

**OMUSENI AKISO ESTHER**

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## Education

### MSc. Medical Biotechnology

Maseno University, Kenya

September 2016 – February 2022

### BSc. Biomedical Science and Technology

Egerton University, Kenya

September 2011 – September 2015

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## Honors and Awards

- **Scholarship/Award:** Scholarship Funded By The Directorate General Development Cooperation For Short Course Study On Molecular Data For Infectious Diseases in at The Institute of Tropical Medicine- Antwerp – 2024 - 2025
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## Research and Development Experience

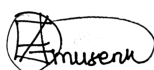
**KEMRI/USAMRD-K: May 2019 – Present**

### Research Scientist

- Conduct nucleic acid extractions.
- Perform next-generation sequencing (NGS) for molecular characterization of pathogens.
- Conduct serological and immunological assays.

### Laboratory Quality Assurance Manager

- Manages quality assurance and compliance with ISO 15189 standards.
- Conducts internal audits, EQA programs, and laboratory management reviews.
- Leads monitoring, evaluation, and corrective action planning for quality improvements.



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## **Assistant Research Officer**

**KEMRI/CDC: April 2017 – April 2019**

- Processed clinical samples for diagnostic research.
  - Conducted PCR-based molecular diagnostics and antimicrobial susceptibility testing.
  - Performed bacterial culture, nucleic acid extraction, and ELISA testing.
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## **Other Work Experience**

### **Student Intern**

KEMRI/CDC: July 2016 – December 2016

- Trained in sample processing, bacterial culture, and nucleic acid amplification.

### **Assistant Teacher**

Ebukhaya Secondary School: January 2014 – May 2014

- Taught Mathematics, Chemistry, and Biology to secondary school students.
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## **Publications**

1. COVID-19 mass testing and sequencing: Experiences from a laboratory in Western Kenya – PMID: 35937764
  2. Temporal lineage replacements and dominance of imported variants of concern during the COVID-19 pandemic in Kenya – PMID: 35982756
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## **Conference Presentations**

- American Society on Tropical Medicine and Hygiene (ASTMH) Conference – October 2023
- KEMRI Annual Scientific Conference – February 2020 and February 2024
- KDF Scientific Conference March 2024
- PATH International VASE Conference on Shigella and ETEC Vaccines – Mexico City, June 2018



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## Professional Development Training

- Molecular Data for Infectious Diseases (October 2024 – February 2025)
- Laboratory Quality Management System – CLSI (2022)
- Biological Safety Cabinet Training – CDC (2020)
- Flow Cytometry Workshop – Institute of Primate Research (2019)
- ISO 15189 Laboratory Accreditation Training – [Institution, Year]
- Data Science: Visualization (R Programming)
- Genome Analysis and Targeted Sequencing Training

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## Leadership Experience & Community Engagement

- Director, ERIC Cancer Initiative (Kenya) – June 2024 to Present
  - Leads community engagement programs focused on breast cancer awareness and early detection.
  - Develops public health strategies to improve cancer diagnosis and management.
- Director at Large & Gender Equity and Diversity Inclusion commission Chair  
World Flying Disc Federation (WFDF) – November 2023 to Present
  - Advocates for women's inclusion in sports and leadership development.
  - Leads global initiatives for gender equity and representation.
- Captain, Kisumu Frisbee Club  
August 2018 to 2024
  - Mentored young athletes, fostering leadership and teamwork skills.

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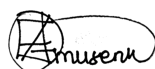
## Languages

- **English** – Fluent (Reading, Writing, Speaking)
- **Swahili** – Fluent (Reading, Writing, Speaking)

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## Technical Skills

- Molecular Biology Techniques – PCR, qPCR, TAC, ELISA, NGS
- Microbiology techniques – Bacterial culture, isolation and identification
- Bioinformatics & Data Analysis – R, Python (basic), Genomic Data Interpretation
- Laboratory Quality Management – ISO 15189, Internal Audits, EQA
- Project Management & Leadership – Research Coordination, Scientific Mentorship

D. Amuseku

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## References

**Dr. John Waitumbi**

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Mentor and current supervisor

**Dr. Benjamin Ochieng**

Senior Research Scientist, KEMRI

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Professional mentor

**Prof. Collins Ouma**

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Academic mentor

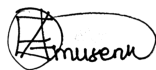
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Academic mentor



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