APPLICANT BIOGRAPHICAL SKETCH

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NAME: Moses Okol

APPLICATION LOG IN USERNAME: moses.okol@mak.ac.ug

POSITION TITLE: Assistant Lecturer

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	Completion Date MM/YYYY	FIELD OF STUDY
Makerere University Kampala	MPH	May/ 2010	Public Health
Makerere University Kampala	Bsc.	May/ 2002	Biochemistry and Chemistry

A. Personal Statement

I am a well-rounded biochemist with public health training with a combination of experiences and theoretical analysis capabilities. I am well trained at master's level in research methodology, biostatistics and epidemiology; and have considerable experience in biological sciences and environmental analysis. I have been lecturing industrial & environmental biochemistry since 2012 and have 14 years with manufacturing industry.
I am inspired by the complexity of inter-disciplinary work. My areas of interest include Occupational, Environmental & Molecular epidemiology together with environmental toxicology and environmental bioremediation. I am Interested in studying the impact of exposures to various pollutants on health/ biodiversity/ ecosystems, the interactions between host factors (genetic and acquired susceptibility), and environmental exposures in producing acute and chronic diseases and the consequences of biodiversity loss for the support and provision of ecosystem services. Generally, application of inter-disciplinary methods to evaluation and risk assessment of environmental pollutants, environmental fate metabolism. The overall goal is to understand / elucidate the complex biochemistry of gene-environment interactions that are critically involved in diseases relevant to public health and effects on environment/ ecosystems. The pollutants of interest include particulate/ gaseous air pollutants, inhalable microorganisms associated with particulate air pollutants, heavy metals, pesticides, persistent organic pollutants, and microplastics. I have supervised projects on bioremediation of oil contaminated soil using sorghum plants and industrial wastewater treatment plants. Currently studying how transport related air pollution is associated with lung function.
Experienced in ISO 9001, 22000, 14001, 45001 and FSSC 22000 design, implementation and auditing.

B. Positions and Honors

Positions and Employment

1996-2002 Bishop Nkoyoyo Senior Secondary School- Assistant Director of studies, Internal examination master, Head of Chemistry Department and Chemistry and Physics Teacher.
2002-2003 Research assistant for Dr. Kyambadde PHD student Karoliska Technical Institute: Project: Use of constructed wetland to treat wastewater.
2003 – 2017 Diageo Uganda Breweries Ltd- Supply Governance Manager, Quality & Environment & HS Manager, Quality Systems Manager, Materials and environmental chemist.
2012 – >>>> Makerere University Kampala- Assistant Lecturer, College of Natural Science, School of Biosciences, Department of Biochemistry and Sports Science.

Other Experience and Professional Memberships

2020- Fundamentals of GIS and Spatial Data Analysis, Makerere University

2019- Leading and managing a research and innovation grant project. Makerere University GMS

2019- Partnership for Enhanced and Blended Learning (PEBL) Rwanda Kigali, organized by The Association of Commonwealth Universities

2017- NEMA Uganda, Waste management Conference.

2016- NEMA Uganda, Waste management Conference (made a poster presentation on wastewater treatment and use of wastewater facility sludge).

2015- NEMA Uganda, Waste management Conference (Co-presented on waste management in industry).

2014, 2015 and 2016: Best employee awards at Diageo Uganda Breweries Ltd.

2014- UNBS standards review-Standards for Food & Agriculture, Methods of Analysis of Alcoholic beverages, Water and alcoholic beverages standards.

2012- East African Standards Harmonization workshop organized by UNBS.

2010- Participatory Epidemiology methods training facilitated by AFNET.

2006- Eco-Benefits VIII- facilitated by Uganda Cleaner Production Centre. Skills-Environmental management, materials and energy auditing, waste minimization and materials balancing.

C. Contributions to Science

1. **Graduate Research:** As a masters of public health student (presented as MPH dissertation), I carried out research on factors associated with utilization of HMIS data for decision-making in Nakawa Division, Kampala District. This study provided an understanding into which factors drive the use of HMIS data for decision making. The work from the study was published as a poster during Participatory Epidemiology Network for Animal and Public Health held in Dar-salaam Tanzania.

    a. Moses Okol, Rutembererwa Elizeus, Ddamulira J B (2011) Factors associated with the utization of health Management Information Systems (HMIS) data for decision making in Nakawa Division, Kampala Participatory Epidemiology Network for Animal and Public Health (PENAPH) workshop in Dar-salaam, Tanzania.

2. **Graduate research:** I studied factors associated with persistence of Tungiasis in Kakira County, Jinja district. Study selected for presentation as poster during the First Technical Workshop of Participatory Epidemiology Network for Animal and Public Health held in Chiang Mai, Thailand in Dec'2012. The work was particularly exciting because it demonstrated how participatory epidemiological approaches can be used together with common approaches to better understand and explain research findings.

    a. Samuel Etajak, **Moses Okol and** Monica Musenero (2012) Factors Associated with the Persistence of Tungiasis In Kakira Town- Council, Jinja District, Uganda, Participatory Epidemiology Network for Animal and Public Health (PENAPH).

3. **Graduate Research:** I was part of the team that investigated the H1N1 Influenza Virus outbreak in Bushenyi District. As a developing researcher, this study helped us understand the role of cross-boarder movement in disease transmission and management.

    a. Busuulwa Monday, David Mukanga, Olive Namusisi, Musenero Monica, Nanyunja Miriam, Okot Charles, Wamala Joseph, Adrawa Michael, Opollo Mark, **Okol Moses**, Lubega Mohamed and Akech Stella (2010) Pandemic Influenza A H1N1 Outbreak in Bushenyi District, Western Uganda, 2009 Training Programs in Epidemiology and Public Health Interventions Network (TEPHINET).

4. **Predoctoral Research:** My ongoing predoctoral research is focused on characterization of Transport-Related Air Pollution (TRAP) exposure among commuter taxi drivers and motorcycle taxis (boda-boda motorcyclists) in Kampala District and how this exposure is related to impaired lung function. Whereas exposure to traffic related air pollution (TRAP) has adverse health effects, there is still a limited body of evidence and knowledge on characteristic of TRAP and levels of exposure among different microenvironments, including the characteristic in the transport microenvironment. Only a limited number of studies have examined the relationship between air pollution and health effects. This is the first study involving the transport microenvironment done in Uganda. I believe the results from my research will likely be highly relevant to human health and to the understanding of physical, chemical and biological characteristics of TRAP and how the TRAP characteristic is associated with lung function.

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research and Support

Grant: Makerere University Kampala, Research and Innovation Fund- Cluster 1
Research Title: Association Between Transport-Related Pollution (Trap) And Lung Function Among Commuter Taxi Drivers and Boda-Boda motorcyclists in Kampala City.
This study aims to characterize and compare pollution exposure in transport microenvironment (commuter taxis and motorcycle cycle taxis-boda-boda motorcyclists) to the ambient pollutant exposure. It will also determine how the pollutant exposure characteristic is associated with Lung function among the exposed.
Grant Amount: 13025 USD
Role: Principal Investigator

Grant: Makerere University Kampala, Research and Innovation Fund- Cluster 1
Research Title: Development of Bacterial Systems for The Production of Industrial Enzymes: Proteases and Levansucrases. This study aims to isolate and characterize (morphologically, physiologically, biochemically and phylogenetically) thermophiles that secrete proteases and levansucrases and mutagenic improvement of enzymes that produce desired activity for improved production of the enzyme (s).
Grant Amount: 28108 USD
Role: Study Coordinator

Research Support Completed During the Last Three Years
None