

SEMINAR**Victorian Centre for Biostatistics**

**Thursday 25th June 2015
9.30am to 10.30am**

**Seminar Room 2, Level 5
The Alfred Centre
99 Commercial Road, Prahran**

**The People of the British Isles:
A statistical analysis of the genetics of the UK**

**Dr Stephen Leslie
Group Leader in Statistical Genetics
Murdoch Childrens Research Institute**

In this talk Stephen will present some of the as yet unpublished findings from the People of the British Isles project. In particular he will show that using newly developed statistical techniques one can uncover subtle genetic differences between people from different regions of the UK at a hitherto unprecedented level of detail. For example, one can separate the neighbouring counties of Devon and Cornwall, or two islands of Orkney, using only genetic information. Stephen will then show how these genetic differences reflect current historical and archaeological knowledge, as well as providing new insights into the historical make-up of the British population, and the movement of people from Europe into the British Isles.

This is the first detailed analysis of very fine-scale genetic differences and their origin in a population of very similar humans. The key to the findings of this study is the careful sampling strategy and an approach to statistical analysis that accounts for the correlation structure of the genome.

Dr Stephen Leslie is an Australian statistician working in the field of mathematical genetics. Stephen obtained his doctorate from the Department of Statistics, University of Oxford in 2008, under the supervision of Professor Peter Donnelly FRS. Prof Donnelly is one of the major figures worldwide in statistical and population genetics. After graduating Stephen took up a position as a post-doctoral researcher in the Department of Statistics at Oxford. He was then awarded one of the prestigious Nuffield Department of Medicine Scientific Leadership Fellowships to work on HIV and other pathogens. In late 2010 Stephen was recruited by Sir Walter Bodmer FRS and Peter Donnelly to lead the statistical analyses for the People of the British Isles Project (POBI), a major UK research project to investigate fine-scale genetic differences across the British Isles, including the consequences and causes of any observed differences. In February 2012 Stephen returned to Australia to establish his own research group at the Murdoch Childrens Research Institute as the Group Leader in Statistical Genetics.

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VICBiostat is a Centre of Research Excellence in biostatistics funded by Australia's National Health & Medical Research Council (NHMRC). The Centre is a collaboration between biostatistical researchers at the Murdoch Childrens Research Institute, the Department of Epidemiology & Preventive Medicine at Monash University, and the Centre for Epidemiology & Biostatistics (CEB) at The University of Melbourne.