

THE CAMBRIDGE STATISTICS DISCUSSION GROUP

Monday 3rd March 2008 7:15 for 7:45

Lecture Theatre, Department of Plant Sciences,
Downing Site, Cambridge

Biology in the post-genomic era: statistical issues

Krys Kelly

MRC Biostatistics Unit and University of Cambridge Department of Pathology

Abstract: At first biologists studied one gene or protein at a time. Then high throughput sequencing led to exponential growth in the DNA sequence available in public databases. The publication of the draft human genome in 2001 was an important milestone and some authors have called the time since then the “post-genomic era”. Today other high throughput technologies allow the study of gene expression, proteins, metabolites and, most interestingly, controlling elements. And the data explosion continues.

In this talk, Krys will introduce you to the biology, the main high throughput technologies and the types of data and statistical issues they produce. She will illustrate her talk mainly with examples from her own work.

Speaker: Krys Kelly graduated from the University of Birmingham in 1974. During her PhD and first postdoctoral post, also in Birmingham, she developed statistical methodology for the analysis of continuous variation in human populations. In 1983, she became the Senior Statistician in the newly-formed West Midlands Cancer Research Campaign Clinical Trials Unit, working on both national and regional studies. In 1990, she joined the American biotechnology company, Amgen, becoming Director of Clinical Data Management and Statistics. She left Amgen in 2001 to gain a Master’s Degree in Bioinformatics and return to research. Since 2005, she has held a joint appointment in the MRC Biostatistics Unit and the University of Cambridge’s Department of Pathology.

Directions: The Department of Plant Sciences is located on the Downing site situated between Downing Street and Tennis Court Road (see map below). Go through the second door you come to in the building immediately on your left as you enter from Tennis Court Road. Once inside the building follow the arrows. Refreshments will be served in the first floor kitchen. It is not possible to park on the Downing site in the evening. The nearest car park is at Lion Yard. Arrivals after 7:45pm can gain admittance by contacting the secretary on 07761769436.

Provisional Next Meetings:

1st April – Paul Garcia (Hertfordshire County Council) on ‘Don’t act like a burglar - collecting data on who lives in a house’.

29th April – Stephen Sharp (MRC Epidemiology).

October – Simon Tavaré (Applied Maths & Theoretical Physics).

Supper: Some members eat regularly in the University Centre before each meeting at **5-45pm**. Feel free to join them.

Subscriptions: of 1 pound are now due for attending the 2007-2008 session.

Secretary: Peter Watson, MRC Cognition and Brain Sciences Unit, 15 Chaucer Road, Cambridge CB2 7EF; telephone 01223 355294 Extension 801; E-mail peter.watson@mrc-cbu.cam.ac.uk

Take a look at our website: <http://www.mrc-cbu.cam.ac.uk/~peterw/csdg.htm>

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