

Thérèsa L Coetzer

Department of Molecular Medicine and
Haematology

University of the Witwatersrand
NHLS

Focal Areas of Research

- Interactions of *P falciparum* proteins with red cell membrane proteins
Roberto Lanzillotti / Sonja Lauterbach PhD students
- Transcription factors and gene regulation
- Gametocytogenesis
Danny Meyersfeld PhD student
- Telomerase and genome evolution
Pierre Durand PhD student
- Glycerol kinase
Kuben Naidoo MSc student

Current Expertise

- Purification of red blood cell membrane (RBCM) proteins
- Creation of *P falciparum* phage display libraries
- Identification of parasite-RBCM protein interactions
- Cloning, expression and purification of parasite proteins
- Gametocyte culture
- Bioinformatic analysis
- Basic molecular biology techniques

Expertise to be developed in 2005

- In vitro binding assays and kinetic studies
- Pull-down assays with parasite extracts
- Blot overlay assays
- Kinase assays
- DNA footprinting and gel shift assays
- TRAP assay to measure telomerase activity
- Quantitative RT-PCR on the Roche LightCycler
- RNAi studies

Future Developments

- PCR assay to measure telomerase mRNA
- PCR assay to measure telomere length
- Confocal microscopy experiments
- Molecular modelling
 - parasite protein-RBCM protein interactions
 - parasite protein-parasite DNA interactions

Collaborations

- Catherine Vaquero
INSERM
Paris
- Raphael Isokpehi
SANBI
University of the Western Cape