

CoRE of The Matter



NATIONAL RESEARCH CENTRE FOR
GROWTH AND DEVELOPMENT

14 FEBRUARY 2006

EDITION NO. 8

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1. From the Directorate

Welcome to the first Edition of CoRE of the Matter for 2006.

As we get back up to speed after the summer break it is with a feeling of satisfaction that the NRCGD has moved forward immeasurably over the past 12 months and now has a sense of stability. Report cards on the Centre by both the TEC / MoE Mid Term Review Committee and the Science Advisory Panel were both strongly positive and we received confirmation that funding was renewed for the second 3 years period of the Centre's original 6 year contract. Moreover, the election campaign revealed a 6 year renewal / extension for CoREs which we now know is likely to be based on a competitive funding round later in 2006. This is both a challenging and exciting prospect for this year.

Our core business is of course science. While the SAP was extremely laudatory of our progress they did recommend some rebalancing of our research to increase focus on areas of highest strategic merit. 'We recommend that the NRCGD **focus** on *conception, fetal development and the neonatal and infant periods in relation to specific clinical outcomes for humans, and on animal health and productivity in agriculture. Much of this research should interrogate the epigenetic state of the genome, encompassing mechanisms that modify phenotypic outcomes by varying gene expression in ways that are not determined by primary DNA sequence, and studies on trans generational effects on phenotype*'.

We are fortunate in having a Board that is committed to funding projects based on their strategic merit and not legacy or entitlement considerations. Responding to the SAP Report involved a competitive round based on a request for research proposals from investigators. These were rated by investigators at a science retreat in November resulting in a priority list of projects for 2006 science planning.

The Science Retreat had two major objectives:

- To reinforce a strategic sense and collegiality
- To prioritise research investment for the next 3 years – 06 Projects

The Retreat was very successful and a number of people have commented on the high level of engagement by Centre members in this process which is great.

We wish to acknowledge the contribution of the Host Institution – the University of Auckland to the NRCGD's new science plan. Through Vice Chancellor Stuart McCutcheon the University has provided additional funds for 2006 and 2007 to ensure that the CoRE can meet all its objectives.

As I write this the planning process has been completed, contracts have been let with partner organisations and the focus is turning again to science delivery. For the Directorate the focus is now on drafting the 2005 Annual Report.

With best regards

Steve Hodgkinson

2. Research Projects

The following is the list of projects that were funded as a result of the science planning process late in 2005:

P. Gluckman - Ecological developmental biology.

M. Mitchell - Exposure to environmental chemicals and developmental origins of health and disease: epigenetic regulation of the activities of key genes.

M. Mitchell - Epigenetic regulation of the activities of key genes required for parturition, fetal wellbeing and long-term health.

B. Breier, M. Fraser, M. Davison - Integrating brain function, metabolic regulation and lifestyle choices following diverse environmental influences in early life.

C. Winterbourn - Involvement of oxidative stress in growth and development.

P. Lobie - Hormonal regulation of epigenetic events

M. Dragunow - Microglia: role in brain development and destruction.

H. Blair - Manipulating the dam to benefit offspring health and well-being.

A. Reeve - Epigenetics and the environment

F. Bloomfield - Development of a preterm lamb intensive care facility for studies of development in preterm subjects

M. Vickers - Empirical testing of the DoHAD paradigm:
(i) The role of the neonatal leptin surge in the development of programming related disorders.
(ii) The role of paternal nutrition in transgenerational programming and disease transmission.

P. Lobie & M. Mitchell - Development of core capacity and expertise in epigenetic investigation and its application to the study of human implantation as the key to growth and development.

J. Harding - Long-term consequences of periconceptional undernutrition.

C. Williams - Developmental neurobiology – Saving babies brains.

W. Cutfield - Early life events and epigenetic modification in humans.

3. Comings and Goings

PhD Student Ursula Byrne wins First Prize for her Poster

PhD Student Ursula Byrne (NRCGD Major Project 7) recently won first prize for her poster presentation at Exposure⁰⁵, an exposition of the best postgraduate research at the University of Auckland. The top sixty posters were selected from faculty pre-competitions to be showcased at Exposure, which aims to raise the profile of postgraduate research across the wider community. Ursula was presented with a laptop computer at the awards ceremony for her poster entitled 'Myeloperoxidase Expression in Alzheimer's disease'. In a collaborative project supervised by Professor Mike Dragunow, Professor Richard Faull and Associate Professor Tony Kettle, her preliminary research demonstrates the prominent expression of the pro-oxidant enzyme, myeloperoxidase, in Alzheimer's disease human brain tissue and its absence from normal control brain tissue.



4. Upcoming Events

16th February

Executive Committee Meeting
(Liggins Institute & by Teleconference)

23rd February

Board of Governance Meeting
(Liggins Institute & by Teleconference)

15th to 17th March

Science Retreat for trainees and mentoring

15th March

Board of Governance Meeting
(Liggins Institute & by Teleconference)

17 March

Dr Michael Cullen visit to celebrate NRCGD's 3rd birthday and awards for achievement.

5. Contacts

Contributions to the next Newsletter are welcome and should be sent to Rowena Knight-Brown (r.knight-brown@auckland.ac.nz). If you would like to subscribe to this newsletter or know of someone else who may want to receive a copy please contact r.knight-brown@auckland.ac.nz.