

CoRE of The Matter



NATIONAL RESEARCH CENTRE FOR
GROWTH AND DEVELOPMENT

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1. From the Directorate

- Steve Hodgkinson

Welcome to the Spring 2005 Edition of CoRE of the Matter.

Good News from the Government regarding CoRE funding

In his speech to the Research Managers Conference held at Canterbury University recently, the Hon Trevor Mallard, Minister of Education, announced:

“ the Board of the Tertiary Education Commission has approved funding for each Centre of Research Excellence for the remainder of the funding term, right through to 2008/9. I am also very pleased to announce that the government has agreed to a three-year phase-down from that time for any Centres of Research Excellence that are not approved for ongoing funding. This provides a great deal more certainty for CoREs and allows you to plan ahead with more confidence, especially when taking on new PhD students...”

Special mention was made in the Minister's speech of the NRCGD – “...the National Research Centre for Growth and Development is finding answers to the big questions about growth and health, both before and after birth. It's an excellent example of collaboration across disciplines and across a range of institutions, with researchers in animal and human health working together to find the keys to healthy development.

The magic of how a single cell grows and develops into a complete organism involves some of the most complex biology. We are fortunate in having several clusters of internationally recognised scientists working in this area.

The Centre is hosted by the University of Auckland at the Liggins Institute and pools the skills and research expertise of Massey University, the University of Otago and AgResearch Limited. I believe it is also the first formal research organisation to include both our medical schools...”

In summary, the Government has committed to essentially doubling the NRCGD's remaining life expectancy with good prospects of further extension, subject to a satisfactory review. This is great news!

SAP Review

A review was carried out by the Scientific Advisory Panel in July. The following is a summary report of their findings:

Summary Report

- The Scientific Advisory Panel was impressed with the high standard of research that is conducted in the CoRE. The CoRE has already produced, and is continuing to produce, world-leading research. As the investment made to date continues and matures, the productivity and impact of the CoRE

should continue to grow in this area of critical importance to New Zealand and globally.

- There was no research project presented that we would not have been proud to host in our home Universities and Institutes.
- The strategic vision and leadership offered by Peter Gluckman and the senior management team is exemplary.
- The CoRE has successfully promoted interdisciplinary research between researchers in determinants of human health, and researchers in animal husbandry. It has fostered fruitful collaborations between the six sites of the CoRE: the Liggins Institute, the University of Auckland, AgResearch (Ruakura), Massey University, Otago University (Christchurch) and Otago University (Dunedin). It has also stimulated important international collaborations.
- The overall quality of the research is excellent. The SAP would particularly note the research in Project 3 (Clinical IVF) and Project 4 (Further development of the developmental origins theory). These projects, both of which focus on human health and involve epigenetics, have a major potential to be foci of research of international quality in the future.
- The SAP considers that some NRCGD research could have even greater focus. During the coming period 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 aware this will have important consequences for the future of some projects.
- The research into model systems would benefit from more input from molecular genetics. The SAP also notes that some of the most innovative research involves animal models and clinical research. It is important that these projects are also closely integrated with the molecular and epigenetic technologies, especially making use of the innovative ideas emanating from Project 5b (Gene / environment interactions).
- The SAP considers that some other research is good, but more peripheral to the recommended direction of the CoRE. Some is good but cost-intensive and might come to a natural end over the coming two to three years. Most of the other projects were regarded as excellent but funded at an appropriate level at present. We also note the potential of the Massey group to provide scientific benefit by becoming even more deeply involved.

- The SAP acknowledges the experience, track record and innovative experience of the Dunedin group in analysis of gene expression and of methylation haplotype. These studies are of great importance to the CoRE. The SAP notes that this technology will be central to all sites, and we hope that the Dunedin team will be able to help the other sites achieve on-site innovative capability in the field of DNA chip analysis and related technologies.
- The SAP would like to see more, formal, mentoring within the CoRE, for students, for post-doctoral fellows, and for senior staff. We consider mentoring to include discussion and training on issues such as finance, grants and manuscript writing, the use of existing grants (such as the CoRE) to achieve leverage, using the media, how to publish, health and safety policies, the need to speak in the community, and the need to influence politicians. Improved mentoring also involves greater delegation of responsibility to junior staff and students, which would help to free time of the Director and senior staff for strategic intervention and writing papers.
- It is important to note that education about financial issues is necessary to empower staff to manage their budgets and achieve leverage funding.
- The SAP complements the CoRE on its innovative initiatives to bring contemporary research concepts to high school students and to those of Maori heritage. These studies should be expanded during the coming three-year period.
- The SAP agrees that the CoRE gained benefit from its Special Initiatives and Pilot Project funding schemes. It recommends an extension of the special initiative funding and pilot project funding for a further two widely advertised and competitive rounds, with one allocation towards the end of 2005 and one towards the end of 2006. Decisions on allocation should be made by the Director in consultation with the Project leaders and the Chair of the SAP, and members of the SAP where indicated.
- Greater fluidity in funding is considered an essential strategy to give investigators the opportunity to apply for new funding for projects in line with strategic direction. This could include application of Special Initiatives and Pilot Project funding to realignment of projects with the main direction of the CoRE.
- The SAP determines that a relatively small increase in overall funding, of the order of 12%, would increase the effectiveness of the CoRE greatly. Therefore the SAP recommends to the Board that Government should be approached to allocate a further sum to the NRCGD for the coming three year period.

2. Science Planning

Following the SAP Review and report, effort is now beginning on development of next year's Science and Business Plans. This process will accelerate through October and early November with the Science Retreat.

Completion of next year's Science Plan is required by the 16/11/05 Board Meeting.

3. Comings and Goings

Over the past 12 months evolving exciting interim data from the project examining the **auxological and biochemical characteristics of IVF** children has been

presented at the Asia Pacific Paediatric Endocrine Society (oral presentation), the US Endocrine Society (oral presentation) and featured in the Washington Post and the European Society for Paediatric Endocrinology/Lawson Wilkins Pediatric Endocrine Society joint meeting (poster presentation), SIRT NZ meeting (invited oral presentation), and Fertility Society of Australasia (oral presentation).

Ms Alice Coveny, a PhD student working on Major Project 4, has been awarded a Top Achiever Doctoral Scholarship by the Tertiary Education Commission for her project entitled "Intergenerational macronutrient transitions and long-term consequences". Alice is supervised by Dr Mark Vickers and Professor Peter Gluckman.

Recent publication of a CoRE fund pilot project – "Vickers MH, Gluckman PD, Coveny AH, Hofman PL, Cutfield WS, Gertler A, Breier BH and Harris M. Neonatal Leptin Treatment Reverses Developmental Programming. *Endocrinology*, August 2005.

Maori Farmers Conference (Te Ohu Whenua Hui a Tau) with Sponsorship by NRCGD

On the 7th and 8th of September Massey hosted the above conference. About 100 people attended the Hui with the majority being Maori who had some form of association with Maori farming including horticulture and forestry. The NRCGD purchased a Silver Sponsorship package (\$3,000) to support the conference. The NRCGD curtain-drop banner was placed in a prominent position in the foyer where all social events occurred.

I presented a 90 minute session on basic animal genetics including a 5 minute overview of the NRCGD. My paper is published in the proceedings and refers to me as being a member of the NRCGD.

While I could not claim that the NRCGD achieved national prominence through my participation, it would appear that my presentation was well received and that I am likely to be invited back for an encore next year. Furthermore, there was a common theme expressed by older participants (post 50) of how few young Maori were preparing themselves with a science-based education to become the next generation of farmers, managers, business entrepreneurs, etc. There were some examples where Maori Corporations had attempted to engage Maori high school youth to explain what they do and this was met with interest.

Do I see an opportunity? Yes, I do, but it would require the employment (part-time) of a person at Massey to work with the network we already have out into the Maori Corporations and Te Puni Kokiri (TPK). I strongly suspect they would be prepared to invest funds in such an initiative, as a number of the Corporations have already identified that they have "social" KPIs, and this includes education.

Hugh Blair

4. Upcoming Events

1-2 November 2005
NRCGD Science Retreat

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.

