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## Malaria in pregnancy: complementary research angles to tackle a complex disease

Thursday 22 August 2013 1 – 2pm

**Dr Philippe Boeuf** Department of Medicine, University of Melbourne

**Slatyer seminar room** R.N. Robertson Building (Bldg. 46), Linnaeus Way, ANU



Malaria in pregnancy is associated with poor pregnancy outcomes, including low birthweight due to foetal growth restriction. The underlying pathogenetic mechanisms are largely unknown but foetal growth restriction is thought to result from a three-step process: i) malaria-infected erythrocytes adhere to the placenta; ii) a local inflammatory response is triggered; iii) the inflammatory milieu impairs the transplacental transport of maternal nutrients to the foetus.

I will share our current efforts in investigating each of these three steps. The multidisciplinary nature of our research will be evident from the presentation of our most recent discoveries on the mechanisms of malaria-infected erythrocytes adhesion, inflammatory cell phenotype and placental nutrient transport function.

By gaining a better understanding of the pathogenetic processes supporting foetal growth restriction in placental malaria, we hope to provide scope for the design and implementation of alleviation strategies for malaria in pregnancy as well as for other pathological pregnancies.

**Biography:** Dr Philippe Boeuf is a research fellow at the Department of Medicine at The University of Melbourne. During his PhD at the Pasteur Institute, he showed that severe anaemia and cerebral malaria, the two main forms of severe paediatric malaria, were associated with specific immune profiles. Since 2005, in Pr Rogerson's lab, he focuses on gaining a better understanding of placental malaria pathogenesis. He has generated seminal data on decreased transplacental transport of maternal nutrients as a mechanism of foetal growth restriction. This discovery should open the way to interventions to alleviate the burden of malaria in pregnancy.

Presented by

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