

Methods in Molecular Microbiology

A three-part programme over 3 weeks

Hosted by the Royal Free and University College Medical School,
based at the Royal Free Hospital.



Supported by the Infectious Disease Research Network.

Please see <http://www.idrn.org/researchworkshops.php> for information on how to register.

Contact Dr Tim McHugh t.mchugh@medsch.ucl.ac.uk , 020 7472 6402 for enquiries.

Part 1 Basic Molecular Techniques for Medical Microbiology

1 Day

Date: Friday 16 June 2006, 9am – 5pm

Total cost for the day: £50. The IDRN will reimburse 50% of the costs for the first 50 registrants.

A day of practical demonstrations and tutorials to provide insight into the basic tools in molecular medical microbiology.

1. Practical demonstration: These are the tools
2. Practical demonstration: Restriction digestion and gel electrophoresis
3. Practical demonstration: Real time PCR
4. Hands on session: Practice with pipettes, make and load a gel.
5. Tutorial: Getting your nucleic acid from a sample.
An overview of the problems and solutions for extracting DNA & RNA
6. Tutorial: What is the sequence?
A guide to sequencing, hybridisation and arrays.

**Part 2 Introduction to the essential methods of molecular medical
Microbiology**

3 Days

Date: Tuesday 20 - Thursday 22 June 2006 (inclusive), 9am – 5pm each day

Total cost for the three days: £400. The IDRN will reimburse 50% of the costs for the first 12 registrants.

A practical course in which each student undertakes gel electrophoresis, DNA hybridisation and sequence analysis.

1. Practical: IS6110 RFLP analysis of *Mycobacterium tuberculosis*
2. Practical: 16S sequence identification of bacterial pathogens
3. Practical: MLST of *Streptococcus pneumoniae*
4. Tutorial: PCR in routine diagnosis
5. Tutorial: Analysis of typing data

Tutorial time will be available to address issues that the group wish to discuss in further detail.

Part 3 Application of molecular techniques in infectious diseases

1 day seminar series

Date: Monday 26 June 2006

Total cost for the day: £25 (for all registrants)

Provisional programme

9:30 – Registration

10am – *Interpreting molecular epidemiology data* - Professor Stephen Gillespie (University College London/Health Protection Agency)

10:40 – *Molecular epidemiology of tuberculosis in South African gold mines* - Dr Pam Sonnenburg (London school of Hygiene/ Health Protection Agency)

11:30 – Coffee

11:50 – *Understanding the rise of the superbug: genomic variation and evolution of Staphylococcus aureus* - Dr Jodi Lindsay (St Georges, University of London)

12:30 – *Genotypic characterization of the meningococcus by MLST* - Dr Ian Feavers (National Institute for Biological Standards and Control)

1:10 – Lunch

2:00 – *Norovirus: Molecular detection, characterisation and epidemiology.* – Dr Jim Gray (Health Protection Agency)

2:40 – *Routine diagnosis of influenza, the move away from immunofluorescence, culture and traditional PCR.* – Dr Malur Sudhanva (King's College Hospital NHS Trust)

3:20 – *title to be confirmed* – Dr Sheldon Stone (University College London Medical School)

4:00 – End of day