

ABOUT THE TUTORS



Dr Guy Sutton is Director of Medical Biology Interactive & Honorary Lecturer in the Division of Psychiatry at University of Nottingham Medical School. He lectured in genetics and neuroscience to a range of undergraduate and postgraduate students, including medics, biologists and psychologists. He has held academic appointments at Manchester and Cambridge Universities and has conducted research projects and data analysis for various organisations, including the Department of Health and the Medical Research Council.

Guy has tutored on A-level reading parties for students and teachers for several years, and is an associate tutor with Villiers Park Educational Trust, Cambridge. He has developed courses for the OCR Examining Board and for the National Academy for Gifted & Talented Youth.



Dr Emma Ashwin researches the role of foetal testosterone in brain development and its proposed role in autism. She is based in the Department of Developmental Psychiatry at the University of Cambridge. Emma completed her degree and PhD at the University of Cambridge and tutors on A-level reading parties.

ABOUT MBI

MBI (Medical Biology Interactive) delivers one-day and half-day courses, seminars and tutorials in epidemiology, occupational health and the human sciences to the health service, industry and education. All MBI seminars are written and run by academics and health specialists, each of whom has considerable experience in research and its practical applications. Seminars are delivered at the hospital, workplace or school, based on cutting-edge research and current practice benchmarks, and tailored to the needs and concerns of the client.

For further information and full programmes, please contact Dr. Guy Sutton; tel. 07941 039670, e-mail: gmsutton@mbi-consultancy.co.uk.



M B I
M E D I C A L
B I O L O G Y
I N T E R A C T I V E

**Seminars & Tutorials For The
Health Service, Industry & Education**

Director Dr. Guy Sutton
E-mail: gmsutton@mbi-consultancy.co.uk

8 Shaftesbury Avenue
Sawley
Nottingham
NG10 3FG

Tel. 07941 039670

Web site: www.mbi-consultancy.co.uk



M B I
M E D I C A L
B I O L O G Y
I N T E R A C T I V E

PRESENTS

GENETHICS



*A One-Day Tutorial
For AS/A2 Students
In Medical Genetics &
Associated Ethical Issues -
Delivered At Your School*

TUTORS:

Dr. Guy Sutton
MBI & University of Nottingham

Dr. Emma Ashwin
University of Cambridge

WHY A GENETHICS DAY?

The human genome's gene-containing regions are now effectively sequenced. In years to come, the genome map will revolutionise the practice of medicine and dramatically increase our knowledge of preventing and treating many diseases. It will also impact on academic disciplines from the life sciences to economics.

This tutorial is thus intended to serve as a comprehensive primer of genetic principles and an introduction to medical genetics. Integral to the tutorial is a consideration of the ethical, societal and economic ramifications of a genome map and new gene-related technologies.

Important issues to be discussed include: informing (and not informing) relatives about a family history of genetic illness; the ethics of workplace-based genetic testing; genetics and insurance; and pharmacogenetics, in which an individual's genetic reactions to drugs may inform about their disease risk.

WHICH STUDENTS WILL BENEFIT?

This tutorial is designed primarily for very able A2 level students but will also be useful to:

- any AS students with an interest in the principles and applications of genetics and its contribution to medicine and society.
- those students considering a university degree and/or career in the following subjects:

Medicine	Psychology	Biology
Law	Nursing	Philosophy

The material presented during this tutorial will complement and develop upon topics and issues encountered in the 'A' level Biology, Chemistry & Psychology syllabi.

AIMS OF THE TUTORIAL

The main aims of this tutorial are:

- to explore elementary and advanced genetic principles, and to explore the mechanisms at work in cancer and other genetic diseases.
- to consider the ethical, economic and social consequences of a genome directory, genetic practices such as gene therapy, and issues of genetic privacy and discrimination.
- to explore the use of new diagnostic and intervention techniques such as screening; the ethics of cloning and stem cell technologies.

PROGRAMME

A variety of topics relating to medical genetics and associated ethical issues will be covered. Please note that a half-day Genetics tutorial is also available. Please find below an exemplar programme.

- **9.00-9.15 Introduction & Aims**
- **9.15-10.15 From DNA To Disease**

From DNA, genes and chromosomes to transcription, translation and the genetic basis of mutation and disease. Includes DVD presentation.

- **10.15-10.45 Beyond The Human Genome Project: Proteomics & Cancer Genomics**

How the genetic code was sequenced and current state of knowledge. The future: Cancer Genome Anatomy Project and other projects.

Morning Break

- **11.00-11.45 Medical Genetics**

Genetic disorders and strategies for treatment. The molecular biology of cancer; mutation sequences in breast cancer genes. Molecular cancer therapies.

- **11.45-12.15 Genetic Testing**

What is predictive gene testing? How are disease genes targeted? Advantages and disadvantages of gene testing. Ethical issues in genetic counselling.

Lunch

- **1.15-2.00 Genetics: Internet Session**

Key genetics websites and online exercises.

- **2.00-2.30 Ethics In Medical Genetics**

Major ethical issues in genetic testing, screening and gene therapy. Confidentiality and disclosure issues related to genetic testing. Equity of genetic technology. Includes video case study.

- **2.30-3.15 Cloning & Stem-Cell Technology**

The pros and cons of cloning. Adult and embryonic stem cell research and the ethical difference. Creating human embryos to extract stem cells.

- **3.15-3.25 Conclusions & Questions**

FORMAT

Format is varied, with interactive, multimedia lectures and group discussions.

Each school will receive a CD-ROM with software containing tutorial material, exercises and web links. Students will each receive a comprehensive tutorial pack containing complementary tutorial material.

M B I

OTHER SEMINARS & TUTORIALS

FOR THE HEALTH SERVICES & INDUSTRY

MEDICAL GENETICS
(FOR GENERAL PRACTITIONERS)

METHODS IN
MOLECULAR BIOLOGY

EPIDEMIOLOGY & STATISTICS
IN CLINICAL PRACTICE

HEALTH &
STRESS MANAGEMENT

BRAIN DAY FOR THE
HEALTH & EMERGENCY
SERVICES

FOR EDUCATION
FOR AS & A2 LEVEL STUDENTS

BRAIN DAY

STRESS DAY

DNA DAY

HEALTH & HUMAN DISEASE

PHILOSOPHY OF MIND