



# MBARARA UNIVERSITY OF SCIENCE & TECHNOLOGY

## PHARM-BIOTECHNOLOGY & TRADITIONAL MEDICINE CENTER (PHARMBIOTRAC)



# CALL FOR APPLICATIONS

## MSc & PhD Study Programmes

### At the World Bank Eastern and Southern Africa Higher Education Centre of Excellence (ACE II) in Pharm-Biotechnology and Traditional Medicine (PHARMBIOTRAC) 2017/2018

#### Summary:

The Africa Centre of Excellence for **Pharm-Biotechnology and Traditional Medicine (PHARMBIOTRAC)** is based at the **Mbarara University of Science and Technology (MUST)** a public university located in Western Uganda about 260 Km from the Kampala the capital city of Uganda. PHARMBIOTRAC is pleased to invite applications from highly motivated, talented, research-focused and qualified candidates for admission in the Study Programmes MSc (by Coursework and Dissertation) and PhD (by Research) in Pharm-Biotechnology and Traditional Medicine, for the academic year **2017/18 starting mid-August, 2017**. MUST has been ranked the best medical school in Uganda and in the region by the National Council for Higher Education and The East African Medical Council.

#### 1. Background:

Mbarara University of Science and Technology (MUST), is the second oldest public University in Uganda established by an Act of Parliament of the Republic of Uganda, and with a vision "to be a centre of academic and professional excellence in Science and Technology". MUST is one of the 24 competitively and transparently selected institutions of higher learning in Eastern and Southern Africa and is receiving funding under ACE II Project from the International Development Association (IDA)/World Bank. ACE II project is a regional project involving eight countries namely; Ethiopia, Kenya, Malawi, Mozambique, Rwanda, Tanzania, Uganda and Zambia.

The project seeks to promote regional specialization among participating institutions within areas that address regional development challenges through strengthening the capacities of higher education institutions of learning to deliver high quality, market-relevant post-graduate education, and build collaborative research capacity as well as conduct high quality applied research in five regional priority areas: industry, agriculture, health, education and applied statistics.

The Pharm-Biotechnology and Traditional Medicine Centre (PHARMBIOTRAC) at MUST is providing a regional platform for innovative drug development, including exploring the use of traditional medicine in the region. The goal of PHARMBIOTRAC is "to build a critical mass of specialized and skilled human resource that can advance traditional medicine and Pharm-Biotechnology for socio-economic development of Africa", the vision is "to be a leading African centre of excellence for training and research in traditional medicine and pharm-biotechnology", and with a mission "to contribute to documentation, validation and value chain development of traditional medicine and biotechnology

products for use in pharmaceutical and nutraceuticals industries in the region through training, research and community services for sustainable development".

To this end, PHARMBIOTRAC will provide financial support to selected highly motivated, research-focused and qualified candidates to pursue their MSc and PhD Study Programmes aimed at achieving the goal of the centre. Teaching and supervision will be provided by a joint team of faculty from MUST, faculty from partner Universities as well as senior technical personnel of industries and research institutes coming from India, Kenya, Mozambique, South Africa, Sudan, Uganda, USA, etc.

Applications are now invited from highly motivated, research-focused and qualified candidates for the admission to the following programmes at Mbarara University of Science and Technology commencing August 2017.

A. MSc in Pharmacology (by Coursework and Dissertation, Duration 2 Years Fulltime) Entry Requirements A honors Bachelors degree in Medicine and Surgery or its equivalent from a recognized University OR A honors Bachelors degree in Health Sciences or Biological Sciences e.g. Human Medicine, Veterinary Medicine, Dentistry, Nursing, Bachelor of Science.

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OR

A honors Bachelors degree in Health Sciences or Biological Sciences e.g. **Human Medicine, Veterinary Medicine, Dentistry, Nursing, Bachelor of Science.**

B. PhD (by Research, Duration 3 Years) in the field of Pharm-Biotechnology and Traditional Medicine with the following thematic areas of focus:

#### i) Understanding Traditional Medicine Philosophy of Health and Disease Prevention and Control

This PhD programme is designed to harness traditional medicine knowledge from the practitioners in communities for possible scientific interpretation, documentation, validation, standardization and development into curriculum for training in traditional medicine at undergraduate and master level. The research will focus on practitioners' understanding of health and disease, their diagnosis of disease, treatment and prevention of

disease as well as materials used and their preparation methods and precautions.

**Admission Requirements:** Applicants must have Master of Science or M. Med (or equivalent) degree in field related to Medicine, Dentistry, Nursing, Clinical Pharmacy, Public Health, and Epidemiology.

#### ii) Traditional/Herbal Medicine Quality and Safety Standards

This PhD programme is designed to investigate safety of traditional/herbal medicines and set attainable and acceptable standards for traditional/herbal medicine products produced on commercial scale. It will identify harmful or toxic substances and set limits on the use. It is designed to guide and inform regulation of herbal products in the region.

**Admission Requirements:** Applicants must have Master of Science or equivalent degree in the field related to Pharmacy, Pharmacology, Pharmacognosy, Pharmaceutical Technology, Microbiology or Pathology.

#### iii) Herbal Medicine Production/Manufacturing and Quality Control Standards

This PhD programme is designed to evaluate various herbal medicine production systems aimed at designing an appropriate technology and systems for production of high quality and safe traditional/herbal medicine products in the region. The programme will also evaluate and develop appropriate quality control tests and standards for traditional/herbal medicines in the region. This will be done in collaboration with pharmaceutical/herbal medicine industries and drug regulatory bodies in the region.

**Admission Requirements:** Applicants must have Master of Science or equivalent degree in the field related to Pharmacy, Pharmaceutical Science, Industrial Chemistry, Pharmaceuticals, Pharmaceutical Chemistry, Pharmacognosy, or chemistry.

#### iv) Traditional/Herbal Medicine Knowledge and Material Conservation and Propagation- in-situ, ex situ

This PhD programme is designed to harness traditional/herbal medicine material (plant, animal, etc), their conservation and propagation knowledge from the communities in the region and to design the most appropriate scientific methods for their conservation, domestication and propagation in the region. The conservation will include ex-situ in living gene banks, protected areas, and in-situ as cells, tissues, seeds or organs.

**Admission Requirements:** Applicants must have Master of Science (or equivalent) degree in the field related to Pharmacognosy, Ethno-botany, Agronomy, Horticulture, Agroforestry, Biotechnology, Forestry, Applied Botany or Biology.

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### v) Traditional/Herbal Medicine/ Clinical Validation Protocols and Standards

This PhD programme is designed to evaluate and compare the various methods of clinical drug evaluation and aimed at designing the most feasible and robust protocols and standards for clinical studies and validation of traditional/herbal medicines in the region.

**Admission Requirements:** Applicants must have Master of Science or M. Med (or equivalent) degree in field related to Internal Medicine, Clinical Pharmacy, Nursing, Medical Laboratory Science/Technology, Public Health or Epidemiology.

### vi) Pharmaco-Biotechnology-Application of Biotechnology to Drug Discovery, and Drug Production

This PhD programme is designed to apply the principles of systems biology and metabolomics to identify drug molecules and drug targets particularly macromolecules for development and production of modern drugs, particularly Biopharmaceuticals and Bio-products to tackle various disease burdens in the region especially Tumours, Cancers, HIV, Tuberculosis, Malaria, Diabetes, etc.

**Admission Requirements:** Applicants must have Master of Science or M. Med (or equivalent) degree in the field related to Pharmacy, Pharmaceutical Science, Biological Sciences, Biotechnology, Biochemistry, Microbiology or Molecular Biology.

### vii) Pharmaceutical Business Management/Regulation

This PhD programme is designed to evaluate the pharmaceutical business industry, value chain from active pharmaceutical ingredients production, to pharmaceutical product production, registration/regulation, Marketing and distribution. The programme will evaluate the challenges faced and the region's comparative advantage aimed at designing strategies for the establishment of industries for production and sale of high quality pharmaceutical active ingredients and pharmaceuticals/herbal medicines in the region.

**Admission Requirements:** Applicants must have Bachelor's degree in field related to Pharmacy, Pharmaceutical Sciences, Industrial Chemistry, Regulatory sciences with Masters of Businesses Degree (bias to pharmaceuticals).

### 2. Additional Admission Requirements for PhD Candidates

Applicants must submit a research concept note relevant to the thematic areas of focus for PhD programme as outlined above. The concept notes (PDF format) should not exceed 2500 words (Times New Roman, Font Size 12, & 1.5 Line Spacing). The concept note should clearly define the research problem, elucidate research done so far to address the problem with annotated references, identify gaps, justify the research work to be done, formulate clear objectives, methods, and indicate expected outcomes, and how the outcomes will tackle health challenges faced by the region using the approach proposed by PHARMBIOTRAC. Applicants should also submit a copy of the abstract of their Master's dissertation/thesis (or equivalent) as well as copies of their scientific publications (if any). Applicants are encouraged to demonstrate ability to think and work independently in a multi-cultural and multi-disciplinary work environment.

Applicants must pass an interview for admission into the PhD programmes (via Skype for applicants residing outside Uganda and in person for those residing within Uganda).

Applicants should demonstrate proficiency in English, which will be the medium of instruction. However, where possible, English language support will be provided to the candidates who may not have sufficient knowledge of English during the course of their stay at MUST.

### 3. Place of Study

Mbarara University of Science and Technology (MUST), Uganda with exciting laboratory attachment/placements in facilities of

partner universities/research institutes as well as industrial placements (internships) in **India, Kenya, Mozambique, South Africa, Sudan, Uganda, USA, etc.**

### 4. Payments and Fees Structure

Self-sponsored students are required to pay tuition fees as per the following category:

#### MSc in Pharmacology (by Coursework and Dissertation):

Ugandan, East African Community (EAC) and South Sudan Students	Other International Students
Tuition fees Shs. 2,800,000= p.a.	Tuition fees \$3,500 p.a.
Functional fees Shs. 1,270,000= p.a	Functional fees \$ 1,740 p.a.
NCHE Shs 20,000= p.a.	NCHE \$ 50 p.a.
Application Fees Shs. 50,000=	Application fees \$ 50 p.a.

#### PhD (by Research):

Ugandan, EAC and South Sudan Students	Foreign Students (other than Ugandan, EAC and South Sudan Students)
Tuition fees Shs. 8,000,000= p.a.	Tuition fees \$7,000 p.a.
Functional fees Shs. 1,270,000= p.a.	Functional fees \$ 1,500 p.a.
NCHE Shs. 20,000= p.a.	NCHE \$ 50 p.a.
Application fees Shs. 100,000=	Application fees \$ 50 p.a.

**NB:** Application fees should be deposited on the following PHARMBIOTRAC bank account in Standard Chartered Bank (in both UGX and US\$). Evidence of payment (e.g. bank slips or information on electronic transfer of funds) should be scanned and send directly to the contact details indicated below.

**Account Name:** Mbarara University of Science and Technology-Pharmbiotrac  
**Account Number (Ugx):** 0102808265800  
**Account Number (Us\$):** 8702808265800  
**Bank Name:** Standard Chartered Bank Uganda Limited  
**Bank Branch:** Mbarara Branch, Uganda

### 5. Scholarship Modalities and Sponsorship

Scholarship opportunities are available on a competitive basis for eligible female and male students from Eastern and Southern Africa Region (Ethiopia, Kenya, Malawi, Mozambique, Rwanda, Tanzania, Uganda and Zambia) including other African countries. Female students are particularly encouraged to apply for this scholarship and will be supported with extra stipend. Applicants with disabilities or disadvantaged areas or backgrounds are also encouraged to apply. Please indicate in the cover letter if you like to be considered for the PHARMBIOTRAC Scholarship.

All registered graduate students (with or without scholarship) will be granted financial support. The support should cover research expenses that will include field trips/placements, internships, conference attendance, and publication charges.

Financial support shall be provided to selected students (MSc for up to 2 years) and (PhD for up to 3 years). The support will initially be granted for one-year renewable upon a successful completion of the first year. Renewal of financial support for the subsequent scholarship years will be dependent upon successful completion of the previous year with written evidence of satisfactory progress received from immediate supervisor of the candidate.

### 6. Documents Required for Application

Completed application form which can be downloaded from the University website,

A cover letter indicating which program of study the application is being made and description of the motivation to join the

programme, and interest in scholarship.

A curriculum vitae (CV), Certified copies Master's and Bachelor's degrees and transcripts (for PhD and MSc respectively),

Recommendation letters from at least two academic referees who are knowledgeable about the applicant's behaviours and ability. Copies of valid National Identification Card or passport-Ugandan national, Copies of Passport for non-Ugandans,

Applicants from countries where English is not the medium of instruction must provide an English proficiency certificate from a relevant body or institution in their respective countries,

Research Concept Note relevant to the PhD theme sought, Abstract of copies of master's dissertation/thesis (or equivalent) Publications (if any).

A scanned copy of the application fee payslip Support letter from employer (if any), Sponsorship letter from an organization providing funding (if any),

Applications can be emailed to the contacts provided below.

### 7. Where and When to Apply

Applications can be submitted to the following addresses up to **August 11, 2017** for the first closing **23.59 PM East African Time** intake. Applicants must send scanned (soft copies) of the above listed documents, merged into one PDF document (i.e. not in separate files as separate documents).

However, PhD research concept notes, abstracts of copies of master's dissertation/thesis (or equivalent), and publications if any should be sent in a PDF format as separate documents.

Application forms can be accessed through:

<http://www.must.ac.ug/ADMISSION/>

The documents should be sent to the following addresses the email application route is preferred:

[pharmbiotrac@must.ac.ug](mailto:pharmbiotrac@must.ac.ug) and copy to: [ar@must.ac.ug](mailto:ar@must.ac.ug).

### 8. Contacts:

For Application, any inquiries and further clarifications, please contact the following:

**Casim Umba Tolo (Ph.D)**

**Centre Leader/Director, PHARMBIOTRAC, Mbarara University of Science & Technology,**

**P. O. Box 1410, Mbarara, Uganda, Tel. No: +256 485 20851,**

**Mobile: +256 772 837055**

**Fax. No: +256 485 20782,**

**Email: [pharmbiotrac@must.ac.ug](mailto:pharmbiotrac@must.ac.ug), [tolocas@must.ac.ug](mailto:tolocas@must.ac.ug),**

**Website: <http://www.must.ac.ug>**

**NB:** Applications received after the deadline will not be considered.

### 9. Notification of Selection:

Applicants will be notified by email a week later after the application deadline.



Pharm-Biotechnology & Traditional Medicine Center (PHARMBIOTRAC)



Mbarara University of Science & Technology, P. O. Box 1410, Mbarara Uganda <http://www.must.ac.ug>

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