

Heinrich Hoppe

Malaria Cell Biology Group

Division of Pharmacology, Groote Schuur Hospital,  
University of Cape Town

Group composition: 3 postdocs,  
3 PhD students (2 as co-supervisor),  
2 MSc students

Funding: Wellcome Trust International Research Fellowship (2003-2007)

Project: Endocytosis in malaria parasites

Approach: Characterization of malaria homologues of proteins known to mediate endocytosis in other cells (Clathrin, Dynamin, Adaptins, Coronin, Actin)

Localization

- 1) Expression of genes in *E. coli*
- 2) Production of mouse antiserum
- 3) Localization by Immunofluorescence assay
- 4) Localization by Immuno-electron microscopy

Functional characterization

- 1) Gene silencing by RNAi
- 2) Heterologous expression in *Dictyostelium discoideum*
- 3) Transient transfection of parasites with dominant negative mutants

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Other projects:

### Cell biological effects of antimalarials

Tim Egan (Chemistry Dept, UCT)

CQ, AQ – blocks fusion of endosomes to food vacuole, induces autophagy

MQ, HF, Quinine, ART – blocks endocytosis

### Antimalarial activity of membrane active antimicrobials

Marina Rautenbach (Biochemistry Dept, US)

Amphotericin, Nystatin, Gramicidin – lyse infected RBC

### Characterization of protease inhibitors

Kelly Chibale (Dept. Chemistry, UCT)