



Statistical Society of Australia Inc.

Victoria Branch Newsletter: September 2005

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1. Next Meeting: Belz Lecture and Dinner

There is no meeting scheduled for September so the next meeting is the 2005 Belz Lecture which will be held on Tuesday 25th October 2005 in Old Geology Theatre 1, University of Melbourne. A campus map can found at:

<http://www.pb.unimelb.edu.au/other/maps/>

The speaker is Professor Adrian Baddeley from the University of Western Australia. He is the current Pitman Medallist. The lecture commences at the earlier time of 5.45 p.m., with dinner commencing shortly after the lecture, at approximately 7.15 p.m.

TOPIC

Sampling Theory for Vegetables

ABSTRACT

One of the basic techniques used in microscopy is an application of statistical principles of survey sampling. Suppose we want to infer the composition of a solid material (such as a biological tissue, a rock, or a metal) from thin slices of the material. An expensive solution is to reconstruct the solid geometry of the material using computed tomography, or serial section reconstruction. But there is a far simpler and easier technique, based on elementary principles of random sampling, called "stereology".

The talk will explain some basic techniques of stereology and demonstrate them for the audience. Some of the greatest mistakes in twentieth-century science were committed or perpetuated through a failure to understand principles of sampling inference. Stereology also helps to identify such methodological errors in microscopy. Some examples will be discussed.

2. Belz Dinner

The dinner will be held at the University Café, Lygon Street, Carlton. The cost for the dinner is \$50 per head for members and guests, for a three-course dinner and wine. A booking form is attached, and should be returned with payment by 7 October 2005. The form is also on the website at <http://www.statsoc.org.au/Branches/VIC/meetings.htm>

Vegetarians, vegans, or others with special dietary requirements can be catered for. Please indicate any special requirements on the booking form.

Please get in early and register for the dinner ASAP

For further information please contact the secretary or Treasurer, Geoff Laslett
Geoff.Laslett@CSIRO.au

3. August Meeting: Talk Summary



Relating HFE genotype to chronic diseases in an Australian cohort study of hereditary haemochromatosis.

Dr Lyle Gurrin, Centre for Molecular, Environmental, Genetic and Analytic Epidemiology, School of Population Health, University of Melbourne

Lyle presented a population based study on hemochromatosis as well as some preliminary results. Hemochromatosis is an important public health issue and the current debate is about whether hemochromatosis is a disease that warrants public health screening.

Hemochromatosis is an iron overload disease which can have fatal results. Treatment, unlike many other diseases, is simple because it consists of blood letting. This could actually provide benefits for the community since the blood could be used by others. A major gene, called HFE, and its alleles that cause susceptibility in Europeans have been known since 1995. However the relationship between the genetic predisposition, primarily through the C282Y allele, and disease is “necessary but not sufficient” so the hunt is on to identify environmental and genetic modifiers that will also be playing a role.

Lyle focused on the environmental arm of two studies that are being coordinated at MEGA. He described the large selective sample, selected according to genotype that is currently being gathered for both studies and outlined some of the problems that have already arisen. Another polymorphism of the HFE gene, the H63D mutation, which is of much lesser consequence, has proven to be difficult to genotype, hence necessitating a change in study design and analysis. Lyle discussed the impact of this and another potential bias for one arm of the study which intends to focus on the relevance of these two polymorphisms on chronic disease. The final slide showed some follow up data for transferritin serum levels, a biochemical marker for hemochromatosis, from base levels taken a decade ago to current levels, color coded by genotype and whether or not individuals had received treatment (self reported). This showed that C282Y homozygotes, that is those individuals that have two copies of the susceptibility allele, seemed to have decreased transferritin levels at follow up if they had sought treatment. The study is very large and comprehensive with much data being collected that will be analysed in the next few years. It is impressive in the clinical and organizational challenges it presents and should yield important outcomes for public health.

After the meeting the speaker and members of the audience enjoyed dinner at “The Base Camp” a nearby Nepalese restaurant where further discussion took place over some glasses of wine.

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4. R Workshop in November

The Vic Branch is running a ‘hands on’ workshop on the R System on November 23-24: 9.30 am-5.00 pm. Details and application form are available at <http://www.statsoc.org.au/Branches/VIC/meetings.htm>

There is a limit of 20 participants per day, due to the number of available computers. Early bird discount apply for registrations received by Oct 7, 2005. We appreciate expressions of interest even before applications are made, so we can see how much interest there is.

Secretary

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Statistical Society of Australia Inc.

Victoria Branch

Belz Dinner

Tuesday 25 October 2005

Names of persons attending:

Contact telephone number:

Total cost (\$50 per person):

- Please debit my: Backcard
 Mastercard
 Visa

Name on card:

Card number:

Expiry date:

Signature of card holder:

OR

- Please accept my enclosed cheque made payable to —Statistical Society of Australia
(Vic Branch)

Please indicate any special dietary requirements below:

Return this form ASAP but no later than 7 October 2005 to:

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