



MSc SCHOLARSHIP

Identifying novel pathways in the pathogenesis of treatment-resistant ophthalmoplegic Myasthenia Gravis

Division of Neurology

Department of Medicine
Faculty of Health Sciences

Applicants are invited for an MSc scholarship as part of an ongoing project funded by the Medical Research Council of South Africa (MRC) and the Neurology division; Department of Medicine, UCT.

We are studying the molecular mechanisms underlying a treatment-resistant neuromuscular complication of myasthenia gravis, an autoimmune disorder affecting skeletal muscles. This disease manifestation in the eye muscles is significantly more frequent among South Africans compared to elsewhere in the world. We speculate that this eye muscle manifestation may result from a complex genetic network activated by the autoimmune process and underpinned by the inheritance of key genetic variants present in Southern African genomes. We previously used whole exome sequencing in a cohort of individuals and discovered four potentially functional variants using an unbiased prioritization as well as functional filtering related to biological relevance for eye muscle. We now wish to explore the functionality of these variants by using, for example, gene reporter constructs as well as gene/pathway expression analysis in a "disease-in-dish-model" that we have developed.

The laboratory work will be performed within the dynamic cell biology laboratory at the Health Sciences campus/medical school with Prof Prince as co-supervisor.

The project is suitable for an MBChB or BSc Hons candidate and has the scope to be upgraded to PhD.

The value of the scholarship depends on the candidate's first degree (\geq R100, 000) and will be available until the candidate secures his/her own funding for the second year of study.

Applications need to include:

- Curriculum Vitae (CV)
- Academic transcripts
- Contact details of three referees.

Reference Number: JHSL2016 **Closing date:** 26 August 2016

Website: <http://www.medicine.uct.ac.za/med/divisions/neurology>

For further information contact:

Associate Professor Jeannine Heckmann, FCN, PhD

Email: Jeanine.heckmann@uct.ac.za

Tel: +27 21 404 3263

Only short-listed candidates will be interviewed