UNIVERSITY OF WOLLONGONG
FACULTY OF SCIENCE

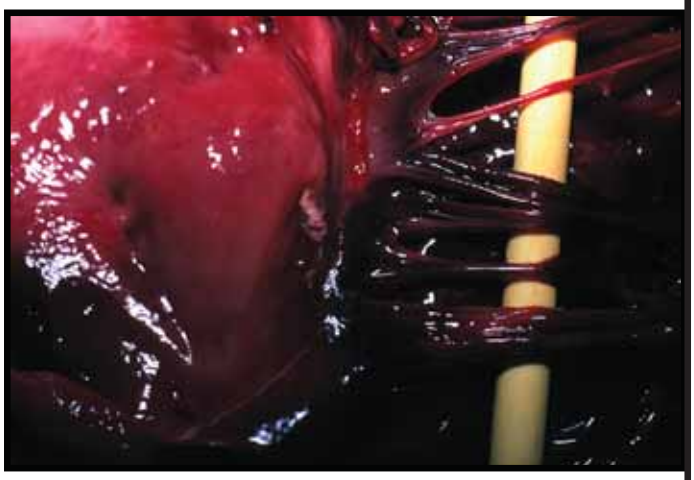
SCHOOL OF BIOLOGICAL SCIENCES

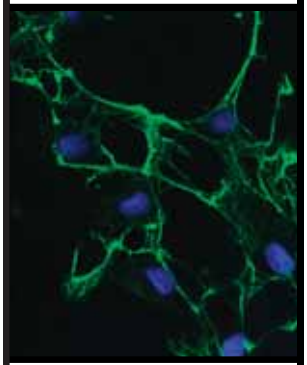
RESEARCH PROFILES

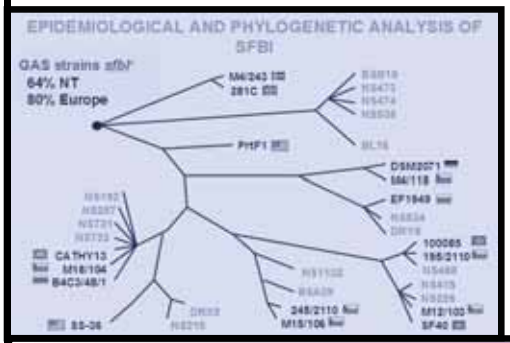
PROFESSOR MARK WALKER

VACCINOLOGY

Professor Mark Walker, in collaboration with other academic and research staff from the German National Centre for Biotechnology, NSW Agriculture, The Menzies School of Health Research and Biotechnology companies, has been analysing the mechanisms by which microorganisms cause disease and how best to develop new generation vaccines against such disease.







Current Research questions include:

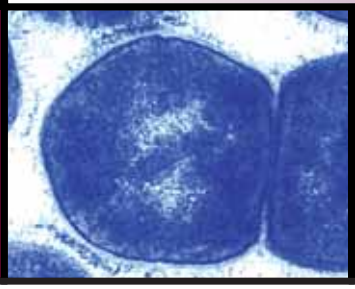
✦ How to develop protective and safe vaccines against *Bordetella pertussis*, the causative agent of whooping cough.

✦ How does *Streptococcus pyogenes* (the causative agent of pharyngitis, impetigo, scarlet fever, toxic shock syndrome, rheumatic fever, acute posl-streptococcal glomerulonephritis and necrotising fasciitis) cause disease.

✦ Whal is the distribution of *Escherichia coli* (human diahorrea) in livestock.

✦ How can new vaccines be developed against the veterinary pathogens *Mycoplasma hyopneumoniae* (swine procine enzootic pneumonia). *Actinobacillus pleuropneumoniae* (swine peuropneumonia) and *Bordetella bronchiseptica* (kennel cough and swine atrophic rhinitis)?

MICROBIOLOGY



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