

VIROLOGY

VIROLOGY is the study of Viruses. **VIRUSES** are microscopic infectious agents that are unable to reproduce outside of a host organism. As a result they rely on the host organism for their replication and survival. The general structure of a virus is a protective protein coat, the capsid, which encloses the genetic material, and either DNA or RNA. Viruses are responsible for numerous human diseases usually named after the virus (e.g. HIV infected individual).

In our laboratory we perform a variety of virology tests towards detecting:

1. Hepatitis Virus B (HBV)
2. Hepatitis Virus C (HCV)
3. Human Immunodeficiency Virus (HIV)
4. Cytomegalovirus (CMV)
5. Epstein Barr Virus (EBV)
6. Syphilis

These viruses have distinct characteristics as the disease progresses allowing us to determine the presence and the progression of the disease. For instance the graphs below show the different antigens and antibodies produced by HBV and HCV viruses (Figs 1 and 2 respectively) during the different phases of infection. It might be useful to use this graph when a Hepatitis profile is requested.

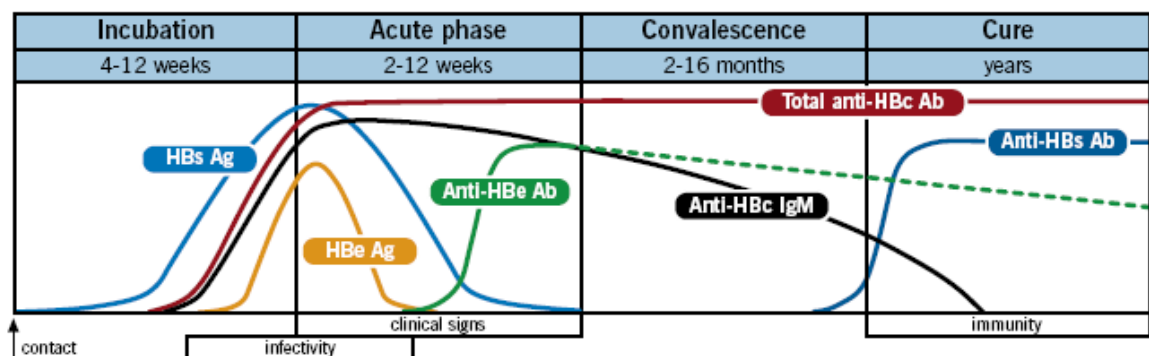


Fig. 1: Appearance of Hepatitis B antigens and antibodies during HBV infection.

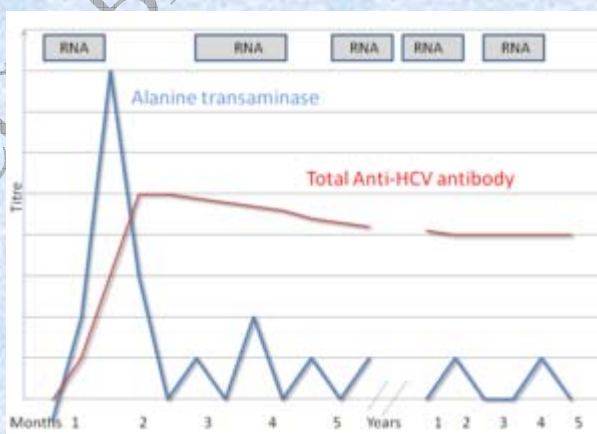


Fig.2: Serological Profile of HCV infection. For more information please refer to the following website: http://en.wikipedia.org/wiki/Hepatitis_C

VIROLOGY

VIROLOGY PROFILE

Hepatitis B Surface Antigen (HBsAg)
Hepatitis Bs antibody (Anti-HBs)
Hepatitis B Core IgG Antibodies (Anti-HBcIgG)
Hepatitis C Antibodies (Anti-HCV)
Human Immunodeficiency Virus (HIV)
Cytomegalovirus IgG (CMV IgG)
CMV IgM
Epstein Barr Virus IgG (EBV IgG)
EBV IgM
Venereal Disease Research Laboratory test (VDRL)

FULL HEPATITIS PROFILE

Hepatitis B Surface Antigen (HBsAg)
Hepatitis B Core IgG Antibodies (Anti-HBcIgG)
Hepatitis B Core IgM Antibodies (Anti-HBcIgM)
Hepatitis Be Antigen (HBeAg)
Hepatitis Be Antibody (Anti-HBe)
Hepatitis Bs antibody (Anti-HBs)

Useful Websites for additional Information:

1. American Foundation for AIDS Research:
<http://www.amfar.org/cgi-bin/iowa/index.html>
2. National Institutes of Health – Hepatitis: <http://health.nih.gov/result.asp/322>
3. National Institutes of Health – Sexually transmitted diseases:
<http://health.nih.gov/result.asp/588>
4. For more information on specific lab tests visit Lab tests online at:
<http://www.labtestsonline.org/understanding/index.html>