Working towards new therapies and a treatment vaccine for HIV.

Immunology at MRF, Royal Perth Hospital

UWA Researchers Professor Martyn French and Dr. Sonia Fernandez, based at Royal Perth Hospital’s (RPH) Medical Research Foundation (MRF), are investigating the mechanisms by which some individuals can naturally control HIV infection.

Human Immunodeficiency Virus (HIV) is a retrovirus which infects immune cells and decreases the body’s ability to defend itself against common and opportunistic infections. Late stage HIV infection is referred to as Acquired Immune Deficiency Syndrome (AIDS).

Professor French and Dr. Fernandez are specifically investigating the role of a particular antibody response in controlling HIV infection. Antibodies are proteins released by immune cells which label dangerous particles, like viruses, for removal or destruction by the body.

“This work will enable an increased understanding of how HIV infection impairs B cells - [immune cells which are required to generate an antibody response] and has the potential to contribute to the development of a treatment vaccine for HIV infection.” - Professor French.

Current treatment for HIV infection is antiretroviral therapy which can slow the progression of the disease and prevent development of AIDS, however, some patients still experience residual immune dysfunction after treatment.

Professor French and his team are also researching the role of a particular protein (called interferon-alpha) in these side effects, research which they say could lead to the development of new therapies to further improve the health of HIV patients recovering from antiretroviral therapies.

For further information, visit www.pathology.uwa.edu.au