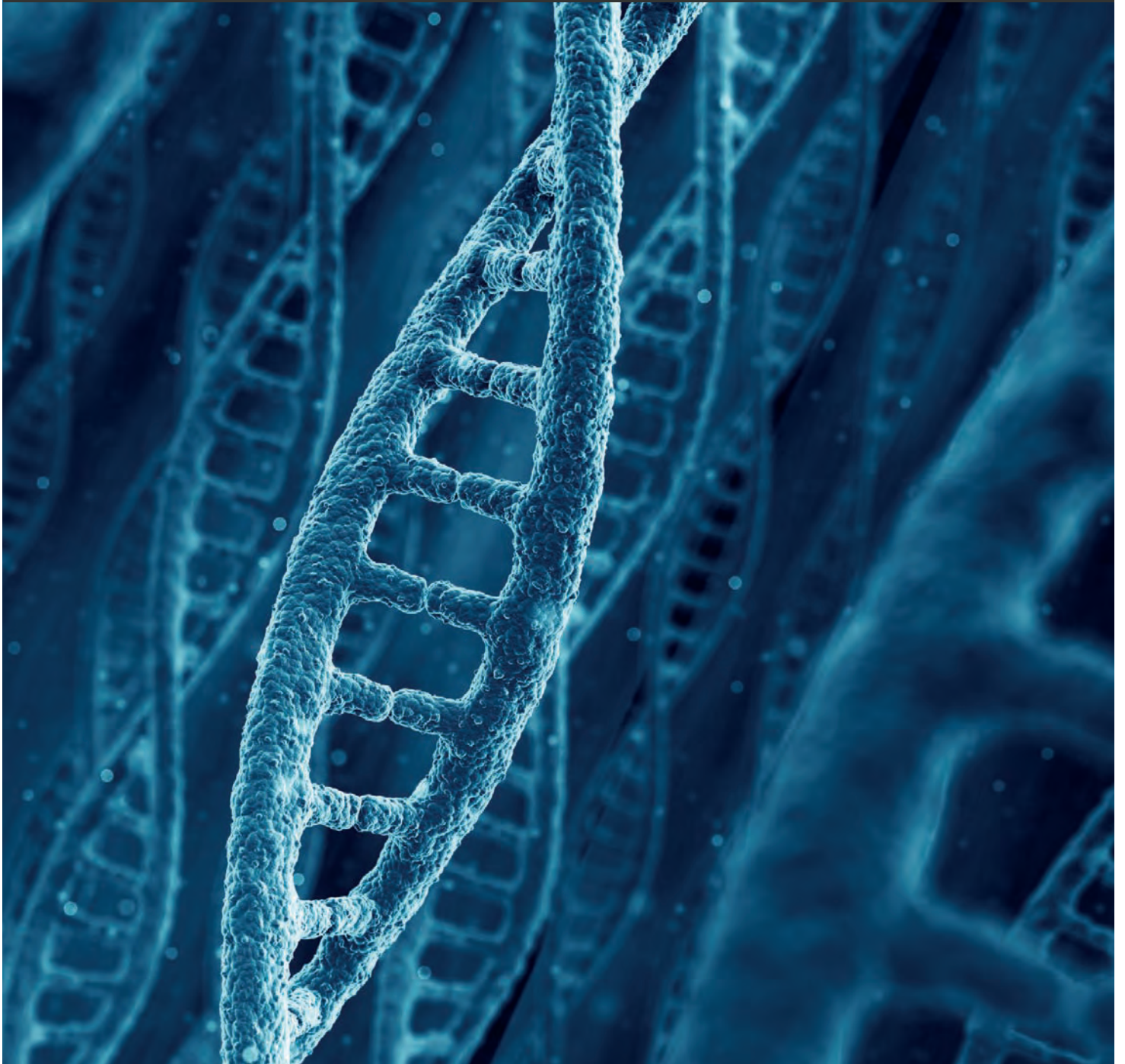




Medicine, Nursing and Health Sciences

# Introduction to Nutrigenetics, Nutrigenomics and Epigenetics



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The Nutrition Society of Australia (Melbourne), Monash University and MyGene are pleased to invite you to our upcoming 'Introduction to Nutrigenetics, Nutrigenomics and Epigenetics' symposium.

Please note, numbers will be capped at 100, and delegates need to **sign up for their preferred workshop sessions using the link below.**

**Where:** Level 5 of The Alfred Centre, Monash University (Go to the 'B' set of lifts in the The Alfred Centre), 99 Commercial Road, Melbourne.

**When:** 1-5.15pm, Tuesday 27 August 2013

**RSVP:** Brianna McFarlane, [brianna.mcfarlane@monash.edu](mailto:brianna.mcfarlane@monash.edu) (by 13 August 2013)

1.00pm	Networking coffee/tea	Foyer of Lecture Theatre
1.30pm	Introduction to Nutrigenetics, Nutrigenomics and Epigenetics	Michael Fenech (CSIRO) Jeff Craig (MCRI)
2.30pm	Global trends in genetics: research, technology and practice	Graeme Smith (MyGene) Melissa Adamski (MyGene)
3.10pm	Tea/coffee break	Foyer of Lecture Theatre
3.30pm	Workshop 1	Level 5 breakout room
4.15pm	Changeover time	
4.30pm	Workshop 2	Level 5 breakout room
5.15pm	Close	

The workshops are a choice of two from following topics (click link below to sign up):

## Workshop preference:

<http://www.mygene.com.au/nsa-symposium/>

1. Designing genetic research projects (including considering the data, interpreting the data and validation)
2. Adding genetic testing to your current research project
3. Translating research into practice
4. Implementing nutri-genetics into your practice
5. Folate genetic test
6. Vitamin D metabolism genetic test
7. Genetic testing, genetic counselling and ethics
8. Epigenetics

## Biographies

### Michael Fenech

Professor Michael Fenech is recognised internationally for his research in nutritional genomics and genetic toxicology and for developing the cytokinesis-block micronucleus (CBMN) assay which is now a gold standard method used internationally to measure DNA damage in human cells *in vitro* and *in vivo*. The CBMN assay has been endorsed by the International Atomic Energy Agency and the OECD for *in vivo* radiation biodosimetry and *in vitro* testing of genotoxins respectively. His key goal is to determine the nutritional and environmental requirements for DNA damage prevention using *in vitro* systems, epidemiology and placebo-controlled human intervention trials. In 2003-2009 his laboratory further developed the CBMN assay into a 'cytome' assay consisting of six complementary biomarkers of DNA damage and cytotoxicity which is now published in Nature Protocols.

In 2003-05, Dr Fenech proposed a novel disease prevention strategy based on personalised diagnosis and prevention of DNA damage by appropriate diet/life-style intervention, which has led to the *Genome Health Clinic* concept and its translation into practice ([www.reach100.com.au](http://www.reach100.com.au)).

He co-founded the ongoing HUMN and HUMN-XL projects on micronuclei in human populations ([www.humn.org](http://www.humn.org)) and is a member of the coordinating group and co-founder of the Micronutrients Genomics Project (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2989004/>) which he has been leading since July 2011.

His research is currently also focussed on the impact of nutrition on telomere length and function. He conceived novel quantitative PCR methods for measuring absolute telomere length and telomere base damage which were later developed by the team he leads at CSIRO.

He was awarded the Flinders University's Convocation Medal in 2007, the Alexander Hollaender Award (USA) in 2008 and the honorary titles of Adjunct Professor at University of South Australia in 2009, Visiting Professor at Taipei Medical University in 2010, Professorial Fellow at Flinders University in 2011 and Honorary Fellow of the Australian College of Nutritional and Environmental Medicine in 2012 for his leadership and contributions to environmental and nutritional genomic sciences internationally. His 220 publications have been cited 10,000 times and his H-index is 51.

### Jeff Craig

Dr Jeff Craig leads the Early Life Genetics group at the Murdoch Childrens and Department of Paediatrics, University of Melbourne. He is a geneticist and cell biologist with over twenty years experience in all aspects of epigenetics including gene regulation and chromosome structure and function.

Dr Craig's current work focuses on the development of epigenetic biomarkers (1) reflecting for past environment and (2) predicting future disease risk with a focus on cardiovascular disease and neurodevelopment.

Dr Craig, together with his MCRI colleagues, is at the forefront of genome-wide epigenetic analysis. He has experience in establishing longitudinal cohorts including the Peri/postnatal Epigenetic Twins Study (PETS). He also leads the epigenetic analysis in the AQUA study of the effects of maternal alcohol consumption on health of the offspring and has collaborative projects on preterm birth, cerebral palsy and autism spectrum disorder.

Dr Craig is also an internationally recognised expert on twins and works closely with the Australian Twin Registry. He has 81 peer-reviewed publications, with an h-index of 24 and has published in journals such as Nature Genetics (3x) and Genome Research (3x). In the past six years he has supervised two Clinical Fellows, two international Postdocs, seven Honours students, 6 PhD students and 3 Masters students. Jeff is also a passionate science communicator and a regular panellist on Radio 3RRR's Einstein-A-GoGo science show.



### Graeme Smith

MyGene's founding scientist, Graeme Smith is a biomedical researcher with experience in molecular biology (genetics), biochemistry, physiology, nutrition and dietetics. Graeme's experience provides MyGene with a very unique knowledge base that combines a number of important scientific disciplines required in understanding the complex interactions that occur between genes and the environment and how these affect various health conditions.

Graeme regularly presents at national conferences educating industry about the role of genetic testing in personalising medication therapies (pharmacogenomics) and diet (nutritional genomics). He also delivers lectures on nutritional genomics to students studying nutrition and dietetics at a number of universities across Australia.

Graeme is well known and respected within the research community and is currently involved in several research projects investigating the use of nutritional genomics, exercise physiology and genomics, transcriptomics and metabolomics in developing programs for the treatment and prevention of a number of common diseases.

He is an active member of a number of national (Nutrition Society of Australia (NSA), Human Genetics Society of Australasia (HGSA) and AusBiotech) and international (International Society of Nutrigenetics/Nutrigenomics (ISNN), and the European Nutrigenomics Organisation (NUGO) organisations and societies.

### Melissa Adamski

Melissa–Nutrition and Education Manager at MyGene–is an Accredited Practising Dietitian and Accredited Nutritionist. She joined MyGene at the beginning of 2011 after four years working in corporate nutrition and dietetics, dietetics research and private practice.

Melissa previously worked at the Dietitians Association of Australia (DAA) as the Project Officer Dietitian, working with food industry, advising government on nutrition and helping bring correct nutrition information to the public. Melissa also worked at Australian Unity in conjunction with Flinders Medical Centre managing a cardiovascular disease randomised clinical trial. As well as working with MyGene in the area of nutritional genomics, Melissa currently runs her own successful nutrition and dietetics private practice in Melbourne CBD.

Melissa holds a Bachelor of Science majoring in Food Science and Nutrition from the University of NSW, and a Masters of Nutrition and Dietetics from the University of Sydney. She is a member of the Dietitians Association of Australia (DAA) and Nutrition Society of Australia (NSA).



**Further information**

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