MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES (MUHAS)

Call for Application for PhD Scholarships in Health Commodity Supply Chain Management

MUHAS SCHOOL OF PHARMACY

I. Background: The Senselet–Tanzania Project

The **School of Pharmacy (SoP)** at Muhimbili University of Health and Allied Sciences (MUHAS) is pleased to announce a call for applications for PhD scholarships under the **Senselet–Tanzania Project: Strengthening Healthcare Supply Chain Management and Education in Tanzania.**

This strategic project is implemented by a consortium led by **MUHAS** in partnership with **LEARN Logistics** and **Novo Nordisk A/S (NN)**, with associated partners including the **Ministry of Health of Tanzania (MoH)**. Building on successful initiatives in the region, the project aims to enhance healthcare supply chain competencies and infrastructure across the country, directly contributing to improved health outcomes for the Tanzanian population.

As a core component of this capacity-building initiative, MUHAS intends to offer PhD scholarships to academic staff, focusing on generating local evidence and developing expert faculty to sustain postgraduate training and research in Health Commodity Supply Chain Management (HCSCM).

II. Description of PhD Scholarships Programme

This call is for **Four (4) PhD Candidates**, corresponding to the thematic areas listed below. The scholarships are primarily funded by the Senselet–Tanzania Project. The aim is to develop faculty within MUHAS to lead innovative research and enhance the quality of teaching postgraduate HSCM programs.

The scholarships programme is expected to commence in the **2025/2026 Academic Year**.

III. PhD Thematic Research Areas (Concept Note Required)

Candidates are required to develop a **concept note** (as per section IV) within one of the following four thematic research areas, which align with the strategic objectives of the Senselet–Tanzania Project and the national HSCM priorities:

1. The Influence of Delivery System Dynamics and Effective Forecasting, Quantification, Demand Planning, and Procurement on Last-Mile Delivery for Essential Health Commodities in Tanzania

This PhD will examine how delivery system structures and planning processes influence the availability, timeliness, and equity of essential health commodities. It will assess how forecasting accuracy, quantification, demand planning, and procurement coordination across MSD, Jazia-PVS, council stores, and private distributors affect last-mile delivery efficiency. The study will map end-to-end supply-chain flows, identify systemic bottlenecks such as stock-outs, emergency orders, and wastage, and simulate interventions to improve responsiveness. Outputs: an evidence-based operational model of Tanzania's last-mile delivery system and actionable policy recommendations for strengthening planning, coordination, and accountability mechanisms.

2. Exploring Digital and Automation Pathways for Public and Private Health Supply Chain Distribution: Emphasis on Data Integrity and Cold-Chain Practices

This PhD will explore how digital and automation technologies can enhance transparency, accuracy, and reliability in health-commodity distribution. It will evaluate mobile stock-reporting tools, GS1/barcoding, RFID, IoT sensors, and predictive analytics in strengthening data integrity and cold-chain performance for temperature-sensitive products. Technology readiness, interoperability, and sustainability will be assessed through pilot implementations in both public and private distribution networks. Outputs: a national roadmap for digital and automation integration, a framework for cold-chain and data-integrity assurance, and policy guidance for scaling proven technologies.

3. Risk Management Linking Health Supply Chain and Pharmacovigilance Systems

This PhD will develop a risk-management framework that connects logistics operations with pharmacovigilance and product-safety monitoring. It will analyze how supply-chain disruptions—such as stock-outs, temperature excursions, and handling lapses—contribute to patient-safety risks and adverse events. Using risk-analysis tools (FMEA, HACCP), the research will identify high-risk nodes and propose data-driven interventions linking LMIS and PV systems for early detection and mitigation. Outputs: an integrated risk-management model linking supply-chain and PV data, a digital dashboard for risk signal visualization, and regulatory policy options for proactive patient-safety oversight.

4. Health Supply Chain Design and Product Quality Assurance Integration within Tanzania's Public–Private Systems

This PhD will design and optimize public–private supply-chain configurations that embed product-quality assurance within logistics design and operations. Using modelling, simulation, and Lean Six Sigma principles, it will assess how system structure, process flow, and governance affect quality, safety, and availability. The study will quantify remaining shelf life from port to facility level, evaluate data availability for redistribution decisions, and develop predictive models for minimizing product loss or degradation.

Outputs: an integrated design and quality-assurance framework, shelf-life and redistribution monitoring tools, and governance guidelines for quality-assured commodity management across both sectors.

IV. Eligibility and Mandatory Requirements

Candidates must satisfy the general PhD admission requirements of MUHAS and the following specific requirements:

1. **Academic Qualification:** Must possess a **Master's degree** in a relevant area (e.g., Pharmacy, Pharmaceutical Sciences, Public Health, Health Economics, Logistics, Supply Chain Management, or an equivalent field).
2. **Affiliation:** Must be a **full-time employee holding an academic/tenure track appointment** at **MUHAS**.
3. **Support Letter:** Submission of a **support letter** from the respective Department Head at MUHAS. This letter must confirm the department's support for the candidate and explicitly state that, upon successful graduation, the candidate will utilize the knowledge and skills gained to **support and strengthen the postgraduate teaching and research programs at SoP, MUHAS.**
4. **Concept Note:** Submission of a **full PhD research concept note** (Max. 5 pages) based on one of the four thematic areas listed in Section III. The concept note must clearly outline the working title, research gap, research problem, objectives, methodological approach, and the expected scientific significance/development impact.

V. Scholarship Benefits:

Tuition fee, stipend, travel expenses to attend scientific conference.

VI. Required Application Documents

Interested applicants must submit the following documents:

1. Application letter specifying the thematic area with motivation.
2. Certified copies of academic certificates (Bachelor and Master's) and transcripts.
3. Curriculum Vitae (CV) demonstrating research and academic experience.
4. Mandatory Support Letter from the Head of the respective department at MUHAS (as per Section IV.3).
5. Master's Dissertation abstract.
6. Copy of publication(s) (if any).
7. **PhD research concept note (Max. 5 pages)** aligned with one of the four thematic areas.

VII. Selection Process

Shortlisted candidates will be invited for an interview on dates that will be communicated through their registered email addresses.

VIII. How to Apply

Interested applicants shall compile all the above-mentioned documents (scanned and saved a zipped folder) and send them via email to the;

Senselet Tanzania Project Principal Investigator at: **senselet.tanzania@muhas.ac.tz**

copy the **Country Director KF TZ** at: **beatrice.millu@kuehne-foundation.org**

Important Naming Convention: Please name the application file/folder as:

"Candidate Name_PhD_Scholarship_Application_Senselet"

Deadline: The deadline for submission of applications is **15th November 2025.**

Note: Candidates should submit only one application.