



**COLLEGE OF HEALTH SCIENCES
SCHOOL OF BIOMEDICAL SCIENCES
DEPARTMENT OF PHYSIOLOGY
P.O. Box 7072, Kampala, Uganda**

JOB ADVERT

Background

Makerere University Biomedical Engineering Unit under the Department of Physiology is glad to advertise for positions under its new Project ‘**KeyScope Project: The Key to Sustainable Cancer Diagnosis and Treatment in Uganda.**’

Laparoscopic surgery is considered as the standard of care for cancer treatment in high-income countries. However, this technology is rarely accessible to LMICs due to the high cost of installment, lack of maintenance personnel, unreliable electricity, and shortage of consumable supplies. To address these concerns, a unique multidisciplinary collaboration between engineers, surgeons, oncologists, and business experts from Duke University, Makerere University, Uganda Cancer Institute and University of Maryland joined efforts to develop a low-cost, durable laparoscopic system (KeySuite) for use in resource-constrained environments.

Our aims are aligned to demonstrating the local capacity to manufacture, acquire local and international regulatory approval, determine clinical performance and distribute/sell the KeyScope to the local market. Specifically, we shall improve the current design and determine the local capacity to manufacture the device, establish the clinical safety and acceptability of the product, and obtain regulatory approval from local and international accredited bodies.

Position: Junior Research Fellow

Reports to: Project Coordinator

Engagement: Full time

Duration: 1 year renewable upon satisfactory performance

Duty Station: Kampala

Roles and responsibilities

As a trainee, a Junior Research Fellow will closely work with a research team to undergo training design, manufacturing and validation of the KeyScope. This is a non-degree/no-credit training opportunity that will prepare the successful candidate for advanced studies and future industry work in an upcoming medical technology sector of Uganda and Africa at large.

Specifically the Fellow will;

- i. Participate in the local construction of the KeyScope through material assessment and selection, developing a product manufacturing plan, and carrying out an impact assessment.
- ii. Aid in the establishment of clinical safety and acceptability of the KeyScope through the use of a feasibility study to secure approvals, recruit patients and surgeons.
- iii. Contribute to the process of attaining regulatory approval from a certified body for the KeyScope.
- iv. Contribute to the development of a commercialization plan under training and mentorship of a Business Developer.
- v. Actively engage in project documentation, questionnaire and ethics protocol development, journal article writing and publication, report writing.
- vi. Conduct key informant interviews, administer questionnaires, and verbatim transcription of interview recordings.
- vii. Participate in data collection and analysis using digital and paper-based tools.
- viii. Participate and contribute to teaching and student mentorship.
- ix. Engage with the research partners and stakeholders.
- x. Any other activities as assigned by the Principal Investigator, and Project Coordinator (Immediate Supervisor) from time to time.

Qualifications:

- i. Completed a Bachelor's Degree in Biomedical Engineering or any closely related field and at least awaiting graduation in not more than 6 months from an accredited University in Uganda.
- ii. If completed, candidate must not have graduated more than 1 year ago.
- iii. Academic qualifications of having attained or expecting at least expecting a second-class upper division degree.
- iv. Experience in Human-Centered Design skills and Design Thinking will be highly considered.
- v. Prior experience in working with international multidisciplinary teams and organizations.
- vi. Experience of previous work on laparoscopy is a plus.
- vii. Evidence of prior interest for research, design, innovation and medical device manufacturing.
- viii. Applicant should have a desire to work with different fabrication techniques.
- ix. Ability to multitask and perform duties in learning environment with minimum supervision
- x. Excellent scientific writing skills and a good command of communication skills.

How to Apply:

All suitably qualified and interested candidates should submit a one-page cover letter, one-page writing sample, CV (maximum 3 pages) with relevant certificates, transcripts & two reference letters as a single digitally signed PDF file addressed to the Project PI and emailed to **keyscopeu01@gmail.com** by 17:00hours on 18th April 2025. Indicate, “KeyScope Project” in the subject line. Those awaiting graduation should send their most recent testimonials. Only shortlisted applicants will be contacted.