



UNIVERSITY OF
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The causes and consequences of HIV transmission and drug resistance - PhD and MSc studentships available at UKZN for the MRC Flagship research project

“MRC Flagship projects, which are inter-disciplinary in scope, are an institution’s highest impact and most prestigious research project. They are essentially big ideas, big science for big impact!” MRC President, November 2013.

PhD and/or MSc in Computer Science – Potential Supervisors: Dr. Deshen Moodley & Prof. Hugh Murrell, CAIR, UKZN

The Health Architecture Lab (HeAL) in the UKZN/CSIR Meraka Centre for Artificial Intelligence Research (CAIR) is offering an MSc and a PhD project in collaboration with the Africa Centre via the MRC Flagship project. The research will aim to investigate machine learning, knowledge representation, and agent based modeling techniques for: (i) predicting HIV drug resistance and treatment failure; (ii) knowledge discovery and extraction from clinical and genomic databases; and (iii) simulation of HIV transmission dynamics in rural African populations. Previous work between the Africa Centre and the HeAL focused on the application of machine learning techniques to the analysis of patient demographic and treatment data as individual predictors of the development of HIV drug resistance and as a supplement to the more expensive genotyping diagnostic.

PhD and MSc fellows will be awarded a scholarship that will cover their tuition costs in addition to a competitive stipend salary. Interested students should send an application, which should contain a CV and a motivation letter (max. 500 words) **by 30 January 2014** to Mrs. Xolile Kineri @ email: xkineri@afriacentre.ac.za, Tel: 035 550 7500, Fax: 035 550 7565.

In total, we are advertising 7 PhDs and up to 4 MScs fellowships that can be taken in different departments at UKZN. This includes the following disciplines *Clinical Infectious Diseases, Computer Science, Epidemiology, HIV Pathogenesis, Human Genetics, Genomics & Bioinformatics and Social & Economical Sciences*. **More info: www.bioafrica.net**

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