



Liam Bell

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Proteomics

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South Africa

I am currently interested in utilising proteomics as a tool to understand biological systems and to tease apart underlying mechanisms of action within those systems. I completed my Ph.D in Cape Town at the Institute for Infectious Diseases and Molecular Medicine which is based at UCT under the guidance of Prof. Jonathan Blackburn.

## CURRENT RESEARCH

### Topic

Phosphosignalling cascades during infection of macrophages and dendritic cells by *Mycobacterium tuberculosis*

### Methodology

- Cell culture
- Phosphoprotein enrichment
- Proteomics

Monocyte derived macrophages/dendritic cells will be infected with TB and then the phosphoproteins will be enriched and analysed using mass spectrometry

### Application

Mycobacteria are very adept at preventing fusion with lysozyme vessicles once they have been phagocytosed by Dcs and macrophages. The mechanism of this manipulation is not defined and this project aims to further elucidate this in the hopes of providing a better understanding of potential drug targets.

## UKZN main Publications

### Past Researches

High throughput proteomic analysis of *Mycobacterium tuberculosis* associated Immune Reconstitution Inflammatory Syndrome. *Manuscript in preparation*

### Future Interests

Inflammation in infectious disease, utilising proteomics in systems wide analyses of disease mechanisms. Applied and translational research

### Extra Interests

Hockey, surfing, SCUBA diving, mountain biking