

CATHERINE NJERI MWANGI

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### **PERSONAL INFORMATION**

Name: Catherine Njeri Mwangi  
Nationality: Kenya  
Gender: Female

### **EDUCATION**

**Current** Jomo Kenyatta University of Agriculture and Technology (PhD  
Medical Microbiology)  
**2020 -2020** University of Washington, Certificate Project Management in Global  
Health  
**2008-2013** Jomo Kenyatta University of Agriculture and Technology (ITROMED)  
Master of Science in Medical Microbiology  
**2004-2007** University of Nairobi, BSc. Biochemistry (Second Class Upper Division)

### **SUMMARY OF QUALIFICATIONS**

I am a trained Medical Microbiologist, with over ten years' experience of working in Medical research at Kenya Medical Research Institute and Aga Khan University Hospital serving as a research associate. I have interest in neglected tropical diseases and *Helicobacter pylori* antibiotic resistance patterns which is in alignment with the Global Action Plan of Antimicrobial Resistance (AMR) and National Action Plan of AMR as proposed by the Ministry of Health Kenya.

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### **EXPERIENCE**

**January 2017-current** Kenyatta University (Tutorial Fellow)  
**Responsibilities**

**September 2015 to September 2016** Jomo Kenyatta University of Agriculture and  
Technology (Part- time Lecturer)

#### **Responsibilities**

- Prepare a course outline for the students
- teach students in line with the outline
- preparing practicals, assignments and setting continuous assessment tests and exams

**April '13 to August 2016** Aga Khan University Hospital (Research Associate Drug Index  
Validation Study)

**Responsibilities:**

- Perform laboratory analysis, which includes but not limited to the following techniques (ELISA, RPR, TPPA, TPHA, Western Blotting, HIV DNA PCR, HIV Viral Load, Excellent experience in PCR, Enzyme linked Immunosorbent assays (ELISA) and Rapid Diagnostic Kits.
- Well conversant with operation of COBAS Integra Clinical Chemistry analyzer for routine chemistry analysis, Cobas 6000 series for routine and special chemistry analysis, Cobas AmpliPrep for DNA/RNA extraction and Cobas Taqman 48 PCR
- Performing specialized analytical techniques including macrophage harvesting, HPLC, column chromatography among others.

**Dec 2009-March 2012** Centre for Microbiological Research (KEMRI) (Volunteer)

**Responsibilities:**

- Field specimen collection and analysis
- Culture media preparation, microscopy and serology
- Research and sourcing of national and international journals and research paper
- Supervision and training of students in specimen and data collection and laboratory analysis and report writing
- Handle and manage data collection and analysis for project studies.

**June 2008-Oct 2008** Walter Reed Programme (KEMRI) (Research Student)

**Responsibilities:**

- HEP-2, MDCK and LLCMK-2 cell line culture preparation, RSV, Influenza virus isolation and IFA preparation
- Supplementary and differential media preparation, Enterobacteriaceae isolation and serotyping
- DNA extraction, electrophoresis, conventional and real time PCR analysis
- Enzyme Linked Immunosorbent Assay and Plaque reduction neutralization test

### **Fellowships and grants**

1. 2019: Training grant *H. pylori* culture and Molecular Techniques at Department of Environmental and Preventive Medicine, Oita University, Japan.
2. 2019: Project funding by Department of Pathology (Chairman's kitty) Aga Khan University Hospital
3. 2016 to 2017: Project Research grant Innovation Centre for Molecular Biology and Biotechnology AFRICAN-ai-JAPAN project.
4. 2011: Postgraduate Project Research Funding World Health Organization

### **Participation in Workshops and Training**

1. Annual Early Career Health Researchers Symposium Aga Khan University Hospital 10<sup>th</sup> December 2020
2. *Helicobacter pylori* culture and Molecular Techniques Training, Department of Environmental and Preventive Medicine, Oita University, Japan 9<sup>th</sup> to 22<sup>nd</sup> March.
3. Strategic Partnerships for Higher Education Innovation and Reform Curriculum Mapping for Programs Workshop, 8<sup>th</sup> to 10<sup>th</sup> May 2019
4. Partnership for Health Research Training in Kenya 9<sup>th</sup> to 13<sup>th</sup> April at University of Nairobi
5. Annual Early Career Health Researchers Symposium Aga Khan University Hospital 29<sup>th</sup> September 2018
6. Quality Issues in Antimicrobial Susceptibility Testing on 2nd August 2018 at The Aga Khan University Hospital, Nairobi, Kenya.
7. Elsevier Authors Training workshop 19 May 2017

## **8.0 RESEARCH AND PUBLICATIONS**

1. Prevalence and Endoscopic Findings of *Helicobacter pylori* Infection among Dyspeptic Patients in Kenya. Catherine N. Mwangi, Stephen Njoroge, Allan Rajula, Ahmed Laving, Rose Kamenwa, Smita Devani, Andrew Nyerere, Gunturu Revathi *Open Journal of Medical Microbiology* Vol.10 No.4, December 30, 2020 DOI: 10.4236/ojmm.2020.104020
2. Whole Genome Sequencing Reveals Virulence Potentials of *Helicobacter pylori* Strain KE21 Isolated from a Kenyan Patient with Gastric Signet Ring Cell Carcinoma. Catherine Mwangi, Njoroge S, Tshibangu-Kabamba E, Mooloo Z, Rajula A, Devani S, Matsumoto T, Nyerere K, Kariuki S, Revathi G, Yamaoka Y. *Toxins (Basel)*. 2020 Aug 29;12(9):556. doi: 10.3390/toxins12090556. PMID: 32872465; PMCID: PMC7551074.
3. Comparing Diagnostic Performance of Pronto Dry Rapid Urease® and Culture to Histopathology among Endoscopy Patients at the Aga Khan University Hospital, Nairobi-Kenya, Stephen Njoroge, Catherine Mwangi, Kimang'a Nyerere, Gunturu Revathi, Smita Devani, Allan Rajula, Rose Kamenwa, Nyamongo Onkoba, and Fredrick Odhiamb *Journal of Advances in Medicine and Medical Research* 10.9734/jammr 2019
4. Serotypes and antimicrobial susceptibility patterns of nasopharyngeal pneumococci isolated from children in health centers in Nairobi. Catherine Njeri Mwangi, Gunturu Revathi, Samuel Kariuki and Ann Muigai 2016 *Open Journal Of Medical Microbiology* 10.4236/ojmm.2016.61007
5. Antimicrobial activity of various extracts of the sea urchin *Tripneustes gratilla* (Echinoidea) African Laila Abubakar, Catherine Njeri Mwangi, Uku. J, Ndirangu S. 2012 *Journal of Pharmacology and Therapeutics* 19-23 A KeSoBAP Publication ©2012

## **REFEREES**

**Dr. Samuel Kariuki** [PH.D Microbiology, Director Centre of Microbiological Research]

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**Dr. Gunturu Revathi** [Consultant microbiologist]

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**Dr. Daniel W. Kariuki (PhD)** [Dean]

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