



CALL FOR APPLICATIONS FOR A PhD SCHOLARSHIP UNDER THE UR-SWEDEN PROGRAM AND THE SUB-PROGRAM “INFECTIOUS DISEASES”

Optimization of standard malaria treatment in the Rwandan population

Background

Malaria still constitutes a heavy burden for Rwanda and other developing countries. Improvement in the prevention, diagnosis and management of malaria is warranted. The UR-Sweden Program for Research, Higher Education and Institutional Advancement, sub-program of infectious diseases proposes a project on malaria treatment for PhD research in sandwich mode.

The aim is to strengthen the capacity of the University of Rwanda to conduct research in the field of malaria and propose solutions to alleviate the malaria burden in the country, through treatment optimization.

Call for Applications

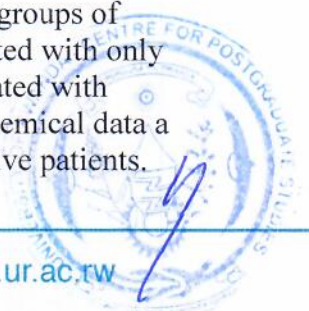
The UR-Sweden Program for Research, Higher Education and Institutional Advancement announces to interested candidates that it offers one position for PhD training in sandwich mode in the area of malaria treatment. The training will be organized through partnership between the University of Rwanda, College of Medicine and Health Sciences and the University of Gothenburg, Sweden. Successful applicants will be registered at the University of Gothenburg where they will pursue their studies. They will conduct their field work in Rwanda.

The title of the PhD research project is: ***“Optimization of standard malaria treatment in the Rwandan population”***

Topic. The overlap of HIV and malaria results in simultaneous treatment with antiretroviral and antimalarial drugs. Treatment for each of these infections is advanced, effective and safe. However, drug-drug interaction resulting in a decrease in blood levels of the malaria drugs can result in treatment failure and the development of resistance. Importantly, inadequately treated malaria infection can increase the risk of HIV-infection progression. Indeed, HIV-RNA viral load and CD4⁺ cell counts are reported to transiently increase and decrease, respectively, during malaria episodes in HIV/malaria co-infected patients, with ensuing risk of rapid progression of HIV-infection. In Rwanda, the incidence of malaria has increased four-fold since 2014. However, mortality from malaria has decreased due to efficacious artemisinin-based combination therapy. There are, however, worrying reports of resistance development in this region (Zeile et al., 2012; Tacoli et al., 2016). This means that optimized treatment to avoid underexposure is vitally important to prevent further resistance development.

Aim. To optimize treatment of malaria in HIV-infected Rwandan patients.

Work plan. A Rwandan PhD-student will plan and run a clinical study where groups of patients receive treatment for only malaria or malaria and HIV (group 1 infected with only malaria treated with antimalarials, group 2 infected with HIV and malaria treated with antimalarials and antiretrovirals). Besides different biomarkers and physicochemical data a molecular marker for artemisinin resistance will be assessed in the HIV-positive patients.





Collected blood samples will be analysed using liquid chromatography mass spectrometry. A population pharmacokinetic (pop pk) modelling approach will be used to assess the data. The final developed pop pk model will be used to simulate improved dosing schedules.

Rwandan supervisors: Emile Bienvenu, Egide Kayitare; *Swedish supervisors:* Sofia Birgersson, Magnus Gisslén (UGOT)

Funding

The PhD project in sandwich mode is funded by the UR-Sweden Program for Research, Higher Education and Institutional Advancement.

Selection criteria. *The applicant should:*

- Be of Rwandan nationality
- Be a permanent staff of the University of Rwanda; contractual staff are not eligible to apply
- Hold a Master's degree in the area of pharmaceutical sciences or medical sciences, with knowledge in pharmacokinetics, bioanalysis and clinical study conduct.
- Be ready to adhere to UR capacity building policies and to comply with UR regulations regarding doctoral studies
- Have interest and passion for malaria-related research, teaching and institutional collaboration
- Have the capacity and be ready to conduct his/her PhD research activities in a collaborative way within the team of researchers
- In line with UR gender policy and UR commitment to bridge the gender gap in academic (teaching and research) career, female candidates are encouraged to apply. All things being equal, priority will be given to female applicants.

Application files should include the following:

1. Application letter addressed to the Acting Director of Centre for Postgraduate Studies, University of Rwanda; the letter should demonstrate commitment, motivation and reasons for interest in this PhD project. A special section should be devoted to demonstrating how the applicant meets the above requirements.
2. Curriculum vitae
3. Photocopy of ID card
4. Photocopy of degree certificates, especially the Master degree in the field of pharmaceutical sciences or medical sciences.
5. A concept note of maximum 5 pages on the PhD research topic of "*Optimization of standard malaria treatment in the Rwandan population*". The candidate should elaborate on the given topic in terms of objectives, envisaged methods and the scientific approach to the research question





6. Motivation letter for PhD research on the given topic and previous field work or research experience. The applicant should show how he/she is a good candidate for the PhD project. A list of scientific publications (if any) should be added.
7. At least 3 recommendation letters (2 from senior academicians and 1 from the administrative supervisor at current employment)
8. Any other document that may show that the applicant is eligible for the PhD project.

How to apply

A hard copy of the complete application files should be submitted to the Secretariat of the Centre for Postgraduate Studies, University of Rwanda, Gikondo campus, with a complete Cc. to the Director of Research and Innovation, College of Medicine and Health Sciences, Remera Campus.

The soft copy of the complete application files should be emailed to the official email of the Centre for Postgraduate Studies at UR (E-mail: dcgs@ur.ac.rw) with Cc. to Prof. Jean Bosco Gahutu, Director of Research and Innovation CMHS and Team Leader of the Sub-program of Infectious Diseases (e-mail: j.b.gahutu@ur.ac.rw)

Deadline for applications: 31st January 2020 at 3:00 p.m.


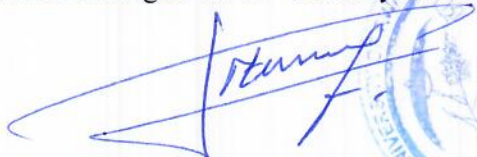
A recruitment panel from the University of Rwanda and Swedish Universities will proceed to the analysis of application files.

Shortlisted applicants will be invited to selection interviews that will be organized in February 2020.

For more information:

Applicants can request further information by sending an e-mail to Prof. Jean Bosco Gahutu, Director of Research and Innovation CMHS and Team Leader for the sub-program of Infectious Diseases (e-mail: j.b.gahutu@ur.ac.rw).

Done in Kigali on 17th January 2020



Dr Celestin NTIVUGURUZA

Acting Director, University of Rwanda Centre for Postgraduate Studies (UR CPGS)