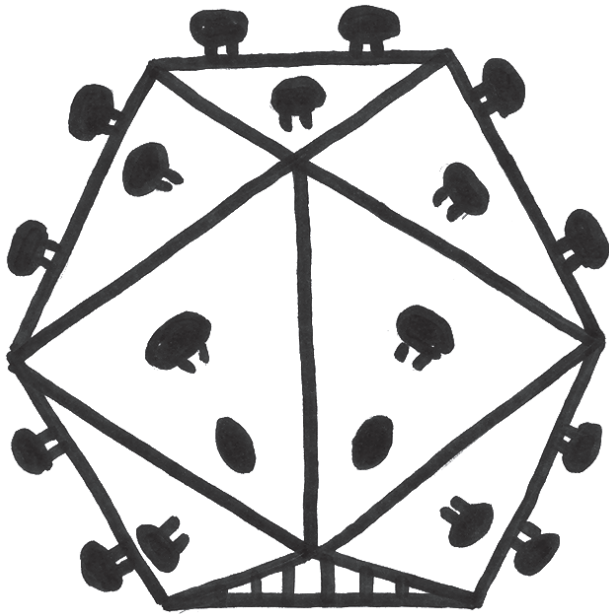


WANTED

LIVE OR ATTENUATED



Name: Human Immunodeficiency Virus
AKA: HIV, HIV/AIDS

Wanted for: As the causative agent for acquired immune deficiency syndrome (AIDS), HIV has caused the deaths of over 20 million people world-wide, whilst 40 million people are currently infected (25 million in subSaharan Africa). In 2005, between 2.4 and 3.3 million died from AIDS related illnesses. There is no effective cure at present.

Characteristics:

The virus is transmitted sexually, through contact with contaminated blood (e.g. through drug use), and from mother-to-child during gestation or via mother's milk. The virus infects helper T (Th) cells and macrophages – responsible for controlling important aspects of innate and adaptive immunity. Infected Th cells are themselves targeted and destroyed by other immune cells. Without these important cells, the body is open to a whole range of infections – and it is these that produce the major pathology of the disease, as opposed to the direct effect of the virus itself.

How can Immunology help?

HIV represents a major challenge for researchers, due to its ability to 'change its disguise' and thus elude both the immune system and efforts to create an effective vaccine. Variation in the surface coat of the virus (the target for immune reactions) is often great, even within one infected individual. It also integrates its own genome into that of the cells it infects and may remain dormant for long periods – making the clearance of infection difficult. However, success has been achieved with so-called 'antivirals' that affect the integration of the viral genome with that of the host. The ultimate hope lies with an effective vaccine.

Can you help? Immunology needs you!