NGED Forum to be held at Palm Cove. The ECR Forum will commence at 2pm on 12th June and will continue on 13th June till the commencement of the main NGED Forum.

The ECR Forum consists of many exciting events including a nationally renowned expert specializing in early career researcher motivation, Dr Hugh Kearns. Dr Kearns will present a number of seminars to ECRs including Time Management Skills, Self Sabotage, Goal Setting, Maintaining Motivation and Resolving Conflict between Colleagues and Supervisors. Dr Kearns will also host the ECR dinner in which senior members of the network will be on hand to provide mentoring and advice to ECRs.

Of course, an ECR meeting is not an ECR without a ridiculously early breakfast session, which will feature members of the Network, both junior and senior, presenting to ECRs on the paths they have taken to reach the positions they currently are at. There will be other surprises in store, and plenty of opportunities to network between other ECRs and senior members of the network, ensuring this event a must for ECRs within the Network. Each laboratory head is allowed to bring 1 ECR from their laboratory, so start making lots of coffee and washing cars to book your place.

The NGED ECR Committee is also planning a scientific ECR meeting for later this year so watch this space!




[The NGED ECR Committee](#)

NGED Programs

The Network has introduced a number of programs to support the interaction amongst Network Members and with other researchers and research organisations from Australia and overseas. Award rules and application forms are available on the [NGED website](#). The table below provides a brief description of the programs and the application closing dates for 2007.

<u>Closing Dates</u>	<u>Programs</u>
30.04.2007	<u>NGED Conference Support Awards</u> The purpose of the NGED Conference Support Program is to assist conference organisers to provide high profile meetings in the areas of developmental biology / developmental physiology. Preference will be given to international conferences held in Australia with an emphasis on promoting multidisciplinary interactions in order to provide the greatest benefit to NGED members from different scientific backgrounds.
30.04.2007	<u>NGED Conference Participation Awards</u> The purpose of the NGED Conference Participation Award is to provide young scientists with an opportunity to present their work at a scientific forum, which they otherwise may not have been able to. Preference will be given to the Network's PhD students and early career researchers. Awards will not normally exceed \$500 (for meetings in Australia) or \$1,000 (for overseas meetings).
30.04.2007	<u>NGED Laboratory Interchange Award</u> The NGED Laboratory Interchange Award is available to assist NGED students, early career scientists and other members of the Network to visit other NGED laboratories to work on collaborative interdisciplinary projects, learn specialised techniques or access specialised equipment.
Ongoing	<u>NGED Cross-Disciplinary Workshop Attendance Award</u> To facilitate research interactions and research training activities, which cross discipline boundaries, the Cross-Disciplinary Workshop Attendance Award will assist NGED students, early career scientists and other members of the Network to attend cross-disciplinary workshops (i.e. a physiology student attending a developmental biology workshop).
30.04.2007	<u>NGED Focus Group Award</u> The purpose of this award is to support 'Focus Group/Think Tank Meetings' that lie within the objectives of the Network (i.e. strategic planning across the fields, Centre of Excellence planning, or establishment of collaborations between NGED groups that cross disciplinary boundaries).

LATE APPLICATIONS WILL NOT BE CONSIDERED.

What's On....	
<p>31.03.07 - 01.04.07</p>	<p>Fetal and Neonatal Workshop 31st March – 1st April 2007 in Melbourne</p> <p>Registration and abstract deadline: 2nd March 2007 For details please visit http://www.med.monash.edu.au/physiology/workshop/index.html</p>
<p>01.04.07 - 04.04.07</p>	<p>Perinatal Society of Australia and New Zealand Annual Congress 1st - 4th April, 2007 in Melbourne</p> <p>For details please visit: http://psanz07.eventplanners.com.au/</p>
<p>01.11.07 – 02.11.07</p>  	<p>Monash Healthy Start to Life Research Initiative Healthy Start for a Healthy Life: The Wintour's Tale DOHaD Satellite Conference In recognition of the career of Professor Marelyn Wintour FAA Nov 1-2, 2007 Grand Hyatt Melbourne</p> <p>The Developmental Origins of Health and Disease (DOHaD) is quickly emerging as a major new research focus in basic and clinical medicine. In essence, DOHaD research focuses on the early origins of adult health and disease, as we are learning that the origins of many adult chronic diseases can be traced back to our embryonic, fetal and early childhood development. This Satellite Meeting, an initiative of the Monash Healthy Start to Life research initiative, is being held to recognise the outstanding contributions to this field by Professor Marelyn Wintour FAA. The Satellite will showcase our current understanding of the early origins of health and disease. The programme will include presentations from leading national as well as international researchers in this field.</p> <p>Confirmed invited speakers include: Dr Dino Giussani, University of Cambridge, UK Prof Maria Seron-Ferre, Pontificia Universidad Catolica de Chile Prof John Bertram, Monash University Dr Tony Hannan, Howard Florey Institute Prof Eugenie Lumbers, University of New South Wales Dr. Karen Moritz, University of Queensland Dr Susan Sayers, Menzies School of Health Research Prof Bruce Tonge, Monash University Centre for Developmental Psychology Prof Alan Trounson, Monash Immunology & Stem Cell Laboratories</p> <p>We look forward to seeing you at the Grand Hyatt Melbourne. John Bertram, Convenor</p> <p>For further information please visit www.asnevents.net.au/dohad</p>
<p>06.11.07 – 10.11.07</p> 	<p>5th International Congress on Developmental Origins of Health and Disease (DOHaD) 6 – 10 November 2007 Perth Convention Exhibition Centre</p> <p>The NGED ECR committee, in conjunction with the Network Awareness Group, are delighted to be a major congress sponsor for the upcoming 5th International Congress on Developmental Origins of Health & Disease to be held in Perth, Western Australia on the 6th-10th of November. DOHaD is emerging as one of the most significant forms of international research in determining the prevention and treatment of many child and adult illnesses. One of the most impressive selection of world experts will be speaking on a number of topics encompassing the major disciplines of the Network focusing on finding global solutions for the origins of disease. One of the exciting sessions for early career researchers will be a breakfast symposium with Nobel Laureates Professor Barry Marshall and Dr Robin Warren present their career paths from ECR to Nobel Prize winner. The talk entitled "Helicobacter pylori – the origins of a Nobel Prize" will be followed by an open panel question time allowing ECRs a unique opportunity to ask questions of the Nobel Laureates. The conference also incorporates a joint session with the 2007 Epigenetics Scientific Conference, also supported by NGED. DOHaD not only consists of an excellent scientific program, but an exceptional social program consisting of a Melbourne Cup Day Lunch, Barbecue and Social Afternoon and the Gala Dinner.</p> <p>This meeting is a must for all network members, so tell your colleagues, friends and family, and join us in Perth for the DOHaD 2007 conference. For more information, check out www.dohad2007.org.</p>

If you are aware of any upcoming conferences that are not yet included in the [NGED Events Calendar](#) please let [Helli Meinecke](#) know. Thank you for your help.

Fetal & Neonatal Workshop of Australia and New Zealand 21st Annual Meeting

Royal Women's Hospital
Melbourne

March 31-April 1, 2007

[Registration and call for Abstracts](#)

Deadline: March 2, 2007



For further details visit: www.med.monash.edu.au/physiology/workshop/index.html

THE 21st Fetal and Neonatal Workshop will be held in conjunction with the next meeting of the PERINATAL SOCIETY OF AUSTRALIA AND NEW ZEALAND (Melbourne, April 1-4, 2007).

The Workshop will be held on March 31-April 1, prior to the PSANZ meeting. As in the past, the Workshop will be informal, allowing talks on work in progress and study proposals. There will also be free communications and discussion sessions.

The conference venue is The Yvonne Bowden Auditorium, Royal Women's Hospital, 132 Grattan St Carlton, Melbourne, Victoria, 3053. A registration fee (\$130 full, \$90 student) will be charged to cover venue and catering costs as well as the conference dinner. The conference dinner will be held on the evening of Saturday March 31st.

REGISTRATION AND CALL FOR ABSTRACTS DEADLINE MARCH 2nd, 2007

For further details visit:

www.med.monash.edu.au/physiology/workshop/index.html

2007 Organising Committee

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For those flying into Melbourne on Saturday morning, the Workshop will start at 10am.