

## **APPS Fellow**

### **Associate Professor Michael Norman Pearson**

Associate Professor Michael Pearson has contributed to knowledge of fungal and plant viruses and has been instrumental in developing methods to detect and manage these pathogens in the greater Australasian and Pacific region. He has supported and promoted the development of a large cohort of plant pathologists in New Zealand and the South Pacific region. He has collaborated and developed science programs across the boundaries of institutions and countries, demonstrating his skills as a team builder and champion for plant pathology. He is internationally recognised for his academic and applied contributions to plant pathology.

Mike Pearson gained his PhD from Exeter University in England after research experience with Shell in the UK and East Africa. He lectured at the University of Papua New Guinea for 5 years, and joined the University of Auckland in 1983. His contributions to plant pathology are in three main areas.

The first was recognition of the significance of plant virus infection in the high value vanilla crop in Tonga and other tropical island countries dependent on rural economies. He was instrumental in identifying and characterizing several viruses of vanilla, including cucumovirus and potyvirus species. This work led to the control of previously unexplained crops losses in these countries. His early experience in Africa and PNG probably underpinned the success of this work which involved not only excellent planning skills but also the cultural and political awareness that Mike always exhibits.

The second area is the identification of mycoviruses in *Botrytis cinerea*, the grey mould fungus. A recent PhD thesis supervised by Dr Pearson was impressive by its elegant research, and with the philosophical debate raised as to evolutionary effects of virus infection on the fungus as a pathogen and whether biological control of the fungus by the virus could be contemplated. This indicated an investigative atmosphere in Mike's laboratory which is conducive to the future success of a university where evidence-based hypotheses underpin future research. Mike is recognized as a pioneer in this field by his current inclusion on three subcommittees of the International Committee on Taxonomy of Viruses (ICTV).

The third area is investigation of the presence and properties of viruses in kiwifruit crops in NZ. Until Dr Pearson initiated this research, kiwifruit was thought to carry no virus pathogens. Viruses in several genera have now been identified and characterized, including flexiviruses, tobamoviruses and icosahedral species. The field of pathology of kiwifruit has thus been opened up and the industry now faces a combination of virus and bacterial pathogens as challenges to production. Again his work has been recognized by membership of subcommittees of the ICTV.

In addition to these main themes, Mike has identified a number of new viruses in NZ crop and pasture species and has increasing involvement in the pathology of fungal diseases.