

The Viral Epidemiology Laboratory is a diagnostic laboratory of the Infectious Diseases Laboratories within SA Pathology and is responsible for performing assays to detect viruses associated with gastroenteritis, especially the human calicivirus, norovirus, and to perform resistance genotyping of HIV patients undergoing HAART therapy. In addition, the laboratory has a research interest in the viral causes of gastroenteritis. This began with a prospective case control study of paediatric gastroenteritis in collaboration with the Women's and Children's Hospital from 2000 to 2004. In samples from cases and controls from this study we detected two novel parvoviruses, now called human bocavirus species 2 (HBoV2) and 3 (HBoV3). We have been able to prove statistical association with paediatric gastroenteritis for HBoV2. The role played by HBoV3 in human diseases is yet to be determined. Current research focuses on developing a cell culture model for HBoV2, and further assessing the prevalence of human bocaviruses in human disease.

A second personal interest is the phylogeny of the Legionella species, a bacterium which causes atypical pneumonia in humans, infections of which are often associated with artificial water systems, such as cooling towers, potable water distribution systems and spars, as well as potting mix and compost. Being relatively biologically inert, the speciation of legionella relies on genetic sequencing, which has identified strains representing over 30 novel species, in addition to the currently recognised 52 species.

HONOURS PROJECT (one project)

An Honours project is available which focuses on gene expression and replication of the human bocavirus 2. Please contact the head of the laboratory, Dr. Rod Ratcliff, or the senior research scientist Dr. Jane Arthur. The contact phone is 8222 3321.