

Australian perspectives: outcomes from the 2015 Australia and New Zealand Developmental Origins of Health and Disease (ANZ DOHaD) scientific meeting

The papers in this themed issue represent work presented and discussed at the 2015 ANZ DOHaD (Australia and New Zealand Developmental Origins of Health and Disease) scientific meeting in Melbourne. The ANZ DOHaD convened working groups across several areas of DOHaD to identify gaps in knowledge and foster collaboration to close these gaps. Prescott *et al.* summarize the discussions of these working groups.

Davies *et al.*¹ for the Early Life Nutrition Working Group report on the opportunity for improving long-term health in Australia and New Zealand through altering diet in childhood. The paper highlights that nutrition is one of the most easily modifiable environmental factors during early life with known benefits for health throughout the lifespan. The authors recommend preparation and dissemination of guidelines for optimizing early life nutrition as part of a preventative health policy agenda for Australia and New Zealand.

Led by Dickinson *et al.*,² the animal models for DOHaD Research Working Group reviewed the major principles of study design for animal models to maximize relevance, reproducibility and translation of knowledge into improving health and well-being. The review provides recommendations for consideration in species/strain choice, methods for inducing pregnancy, environment, biological replicates, offspring sex and tissue collection methods. The authors suggest a shift in the approach to DOHaD research; in a time of limited resources, the field will benefit from expanding collaborative networks to provide access to existing animal preparations, tissue banks and experimental data.

Prize winners at the ANZ DOHaD scientific meeting were invited to prepare and submit a manuscript based on their presented data. We congratulate the prize winners Jacinta Kalisch-Smith, Richard Schlegel, Clare Reynolds, Jen Ni Cheong, Amy Ashman and Chantal Pileggi.

Schlegel *et al.*³ explore the impact of maternal magnesium deficiency on cardiorenal function in offspring in mice. They report little difference between offspring of control and magnesium-deficient mothers. The authors conclude that mild magnesium deficiency in mouse pregnancy does not have an impact on long-term offspring cardiorenal health.

Ashman *et al.*⁴ provide important information about nutrition in Indigenous Australian women and their infants. The authors studied 79 mother–child dyads from the Gomeri

gaaynggal cohort. Breastfeeding was initiated by 85.9% of mothers; however, the median duration of breastfeeding was only 1.4 months (0.5–4 months). Compared with recommendations, maternal nutrient intakes of fibre, folate, iodine, calcium, potassium and vitamin D were low and proportions of energy from fat were high. The authors suggest that nutritional support is needed for Indigenous Australian women and their children to improve long-term health.

The working group concept developed by ANZ DOHaD has been productive and will continue. In time these working groups will result in the development of guidelines aimed to promote DOHaD and DOHaD research, promote collaboration and highlight excellent research in our region through prizes and the opportunity for early career researchers to publish their work in our disciplines journal.

References

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H. Dickinson

The Ritchie Centre, Hudson Institute of Medical Research
 Melbourne, VIC, Australia

J. L. Morrison

Early Origins of Adult Health Research Group, School of Pharmacy
 and Medical Sciences, Sansom Institute for Health Research
 University of South Australia, Adelaide, SA, Australia