

# Laboratory of Medical Biochemistry

Unravelling the structure-function relationship of proteins in human pathophysiology



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Proteins in host-parasite interactions



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Serine proteases



## Molecular & Structural Biology

- Recombinant protein production (bacterial, insect, mammalian)
- Protein structure elucidation
- Biophysical protein-ligand interaction (BIPP)
- Kinetic & thermodynamic binding characterization

## Functional and clinical exploration

- Elucidation of enzyme function and expression
- Enzyme inhibitor (I) characterization
- Assay development and validation



### *Leishmania donovani* DLP1

Is *Ldo*DLP1 a good drug target to treat leishmaniasis?

### Malaria sporozoite surface antigens

What is the role of SPZ 6Cys proteins and CSP in hepatocyte invasion?

### *Plasmodium vivax* TrAgs

How do PvTrAgs contribute to reticulocyte invasion?

### Granzyme B

How to visualize GzmB in the tumour microenvironment?

### FAP

What is the role of FAP in the tumour microenvironment?  
How do FAPs bind to FAP?

### DPP8/9

understanding expression & activation in human cells.  
How does DPP9 interact?

### Camelid single-domain antibodies

(aka Nanobodies®)

How can camelid sdAbs help us to answer questions?

