



## EXTERNAL SEMINAR

TUESDAY 14 FEBRUARY 2012 AT 1:00 PM  
WESTPAC AUDITORIUM, BANCROFT CENTRE, QIMR

### ***Catching cancer: Identification of mitogenic proteins and biomarkers in infection-based cancer***



**Dr Jason Mulvenna**  
Qld Tropical Health Alliance  
James Cook University

Jason Mulvenna obtained his undergraduate degree in Biochemistry at the University of Queensland (UQ) and completed his PhD in NMR spectroscopy at the Institute for Molecular Biology, UQ. He then completed a post-doctorate at Harvard Medical School, where he used X-ray crystallography to address the structure, function and interactions of proteins involved in blood clotting. After returning to Australia he received an NHMRC Peter Doherty Fellowship to study parasite proteins using mass spectroscopy.

He currently holds an NHMRC Career Development Fellowship and his major research interests include the development of diagnostics for liver cancer and hookworm infection, *Opisthorchis viverrini*-induced liver cancer and structure/function studies of key *Schistosoma mansoni* vaccine targets.

He is currently funded by the NHMRC, ARC and NIH.

The liver flukes *Clonorchis sinensis* (Cs) and *Opisthorchis viverrini* (Ov) are among the most important public health problems in East Asia, where >700 million people are at risk of infection. As many as 15 million people are infected with Cs in the Peoples Republic of China (PRC) alone. Liver flukes are considered an increasingly important public health problem due to their strong association with bile duct cancer, cholangiocarcinoma (CCA). The International Agency for Research on Cancer (IARC) classifies both Cs and Ov as Group 1 carcinogens and the leading etiological agents for bile duct cancer in Asia, including the leading factor for bile duct cancer in PRC.

In recent years Dr Mulvenna's laboratory has identified mitogenic compounds secreted by these organisms and have begun to unravel the early stages of carcinogenesis. Simultaneously they have been developing mass spectroscopy and miRNA based biomarkers for diagnosis and investigations of key events in disease progression from infection to CCA.