

# CENTRE FOR STEM CELL RESEARCH

## Seminar & Networking Forum

Friday 9<sup>th</sup> October 2009 at 4pm  
Florey Lecture Theatre, Medical School, The University of Adelaide

## “miRNAs in Adult Stem Cell Differentiation Role in Disease and Development”



**Dr Albert Mellick**  
Head – Host Response to Cancer Lab  
School of Medical Science  
Griffith University



In the last ten years, the number of small noncoding RNAs has exploded. This has coincided with a range of tools to study their function. However, despite central roles in gene regulation miRNAs are still regarded as mainly developmental regulators with less regard to roles they may play in modulating cellular function. In contrast, our studies of endothelial progenitor cells in cancer, suggests that miRNAs may play a more subtle role in regulating the function of adult bone marrow stem cells, with implications for disease progression, and wound healing.

Dr Mellick's is the first Griffith Medical Research College (GMRC) Fellow, a joint appointment between the Queensland Institute of Medical Research and Griffith University; and is a member of staff, School of Medical Science, GU. Dr Mellick has substantial research experience at internationally prestigious research institutes, such as the centre for Molecular & Cellular Biology (CMBB) University of Queensland (UQ), and John Curtin School of Medical Research (JCSMR) Australian National University (ANU). Between 2004 and 2007 he was a Fellow at the prestigious Cold Spring Harbor Labs (CSHL) and in the last year has established an independent laboratory on the Gold Coast campus of GU. While working at CSHL (2004-7), he developed methods in retro-viral delivery of inhibitory RNAs. This work has culminated with two ground breaking papers in *Science* (2008) and *Genes & Dev* (2007), characterising bone marrow endothelial progenitor cells (EPCs) and their role in cancer metastasis. Dr Mellick currently holds two CIA grant to study tumour stem cell biology and the role of the bone marrow in disease.