



## Call for applications for PhD Fellowships

### INTRODUCTION

Kilimanjaro Clinical Research Institute (KCRI) at Kilimanjaro Christian Medical Centre (KCMC) is inviting applications for three PhD fellowships in Malaria Vaccine development project. The project is a collaborative effort involving KCMC, NIMR and University of Copenhagen (UC). The project is funded by the Danish Government through the FFU of the Danish Ministry of Foreign affairs. The selected candidates will be enrolled at the Kilimanjaro Christian Medical University College (KCMUCo) of Tumaini University, and part of their training during their PhD course will be conducted in Denmark.

#### **PhD project 1: (one candidate)**

Malaria in pregnant women is a major health problem and making a vaccine to protect against malaria during pregnancy has high international priority. Malaria parasites express a protein named VAR2CSA on the surface of the infected erythrocytes that mediates binding to carbohydrate structures present in the placenta. We are currently developing a vaccine based on VAR2CSA, however it is likely that an effective vaccine should target multiple key events in the malaria parasite lifecycle. The aim of this PhD project is to design and produce VAR2CSA proteins fused to other key malaria vaccine candidates and explore the anti-malaria effect in vitro of antibodies induced against the fusion vaccines.

#### **PhD project 2: (one candidate)**

Severe and deadly malaria in children is major health problem and making a vaccine to protect against malaria in children has high international priority. Malaria parasites express a protein named DC8 PfEMP1 on the surface of the infected erythrocytes that mediates binding to receptors on blood vessel lining endothelial cells. We have recently identified the endothelium-binding region of DC8 PfEMP1, and are now exploring the

potential for developing a vaccine based on DC8 PfEMP1. It is likely that an effective vaccine should target multiple key events in the malaria parasite lifecycle. The aim of this PhD project is to design and produce DC8 PfEMP1 proteins alone or fused to other key malaria vaccine candidates and explores the anti-malaria effect in vitro of antibodies induced against the vaccine constructs.

### **PhD project 3 (one candidate)**

Severe and deadly malaria in children is major health problem and making a vaccine to protect against malaria in children is an international high priority. Malaria parasites express a protein named DC8 PfEMP1 on the surface of the infected erythrocytes that mediates binding to receptors on blood vessel lining endothelial cells. We have recently identified the endothelium binding region of DC8 PfEMP1, and are now exploring which human receptors are involved in the binding to the endothelium. Identification of human receptors involved and characterisation of the clinical impact of the DC8 PfEMP1 interaction with these receptors are essential for developing the basis for vaccine interventions in childhood malaria. The aim of this PhD project is to investigate the endothelium binding phenotypes of DC8 PfEMP1 expressing parasites isolated from malaria sick children in Korogwe in relation to the clinical manifestations of the infection.

### **PhD Supervision**

Senior members from NIMR, KCMC, and UC will be involved in the supervision of the PhD candidates. KCMUCo will facilitate selection of the supervisors.

The selected PhD candidates will be offered a 3 – 4 year scholarship. Evaluation of the progress of the PhD activities will be done according to regulations of the KCMUCo.

### **Requirements:**

The successful candidate must have:

- a 1st degree in a health related field with a minimum pass of 60%
- a 2nd degree in a health related field with a minimum pass of 60%\*
- Intense interest and proven experience in scientific exploration in the areas outlined above
- A strong ambition to accomplish the research goals and to pursue a scientific career path

### **The application letter must include**

- A letter motivating the application
- Applicant's detailed address (including e-mail and mobile phone number)
- A 2 - 3 page information about your research background relevant to the position.
- Certified copies of certificates and academic transcripts
- Recent CV indicating position and employer
- List of peer reviewed publications, and national/international scientific presentations
- 2 letters of recommendation from academicians with their telephone numbers and e-mail addresses

**Application deadline**

The application deadline is **19th January 2013**.

All applications must be submitted to:

Ms Rogathe Machange

KCRI - KCMC

P.O Box 2236

Moshi, Tanzania

*Email:* [r.machange@kcri.ac.tz](mailto:r.machange@kcri.ac.tz)

Please note that all **shortlisted candidates** will be required to attend **a selection interview and to give a presentation**. The date of the interview will be communicated after short listing within 2 weeks after the above mentioned closing date.

**More information**

Further information might be obtained from Ms Rogathe Machange ([r.machange@kcri.ac.tz](mailto:r.machange@kcri.ac.tz)) and at [www.kcri.ac.tz](http://www.kcri.ac.tz)