MRC Research Update. HIV - a global challenge.  
Teachers’ notes

Curriculum links
MRC Research Update 12 is directed at students taking advanced courses (A and AS level) in Biology, Human Biology and Social Biology and at students following courses in GNVQ (Advanced) Science. Some aspects are relevant to GNVQ (Advanced) Health and Social Care.

It relates to the following topics:
- immunity
- human health and disease
- microbiology
- molecular genetics.

Skills involved are:
- oral and written communication
- interpretation and evaluation of information
- decision making
- visual presentation
- design of experiments.

Summary of content
This Research Update describes the progress of research supported by MRC, which is aimed at increasing our understanding of HIV/AIDS, preventing transmission of the virus, and management of infection. The process of infection with HIV and ensuing clinical symptoms are described. Students are asked to interpret graphical data, and to research information on retroviruses. The procedures for diagnosis and prognosis are outlined and different blood tests are discussed. The significant increase in heterosexual transmission of HIV is the focus of MRC trials to develop a vaginal virucide. Students are asked to consider the features of such trials in designing their own. Recent developments in antiretroviral therapy are outlined and future prospects for the management and prevention of HIV/AIDS are explored. The final activity gives students the opportunity to research current progress with vaccine development.

Prior knowledge assumed
It is assumed that students:
- understand immunity
- have a basic knowledge of molecular genetics, including genetic engineering
- understand the transmission routes of HIV.

Timing
This Update requires about 90 minutes of class time. The questions and Activities could be set as additional class or homework assignments.
New words
Teachers/lecturers may want to check that the terminology used in this Update is accessible to students before they begin. All Research Updates contain short glossaries of some key words. Students may find it helpful to add any unfamiliar words, and to use textbooks to make brief notes on each.

This Update covers a complex subject. Most students will find it very challenging and less academic students may need additional help.

Sources of further information
1. Information about AIDS: Aids Education and Research Trust (AVERT). 11-13 Denne Parade, Horsham, West Sussex, RH12 1JD, 01403 210202
2. MRC News, Winter 1995, No 65, 'Renewed hope for a vaccine against AIDS' Jim Stott
MRC News, Winter 1996, No 69, 'How HIV fools the immune system' Andrew McMichael
4. New Scientist journal - many relevant articles.
5. The Internet. Wide-ranging HIV/AIDS information is available.
   Try also: http://www.ama_assn.org/special/hiv/hivhome.htm
6. Further information about MRC research projects can be obtained from:
   The Education Officer, Medical Research Council,
   20 Park Crescent, London W1N 4AL.
   Tel: 0171 636 5422.
   e-mail: Elizabeth.Mitchell@headoffice.mrc.ac.uk
   http://www.mrc.ac.uk

Acknowledgements
This MRC Research Update was written by Dr Christina Morris of Long Road Sixth Form College, Cambridge. They would like to thank the following for their invaluable advice, contributions and support in the preparation of this publication:
Dr Val Kitchen, St. Mary's Hospital, Paddington.
Dr Janet Darbyshire, MRC HIV Clinical Trials Centre.
Dr Alan Stone.
Dr Graham Hart, MRC Medical Sociology Unit, Glasgow.
Dr Sarah Rowland-Jones, Institute of Molecular Medicine, Oxford.
Ahmed Marikar, Queen Elizabeth's School, Barnet.
Melanie Morris, Beechen Cliff School, Bath.
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