Call for Applications for a Ph.D. with a focus on Tuberculosis under the TASP Project

I. Background

Tuberculosis (TB) remains a major public health challenge in Sub-Saharan Africa (SSA), where drug-resistant TB (DR-TB) continues to impede timely diagnosis, effective treatment, and infection control. Rwanda is strengthening its TB and antimicrobial resistance response through advances in diagnostics, individualized treatment, and surveillance. The Tuberculosis Antimicrobial Stewardship Programme (TASP), an EDCTP-funded consortium coordinated by the Institute of Tropical Medicine (Antwerp) and implemented with the University of Rwanda and the Rwanda Biomedical Centre, aims to develop an evidence-based and cost-effective TB antimicrobial stewardship model for high-incidence SSA settings, with a focus on Rifampicin-resistant TB (RR-TB) and rising bedaquiline resistance.

A key component of TASP is the validation and improvement of low-cost, point-of-care drug susceptibility testing tools such as Thin Layer Agar (TLA) for second-line drugs, particularly bedaquiline. The project will also deploy deep sequencing using Deeplex-XL to detect extended drug-resistance profiles and support DR-TB regimen optimization, alongside broth microdilution methods to link genetic mutations with phenotypic resistance. These laboratory activities will inform both the TASP clinical trial and broader evaluations of the feasibility, clinical utility, and cost-effectiveness of TLA and Deeplex-XL for RR-TB management. Within this framework, the University of Rwanda (UR), in collaboration with the Rwanda Biomedical Centre (RBC) and international partners, invites applications for a fully funded Ph.D. in Biomedical Sciences focused on Tuberculosis.

The project will directly contribute to TASP by advancing and applying innovative diagnostic approaches for detecting and characterizing TB drug resistance. The successful candidate will be registered at the University of Rwanda and trained by a multidisciplinary team in Rwanda and abroad, with some laboratory work undertaken at partner institutions such as the Institute of Tropical Medicine (Antwerp). The overarching goal is to generate evidence that strengthens RR-TB patient management and informs future diagnostic and stewardship strategies.

II. Role and description

The selected candidate will be enrolled in the UR Ph.D. Program, and he will be supervised by national and international experts. The research will contribute to improved diagnostics and management of drug-resistant TB within Rwanda and the broader SSA region. The fellowship includes:

- Full-time scholarship, tuition, and academic supervision
- Research funding and consumables
- Participation in TASP training programs, multi-stakeholder meetings, and scientific exchanges

- Opportunities for publication in open-access journals, conference participation, and policy engagement

Specific responsibilities of the Ph.D. fellow will include:

- Conduct research aligned with TASP objectives, including optimizing Thin Layer Agar (TLA), assessing the clinical utility of deep sequencing (Deeplex-XL) for improved detection and management of RR-TB, and generating evidence on the feasibility, operational performance, and cost-effectiveness of implementing TLA at peripheral health facilities.
- Analyze programmatic data to support the Rwanda TB Control Program, including evaluating the impact of the revised diagnostic flowchart using Xpert MTB/RIF for rifampicin resistance detection.
- Prepare high-quality scientific manuscripts and contribute to national and international dissemination of research findings.
- Collaborate with multidisciplinary teams to ensure that research outputs are translated into programmatic priorities.
- Support technical capacity-building activities within TASP-implementing countries in line with the project's objectives.
- Participate in academic activities, specialized training, and relevant national and international workshops and conferences.
- Maintain effective communication and collaboration with project stakeholders, supervisors, and partner institutions throughout the PhD programme.

III. Call for Application and Funding

The successful candidates will receive a monthly living allowance (stipend) for the period of four years. Additional benefits include field allowances (mission fee) and any other research expenses per the UR standards/guidelines. The Ph.D. student's performance will be evaluated after one and a half years, and contract renewal will be contingent upon satisfactory performance.

IV. Requirement

Applicants must:

1. Not have been enrolled in any other PhD program at the time of recruitment
2. Be a Rwandan living in Rwanda
3. Be a UR or RBC staff
4. Be committed to staying and working in Rwanda during the Ph.D. period.
5. Be committed to traveling in the country, implementing the TASP project for capacity building

6. Have a Master's degree in Biomedical Sciences, Medical microbiology, field epidemiology, and laboratory training Program (FLTP), and other biomedical programs with experience in the field of applied microbiology
7. Meet UR admission requirements.
8. Be under 40 years old for men and 45years old for women

Desired qualifications

We are seeking candidates:

- with a strong academic background in pathogen biology and drug resistance evolution
- practical experience in mycobacteriology, applied microbiology, and/or molecular biology
- demonstrated scientific writing skills, including at least one first-author peer-reviewed publication related to infectious diseases.
- Proficiency in academic English (written and spoken); knowledge of French and/or Portuguese is an added advantage.

V. Application File

- Motivation letter addressed to the Director of the UR center of Postgraduate studies, specifying the area of interest for your PhD research, ideally a high-level topic title (with 10 lines maximum concept idea) in the above-mentioned area of interest.
- Copies of academic degrees (from baccalaureate)
- Certified copies of academic transcripts (from baccalaureate). Please supply the official explanation of the grading system if used.
- Three letters of recommendation from the institutions attended by the applicant
- Certified copy of the birth certificate
- Curriculum vitae includes, when applicable, a list of scientific publications and justifies any trajectory gap in the CV, if any.

VI. Application Procedure

Applicants are requested to send documents as listed above by email to the scholarship officer ur-cpgscholarship@ur.ac.rw at UR-CPGS, Tel: 0788532939, and a copy to jclaude.ngabonziza@rbc.gov.rw.

Deadline for application: 31st December 2025 at 5:00 PM

VII. Selection methodology

An interview will be organized for candidates who fulfill the requirements.

For more information, contact: Dr. J.C. Semuto Ngabonziza , jclaude.ngabonziza@rbc.gov.rw, Phone: +250788740490

Done at Kigali, ...08.../...12.../ 2025

UNIVERSITY OF RWANDA - UR

Assoc. Prof. KAYIHURA Muganga Didas
Acting Vice Chancellor