

Viruses

A Very Short Introduction

By Dorothy H Crawford

Questions for Discussion:

- What are viruses and should they be classified as living things?
- The origin of viruses is unknown. What are the relative merits of the present theories? Are there any other possible origins?
- The mind boggling number of viruses in the oceans means that despite their tiny size they are making a significant contribution to the planet's CO₂ build up. Could this be remedied in any way?
- Where do 'new' viruses come from? Where is the next human pandemic virus likely to come from?
- How can we prevent pandemics?
- Is vaccination the best way to prevent acute virus infections like respiratory syncytial virus and rotavirus?
- Why is it important to continue a vaccination programme when the disease has been eliminated from the country? Is this reasonable?
- Given its high infectivity and fatality rate, why is it that an Ebola epidemic is relatively easy to control?
- Which of our common virus infections have evolved to spread among sparse populations and how do they manage it?
- Why do some viruses cause cancer when this may kill the host that they are dependent on for survival?
- Where might you look to discover another human cancer virus?
- Have viruses had a significant impact on world history?
- Could the study of viruses tell us anything about ancient human migrations?
- Was Edward Jenner's experiment with smallpox vaccination on James Phipps justified?
- Should the world's remaining stocks of smallpox virus be destroyed?
- Should antiviral agents be available over-the-counter? What are the problems with free availability?
- What orphan diseases are likely to be caused by a virus and how would you go about finding the virus?
- What are the most likely man-made viral threats in the future?
- Should governments or agencies provide the money for pandemic prevention by identifying potential viral threats in wild animals?
- If the production of an effective HIV vaccine is still several years away how can spread of the virus be prevented?

Other books by Dorothy H. Crawford

The Invisible Enemy (Oxford, Oxford University Press, 2002)

Deadly Companions: How microbes shaped our history, (Oxford, Oxford University Press, 2007)

Suggested further reading

Michael B. A. Oldstone *Viruses, Plagues, and History: Past, Present, and Future*, (New York, Oxford University Press, 2009)

Terence Allen and Graham Cowling, *The Cell: A Very Short Introduction*, (Oxford, Oxford University Press, 2011)

Rodolfo Saracci, *Epidemiology: A Very Short Introduction*, (Oxford, Oxford University Press, 2010)