

# SIMON CHENGO MASHA

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## PERSONAL INFORMATION

Nationality: Kenyan

Gender: Male

Languages: English and Kiswahili

## INTERESTS AND EXPERTISE:

**Infectious diseases:** I have experience and specific interest with research involving Sexually Transmitted Infections (STIs), studies aiming at characterizing this pathogens, laboratory diagnosis and epidemiology of STIs.

**Drug resistance:** I have interest and experience with the epidemiology of antimicrobial resistance and detection of resistance using both conventional and molecular techniques.

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## PROFESSIONAL TRAINING:

### **1. Doctor of Philosophy in Health Sciences**

Ghent University Belgium October 2014 to Date

Research topic: Vaginal infections with emphasis on *Trichomonas vaginalis* amongst women attending antenatal care in Kilifi, Kenya.

#### *I. Research component*

- Epidemiological description of STIs among pregnant women.
- Molecular typing of *Trichomonas vaginalis*
- Interactions of *Trichomonas* and vaginal microbiome

#### *Molecular assays*

- Conventional PCR, qPCR, RT-PCR, Gel electrophoresis and sequencing

### **2. Master of Science (Molecular Biology-Human Option)**

Vrije Universiteit Brussels (VUB) Belgium 2011-2013

Distinction

#### *I. Taught Component;*

My MSc taught course modules included Immunology, Microbiology, Molecular biology, Human infectious diseases, Microbial genetics, Bioinformatics, General & analytical Biochemistry, Virology, Parasitology, Nucleic acid chemistry and Genetic Engineering.

#### *II. Research Thesis Component;*

My research thesis entailed the development and validation of a qPCR for detection of macrolide resistance in *Mycoplasma pneumonia*, followed by a retrospective macrolide resistance study of in *Mycoplasma pneumonia* at the Antwerp University Hospital, Belgium.

### 3. Bachelor of Science (Medical Laboratory Science)

Jomo Kenyatta University of Agriculture and Technology (JKUAT) 2004-2008

### 4. Other Courses and Skills

- Research with Data/Laboratory Specimens(CITI)
- Good Clinical Practice (CITI)
- Protection of Human Research Participants (NIH)
- Data analysis using STATA
- Anaerobic culturing and determination of H<sub>2</sub>O<sub>2</sub> production by vaginal microflora
- Computer Ms Office package

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## **WORK EXPERIENCE**

- September 2016 to Date  
Pwani University  
**Assistant lecturer**
- October 2014-to Date  
**Visiting PhD Studentship**  
KEMRI Welcome Trust-Kilifi
- May – August 2015  
**Part-time Assistant-Lecturer**  
Mount Kenya University
- January 2104 – April 2015  
**Part-time Assistant-Lecturer**  
Pwani University
- Sep 2013 – Sep 2014  
**Part-time Assistant-Lecturer**  
Technical University of Mombasa

Lecturing the following courses: Epidemiology, Microbiology, HIV, Medical virology, Essential of molecular biology, Microbial genetics, Molecular markers techniques and applications

### *Duties and Responsibilities*

- Delivering lectures, seminars and tutorials;
- Designing, preparing and developing teaching materials;
- Assessing students' coursework;
- Setting and marking examinations;
- Supporting students through an advisory role;
- Supervising students' research activities;

- October 2012 - June 2013  
University of Antwerpen Hospital (UZA)  
Masters studentship

### *Duties and Responsibilities*

- Literature review
- Real time PCR development and validation for *Mycoplasma pneumoniae*
- DNA extractions.
- Molecular typing for macrolide resistance
- Retrospective study on clinical samples for macrolide resistant *M.pneumoniae*.

- Quality control procedures.
- Writing a report inform of a thesis document.
- August 2010 - September 2011  
International Center for Reproductive Health-Kenya

### **Laboratory Technologist**

#### *Duties and Responsibilities*

- Sample reception and running of various analytic procedures for various studies.
- Microscopy and other analytical tests.
- Development of Laboratory Quality and safety Manual, SOPs,
- Instrumentation and Equipment maintenance logs, Reagent preparation files,
- Initial Method Validation procedures.
- Reagent and supplies Receipt and Handling
- Ensuring running of internal and external quality control panels and documentation.
- Maintenance of a corrective Action log and reports. Temperature monitoring for stored samples and reagents in the fridges and freezers.

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### **Short Term Research Consultancy**

- 1) 8<sup>th</sup>-11<sup>th</sup> March, 2010 Academy for Educational development-Pretesting of Dosing Instructions for Pyramax
- 2) November 2009, Population Service International ‘Tunza’ Reproductive Health Program
- 3) September 2009, MILDMAY International – HIV Basic Care Kit
- 4) 15<sup>th</sup>-31<sup>st</sup> July, 2009. African Population Health Research Center- Early Childhood Education
- 5) April - May, 2009 National Campaign Against Drug Abuse
- 6) January-February, 2009 Population Services International- HIV Survey
- 7) September-December, 2008 Family Health International, Orphans and Vulnerable Children needs assessment APHIA

*Duties* for all the above appointments included designing of tools and data collection quantitative &/or qualitative data.

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### **AWARDS**

- Won a full scholarship, awarded by the International Union for Sexually Transmitted Infections (IUSTI) to attend the 17<sup>th</sup> IUSTI WORLD CONGRESS, MARRAKESH 9<sup>th</sup>-12<sup>th</sup> May 2016.
  - International AIDS Vaccine Initiative (IAVI) Investigator Initiated Research funding 2014.
  - Won a competitive PhD scholarship in 2014, awarded by the government of Belgium (VLIR-UOS).
  - Won a competitive scholarship in 2011, awarded by the government of Belgium (VLIR-UOS) to study a Masters in Molecular Biology.
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## **Publications and conference presentations**

- Molecular typing of *Trichomonas vaginalis* clinical isolates from Kilifi, Kenya by actin gene sequencing and detection of *Trichomonas vaginalis* viruses. ( *In review, February 2017*)
- High prevalence of curable sexually transmitted infections among pregnant women in a rural county hospital in Kilifi, Kenya (*Review in PLOS One, December 2016*)
- Oral presentation at the 17<sup>th</sup> International Union for Sexually Transmitted Infections (IUSTI) WORLD CONGRESS, MARRAKESH 9th-12th May 2016.
- Association of *Trichomonas vaginalis* isolates from Kenya with mycoplasma species (*manuscript preparation*)
- Application of real-time PCR for the detection of macrolide resistance in Belgian *M. pneumoniae* strains. European Congress of Clinical Microbiology and Infectious Diseases, Barcelona, Spain, 2014.

K. Loens<sup>1</sup>, S.C. Masha<sup>1</sup>, K. Lagrou<sup>2</sup>, H. Goossens<sup>3</sup>, M. Ieven<sup>1</sup>

<sup>1</sup>Microbiology Belgian Reference Centre for Respiratory Pathogens, University Hospital Antwerp, Antwerp, Belgium; <sup>2</sup>Microbiology Belgian Reference Centre for Respiratory Pathogens, University Hospitals Leuven, Leuven, Belgium; <sup>3</sup>Microbiology, University Hospital Antwerp, Antwerp, Belgium

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## **REFEREES**

### **Dr. Benjamin Karabu Tsofa**

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### **Prof. Mario Vaneechoutte**

Director of the Laboratory for Bacteriology Research (LBR), Department Clinical Chemistry, Microbiology & Immunology, Faculty of Medicine & Health Sciences, University of Ghent, Belgium.

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### **Dr. Joseph Mwafaida**

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