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Short Communication

# Nutrition and Disease in Auckland, New Zealand = Current Studies

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This short communication focuses on studies based at The University of Auckland, although often involving collaborations from other areas. Current studies on nutrition and disease in New Zealand include work by three newly appointed fellows of the Royal Society based at the University of Auckland = Associate Professpr Mark Bolland [1], Professor Paul Kilmartin [2] and Professor Andrew Allan [3]. The first of these authors has made significant contributions to the field of osteoporosis, particularly studies on the roles of calcium and vitamin D supplements [1]. His research showed that calcium supplements increase, rather than decrease the risk of heart attacks, outweighing any potential benefits. He also showed that vitamin D supplements do not have significant health benefits for otherwise healthy adults, again reducing potential costs and flawed judgements. Professor Kilmartin trained as an electrochemist, and his application of this field to wine science has assisted New Zealand companies to produce more high quality wines, gaining him an international reputation. Important work by Professor Allan [3] has become key in enabling social acceptability of genome-edited plants, valuable to both food industries and human health.

Keogh and co-authors [4] describe the effective use of a long-stay metabolic facility, the Human Nutrition Unit, based at the School of Biological Sciences at the University of Auckland. This involves Professor Garth Cooper and Dr Sally Poppitt, as detailed in the study published in 2003. Dr Poppitt has more recently become a full Professor and is still highly involved in the Human Nutrition Unit. For example, she is included in a recent study describing metabolic traits, which affect the relationship between liver fat and intra-pancreatic fat [5]. This study involved 16 metabolic traits that represented markers of glucose metabolism, incretins, a lipid panel, liver enzymes, pancreatic enzymes and their derivatives, as measured in blood. The results identified the complexity of relationships between these two fat deposits, also identifying specific targets for intervention. Another important study, on which Professor Sally Poppitt is a co-author, was led by Ching Jian [6]. This describes the PREVIEW intervention study, in which changes in the gut microbiota predicted body fat change, following a low energy diet.

Professor Clare Wall, Head of the Discipline of Nutrition and Dietetics at the University of Auckland, has developed a number of important studies. One recent study comprehensively explored the future of nutrition and dietetics in both Australia and New Zealand, considering the implications for the workforce [7]. The report on the study, headed by Dr Rachel Boak, outlined a range of interviews with a number of focus groups, some with expertise in the area and others without. The studies showed that the current and future needs of this workforce address the impact of climate change, growing inequities, the democratisation of knowledge and the disruption of food and health systems. Another important data set from this group reports on the "Growing up in New Zealand" study, describing the prevalence and maternal determinants of early and late introduction of complementary foods [8]. Also done as part of the Discipline of Nutrition and Dietetics was our own recent review on nutri-genetics and nutrigenomics research in New Zealand, particularly emphasising these field's relevance and application to gastrointestinal health [9].

Professor Cliona Ni Mhurchu is based in the School of Population Health at the Grafton Campus of The University of Auckland, where she has been a member of the National Institute for Health Innovation (NIHI). She is currently Director of the HRC research programme "Dietary Interventions: Evidence and Translation (DIET)". Among her many important recent studies is one on global strategies to reduce sodium concentrations in packaged foods [10] and another [11] on understanding how best to enable nutrition standards in publically funded institutions in Victoria, Australia. Boyd Swinburn is *Professor of Population Nutrition and Global Health in the School of Population Health, University of Auckland. His team has been involved in a number of important studies, particularly looking at the long-term effect of unhealthy eating habits in schools [12,13].*

## Bibliography

1. IR Reid and MJ Bolland. "Calcium and/or Vitamin D supplementation - who needs it?" *Nutrients* 12 (2020): 1011.

2. Lingdai Liu., *et al*. "Antimicrobial and antioxidant AIE chitosan-based films incorporating a Pickering emulsion of lemon myrtle (*Backhoudsia citriodora*) essential oil". *Food Hydrocolloids* 133 (2022): 107971.

3. A Spok., *et al*. "Towards social acceptability of genome edited plants in industrialised countries? Emerging evidence from Europe, United States, Canada, Australia, New Zealand and Japan". *Frontiers in Genome Editing* 4 (2022):899331.4.

4. GF Keogh., *et al*. "Randomised controlled crossover study of a highly B-glucan-enriched barley on cardiovascular disease risk factors in mildly hypercholesterolemic men". *The American Journal of Clinical Nutrition* 78.4 (2022): 711-718.

5. J Ko., *et al.* "Metabolic traits affecting the relationship between liver fat and intrapancreatic fat: a mediation analysis". *Diabetologia* 66 (2023): 190-200.

6. C Lian., *et al.* "Gut microbiota predicts body fat change following a low-energy diet – the PREVIEW intervention study". *Genome Medicine* 14 (2022): 54.

7. R Boak., *et al*. "A qualitative exploration of the future of nutrition and dietetics in Australia and New Zealand: Implications for the workforce". *Nutrition and Dietetics* 79 (2022): 427-437.

8. SS Ferreira. "Prevalence and maternal determinants of early and late introduction of complementary foods: results from the Growing Up in New Zealand cohort study". *British Journal of Nutrients* 129 (2023): 491-502.

9. L Ferguson and M Barnett. "Nutrigenomics and nutri-genetics research in New Zealand and its' relevance and application to gastrointestinal health". *Nutrients* 14 (2022): 1743.

10. E Rosewarne., *et al*. "A global review of national strategies to reduce sodium concentrations in packaged foods". *Advances in Nutrition* 13 (2022a): 1820-1833.

11. E Rosewarne., *et al*. "Understanding enablers and barriers to the implementation of nutrition standards in publically funded institutions in Victoria". *Nutrients* 14 (2022): 2628.

12. D'Sousa., *et al.* "The healthiness of New Zealand school food environments: a national survey". *Australian and New Zealand Journal of Public Health* 46.3 (2022): 325-331.

13. Chote B., *et al*. "Systems Mapping of the New Zealand Free and Healthy School Lunch Programme: Perspectives from Lunch Providers". *Nutrients* 14.20 (2022): 4336.