

CURRICULLUM VITAE

PERSONAL DETAILS

Name: JOSEPH OWINO MUGA
Sex: MALE
Date of birth: 22nd DECEMBER 1968
Nationality: KENYAN
Marital status: MARRIED
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Profile

I am a Chief Technologist at the School of Pharmacy, Maseno University where am in charge of technical aspects in the training of Bachelor of Pharmacy program. I am also a PhD-student of Cell and Molecular Biology at Maseno University. My research interests are mainly focused on the use of nanotechnology in the development of novel drug delivery systems for antimalarial drugs whose efficacy have reduced due to resistance by malaria parasites. The current study is aimed at designing a nanoparticulate drug delivery system that will restore the efficacy of previously used antimalarial drugs, to make them target specific and mitigate development of resistance.

UNIVERSITY EDUCATION

Currently enrolled for PhD in Cell and Molecular Biology, Maseno University

Research title: *"Synthesis of Heparin-Functionalized Solid Lipid Nanoparticles Loaded with Artemether, Lumefantrine and Primaquine Combination for determination of Antimalarial Activities"*

2012 to 2017: MSc Cell and Molecular Biology, Maseno University

2005-2009: Moi University School of Science, BSc- Biochemistry

COLLEGES EDUCATION

1996-1997: Kenya Medical Training College

Higher National Diploma, (Clinical Chemistry).

1989-1992: Kenya Medical Training College and studied Diploma in Medical Laboratory Sciences.

PROFESSIONAL TRAININGS

November 2012: Application of nanotechnology in medicine, Pan-African Summer School in Nanomedicine, South Africa

September 2008: Pre-Exposure Prophylaxis (PrEP) Study workshop in Kampala, Uganda

June 2008: PrEP Study Eldoret Site Activation Training Eldoret, Kenya.

October 2007: Partners in Prevention Regional Workshop, Nairobi, Kenya

October 2007: Good Clinical Laboratory Practice course, Nairobi, Kenya.

July 2006: Partners in Prevention Study Specific Training, Johannesburg, South Africa

July 2006: Good Clinical Laboratory Practice Implementation Workshop by IAVI, Johannesburg, South Africa.

SECONDARY EDUCATION

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1983-1986: Musingu High School for the Kenya Certificate of Education

1987-1988: Chavakali High School for the Kenya Advanced Certificate of Education

WORKING EXPERIENCE

April 2021 up to date:

Chief Technologist at the School of Pharmacy, Maseno University

July 2011 up to April 2021

Joined Maseno University School of Medicine as Senior Technologist Biochemistry

Responsibilities:

- Identification of departmental needs through liaison with head of department for successful implementation of teaching and research activities
- Maintenance of laboratory equipment and supplies inventory
- Supervision of undergraduate and postgraduate practicals
- Supervision of the technical staff
- Participation in planning, designing and developing teaching and research activities
- Provision professional support to improve and manage consultancy services undertaken by the laboratories to ensure reliability of results
- Identification of training needs for technical staff in liaison with head of department
- Procurement of supplies, installation, usage, maintenance, depreciation valuation and disposal
- Participate in curriculum development

October 2010 to July 2011

Deputy Head of Laboratory Services at Moi Teaching and Referral Hospital with the following responsibilities;

- To ensure that requisition of reagents / supplies is made as per requirements
- Attend technical evaluation committee meetings
- Ensure repairs, maintenance and service of machines
- Ensure reagents and supplies are available and update the HoD in case of any shortage
- To handle monthly projections of reagents/supplies
- Ensure monthly returns from sections are remitted on time
- Assist the HoD in administration and personnel matters
- To ensure the department inventory is updated
- Ensure that the procurement plan is fully followed.

December 2009 to October 2010

- Technologist in charge of Emergency/Routine Laboratory services at Moi Teaching and Referral Hospital.
- Quality Assurance/Quality control coordinator, Laboratory Services.

Responsibilities:

Day to day running of the Routine and Emergency Laboratory on 24hours/7 days

- attending departmental meetings
- facilitating CMEs
- coordinating EQAs
- review of SOPs
- writing new SOPs

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- corresponding with EQA providers
- management of supplies
- managing turnaround times
- writing monthly reports
- calibration and maintenance of equipment
- keeping records of equipment maintenance

September 2009:

Officer in charge of the Medical Wards Laboratory Services where duties include;

- Supervision of laboratory staff assigned to work in the medical wards
- Supervision of the phlebotomists collecting samples from patients and transporting to the labs
- Preparation of duty rosters
- Tracking turnaround times
- Billing for investigations done
- Attending mortality meetings and other meetings
- Attending Division of Medicine monthly meetings
- Writing reports
- Attending departmental meetings
- Day to day running of the section.
- Training and CMEs.
- Trainer of Prevention of Mother to Child Transmission and Provider Initiated Testing and Counseling HIV rapid testing programme at AMPATH Training Institute.

December 2008 to September 2009:

Biochemistry Laboratory, Moi Teaching and Referral Hospital

Duties here include;

- Running chemistries using the COBAS INTEGRA and manual methods,
- Calibration of equipment
- Maintenance of equipment
- Evaluation of new kits
- Quality monitoring,
- Teaching students on attachment
- Signing logbooks for students on industrial attachment
- Facilitating at departmental CPDs
- Preparation and updating SOPs
- Organizing point of care tests like blood sugar and blood gas analyses for patients in intensive care and recovery units.
- Compiling monthly reports.
- Corresponding with EQA Scheme providers.
- Sending EQA results for evaluation
- Reviewing results of test and proficiency samples run
- Basic housekeeping and monitoring fridge temperatures
- Attending meetings and trainings.
- Carrying out daily, weekly and monthly maintenance of equipment.
- Filling equipment maintenance logs and Ensuring availability of supplies.

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2004 to 2008:

- Quality Manager, AMPATH Reference Laboratory
- PIPS Study/Pre-Exposure Prophylaxis Study Laboratory Manager
- Partners in Prevention Liaison officer.
- Technologist in charge of HIV serology laboratory, AMPATH Reference Laboratory.

DUTIES INCLUDED:

- Running samples in the Serology laboratory
- Coordinating external quality assurance
- Coordinating quality control programs
- Writing progress report for Partners in Prevention Study
- Aliquoting and shipping specimens abroad according to the IATA rules for transport of dangerous goods.
- Archiving of specimens locally
- Storage of raw data for the PIP Study
- Maintenance of specimen database
- Stock control
- Monitoring turnaround times
- Running the serology laboratory and performing tests like ELISAs, RPR, Hepatitis B surface antigen test, TPHA, Herpes Simplex II ELISA, urine hcg and HIV test.
- Quality control of HIV rapid testing kits for the AMPATH Clinics
- Corresponding to issues related to quality assurance
- Attending teleconferences and circulating minutes of management meetings
- Local and international correspondence for the Partners studies
- Attending management meetings
- Writing Standard Operating Procedures
- Safety coordinator for the AMPATH Reference Laboratory
- Training newly hired staffs and providing refresher training for laboratory staff.
- Mentoring staff from other facilities
- Maintaining staff training files and records

2004: Joined the Partners in Prevention (PIP) Study as the study laboratory technologist, laboratory manager and liaison person for the Eldoret site.

2002:

Moi Teaching and Referral Hospital's Biochemistry laboratory as the Laboratory Quality Assurance co-coordinator and helped set up a QC system in the laboratories.

1992-2002:

Worked in district hospitals in Kenya as a laboratory technologist in the Ministry of Health (Eastern, Rift Valley and Western Provinces) in various capacities.

Specific duties;

- Running routine investigations
- Training and setting up diagnostic laboratories in resource limited health faculties in Isiolo and Samburu counties
- Participating in hospital management team meetings and activities

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PRESENTATIONS

1. “*Evaluation of Antiplasmodial Activities of Chloroquine Encapsulated in Heparin-Functionalized Solid Lipid Nanoparticles*” at the Annual Medical Laboratory Scientific Conference in Kenya, 2015.
2. Thesis title: “*Evaluation of Antiplasmodial Activities of Chloroquine Encapsulated in Heparin-Functionalized Solid Lipid Nanoparticles*”

PUBLICATIONS

Muga, J. O., Gathirwa, J. W., Tukulula, M., & Jura, W. G. Z. O. (2018). In vitro evaluation of chloroquine-loaded and heparin surface-functionalized solid lipid nanoparticles. *Malaria Journal*, 17(1). <https://doi.org/10.1186/s12936-018-2302-9>

HOBBIES: Music, reading and games

AFFILIATIONS:

1. Member of the Association of Kenya Medical Scientific Officers (AKMLSO).
2. Registered and approved to practice laboratory medicine by the Kenya Medical Laboratory Technicians and Technologists Board (KMLTTB).

REFEREES:

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