

CURRICULUM VITAE



Dr. James O. Ogutu, PhD

Synopsis:

- ~1.0 Career objective
- ~1.1 Personal profile
- ~1.2 Publications
- ~1.3 Quality Teaching and Mentorship
- ~1.4 Professional Work/Consultancy
- ~1.5 Administrative Posts and Responsibilities
- ~1.6 Community Engagements and Other Contributions
- ~1.7 Referees

DR. JAMES O. OGUTU, PhD (Ongoing, KU), PhD (HMU), MSc, BSc (UoM)

Department of Medical Microbiology and Parasitology, Kenyatta University | Box 43844 – 00100, Nairobi
| Tel. +254-8710901-3376/7 | Graduate School Tel. 254-8710901-4150/2/3 |

Mobile Phone: +254-722145693, +254-733778845 | Email: ogutu.james@ku.ac.ke, ded-graduateschool@ku.ac.ke

1.0 CAREER OBJECTIVE

- To pursue an active, dynamic, productive and meaningful career in an institution where my knowledge, professional skills, expertise, talents and experience are used to provide quality services (technical, academic or otherwise).

1.1 PERSONAL PROFILE

1.1.1 Personal Details

Name	:	James Opiyo Ogutu
PF No.	:	7516
Department	:	Medical Microbiology and Parasitology
Designation	:	Lecturer
Date of birth	:	June 15, 1980
Gender	:	Male
Marital status	:	Married with three children
Nationality	:	Kenyan
National ID No.	:	21762080
Email	:	ogutu.james@ku.ac.ke
Mobile	:	+254-722145693
Google Scholar	:	https://scholar.google.com/citations?user=l0HxO1IAAAAJ&hl=en&oi=ao
ORCID ID	:	https://orcid.org/0000-0002-9076-624X

Areas of Professional Specialization

- Medical Microbiology (Pathogen Biology); Molecular Diagnostics; Medical Parasitology; Immunology.

Areas of Research Interest

- Mechanisms of pathogenesis of opportunistic infections in immunocompromised individuals.
- Molecular multiplex diagnostic systems for detection of multiple drug resistant Gram-negative bacteria from clinical sources.
- Novel multiplex molecular diagnostic systems for detection of notorious hospital pathogens at the casualty, critical and/or intensive care units.
- Mechanisms and trends of probiotic interventions in antibiotic-associated human diarrheas.
- Possible involvement of sRNAs in the regulation of β -lactamase production and activity.
- Mechanisms of resistance and survival in the polymicrobe biofilms after exposure to antimicrobials.
- Possible novel role(s) of carcinoembryonic antigen-related cell adhesion molecule 1 (CEACAM-1) and *Canjanus canjana* (pigeon pea) in the management of type 2 diabetes mellitus and related cardiovascular abnormalities.

1.1.2 Academic Qualifications and Professional Training

1. May 27 – June 7 2024: Enzyme Manufacturing Master Class 2024 – AfriBIO Hub EMM-2024 and Kenyatta University.

- A hands-on course for researchers focusing on how to produce essential enzymes for molecular biology including DNA polymerases for PCR. I learned and performed all the steps involved in protein production in the bacterial chassis *Escherichia coli* using low-cost materials and standard lab equipment.

2. July 2021: Training on Research Ethics and Good Clinical Practice – Training and Resources in Research Ethics Evaluation.

- Online training comprising four modules namely: Introduction to Research Ethics, Research Ethics Evaluation, Informed Consent and Good Clinical Practice

3. June 12-16 2017: Global Health Diagnostics Course – McGill Summer Institute in Infectious Diseases and Global Health, Montreal, Canada.

- Summer course covering many topics including Value chain, product development, R&D, needs, AMR; Molecular diagnostics, HIV diagnostics, STIs and viral illnesses, mHealth, connectivity, global health security; Fever, TB, Essential Diagnostics, Malaria, Zika; supply chain issues; NTDs & Enteric diagnostics.

4. November 2016 – January 2017: Introduction to Systemic Review and Meta-Analysis – Johns Hopkins University, USA.

- A 6-week 8-module rigorous online study covering essentials and applications of Systematic Review and Meta-Analysis with a certificate awarded on completion.

5. 2015 to date: PhD in Medical Mycology – Kenyatta University, Kenya.

- PhD research involves phenotypic and genotypic characterization of clinical *Candida albicans* and non-albicans *Candida* (NAC) strains isolated from oropharyngeal and genital candidiasis-HIV-1 co-infection cases in a local County Referral Hospital. The study also involves identification and evaluation of the actual risk factors associated with the studied cases.

6. 2015: PhD in Microbiology - Harbin Medical University, China.

- PhD research involved the development and validation of a molecular tool for the multiplex detection of specific antibiotic resistance genes in *Enterobacteriaceae*. The molecular tool was used to detect resistance genes in clinical *Enterobacteriaceae* strains. The distribution and contribution of the studied genes to beta-lactam resistance were evaluated using statistical methods. The developed multiplex PCR system is currently under consideration for patenting.

7. 2005: M.Sc. in Microbiology – Faculty of Medicine, University of Madras, India.

- A three-year Master's degree program of the Faculty of Medicine incorporating Preclinical Sciences: Human Anatomy, Medical Physiology, Medical Biochemistry, General Human Pathology, Medical Statistics and Lab Animal Science in Year I and Medical Microbiology proper (Bacteriology, Mycology, Virology, Immunology and Molecular Biology) in Years II and III. The training also included in-hospital attachment at five different specialized health facilities.
- M.Sc. project involved the profiling of antibiotic resistance phenotypes of UTI-causing clinical bacterial isolates from a tertiary health-care center in Chennai, India.
- Result: **First Class.**

8. 2002: BSc in Microbiology - University of Madras, India.

- A broad course covering all the important subthemes of Microbiology, Parasitology and Immunology along with the foundations of Biochemistry, Molecular Biology, Microbial Biotechnology, Bioinstrumentation, Basic Electronics and Laboratory Techniques.
- Result: **First Class.**

9. 1998: Kenya Certificate of Secondary Education – St. Joseph's Secondary School, Rapogi, Kenya.

1.1.3 Employment History

1. Senior Lecturer | Kenyatta University | August 2024 to date

Duties include:

- Teaching and examining MBChB, BPharm, B.Sc. Nursing and Public Health, B.Sc. Laboratory Science and B.Sc. Environmental Health students on Medical Bacteriology, Mycology, Virology, Immunology, Parasitology & Entomology and Environmental Microbiology.
- Conducting laboratory practical classes, demonstrations and tutorials.
- Curriculum development and/or review from time to time to ensure it is up-to-date.
- Supervising and examining Masters and PhD degree students.
- Student mentorship.
- Grant writing, funding application, research and publishing on various topics of medical, academic and societal interest.

2. Lecturer | Kenyatta University | July 2015 to July 2024

Duties include:

- Teaching and examining MBChB, BPharm, B.Sc. Nursing and Public Health, B.Sc. Laboratory Science and B.Sc. Environmental Health students on Medical Bacteriology, Mycology, Virology, Immunology, Parasitology & Entomology and Environmental Microbiology.
- Conducting laboratory practical classes, demonstrations and tutorials.
- Supervising and examining Masters and PhD degree students.
- Mentoring students.
- Carry out research and publishing on various topics of medical, academic and societal interest.
- Reviewing the curriculum from time to time to ensure it is up-to-date.

3. Adjunct Faculty | United States International University, Nairobi | May 2018 to December 2020.

Duties include:

- Teaching and examining B.Pharm students on Medical Bacteriology, Mycology, Virology, Immunology and Parasitology & Entomology.
- Conducting laboratory practical classes, demonstrations and tutorials.
- Supervising and examining masters and PhD degree students.
- Carry out research and publishing on various topics of medical, academic and societal interest.

4. Tutorial fellow | Kenyatta University | August 2010 to July 2015

Duties included:

- Teaching and examining MBChB and B.Sc Nursing and Public Health students on Medical Bacteriology, Mycology and Virology.
- Conducting laboratory practical classes, demonstrations and tutorials.
- Reviewing the curriculum from time to time to ensure it is up-to-date.

5. Part-time faculty | Aga Khan University Hospital | August 2010 to April 2012

Duties included:

- Teaching and examining Post RN B.Sc Nursing program students on Medical Bacteriology, Mycology, Virology and Immunology.
- Conducting practicals and tutorials.

6. Part-time lecturer | Kenyatta University | April 2006 to July 2010

Duties included:

- Teaching and examining MBChB and B.Sc Nursing and Public Health students on Medical Bacteriology, Mycology and Virology.
- Conducting laboratory practical classes, demonstrations and tutorials.
- Reviewing the curriculum from time to time to ensure it is up-to-date.

1.1.4 Achievements

1. Currently doing PhD lab work for my 2nd PhD degree in the field of Medical Mycology.
2. Successfully completed my two terms as the founding Chairman, Department of Medical Microbiology and Parasitology (2020-2024) and another two terms at the Chairman Department of Pathology (2016-2020).
3. Established the Department of Medical Microbiology and Parasitology in the School of Medicine (2020).
4. Received a fully covered travel grant (KShs. 400,000/-) from Harbin Medical University to attend the Belt and Road Initiative International Conference on the Prevention and Control of Infectious Disease and Wu Lien-Teh Workshop in China in December 2018.
5. I have served as an External PhD thesis Examiner for Sathyabama University and University of Madras Chennai, India.

1.2 PUBLICATIONS

1.2.1 Refereed Journals

1. Yue Gao, Qingbo Wang, Shuaifei Yang, Junhua Wu, Ming Qin, Xin Wang, Xiaona Liu, Yuting Jiang, James Ogutu, Yanhui Gao, Yanmei Yang. Interaction between fluoride exposure and bone metabolism-related gene polymorphisms in the susceptibility to essential hypertension. *Ecotoxicology and Environmental Safety* 2026; 311: 119903
2. Gakinya, Samuel; Nzioka, Ament K; Mugo, Alex G; Onyuma, Timothy; **Ogutu, James**. Autophagy-related protein LC3 β and its association with clinical-pathological characteristics, mismatch repair proteins and survival in colorectal carcinoma. *Frontiers in Medicine*. 2025; 12: 1511227
3. Theuri, Martin; Ndombi, Eric M; Thamaini, Peris; **Ogutu, James Opiyo**; Onsongo, Lister; Madete, June K; Ofula, Victor; Gitau, Samuel; Mwangi, Gladys; Okemo, Paul. Clinical characteristics, anti-SARS-CoV-2 IgG titers, and inflammatory markers in individuals with post-COVID-19 condition in Kenya: a cross-sectional study. *PeerJ* 2024; 12: e17723
4. Otindo AM, Ndombi EM, Theuri M, Muturi M, Thamaini P, **Ogutu J**, Onsongo L, Madete JK, Ofula V, Gitau S, Mwangi G and Okemo P. Seroprevalence of anti-SARS-CoV-2 IgM and IgG and COVID-19 vaccine uptake in healthy volunteers in Nairobi, Kenya: a cross sectional study. *Frontiers in Virology*. 2024; 4

5. Gakinya, Samuel; Njau, Allan; Abdallah, Abdulkarim; Nzioka, Ancent; **Ogutu, James**. Frequency of KRAS and BRAF mutations in colorectal carcinoma and their association with clinical-pathological characteristics in a tertiary hospital in Kenya. *Frontiers in Medicine*. 2024; 11: 1433120
6. Obulemire Edriey Ronniey, **James Ogutu**, Gilbert Munyoki, Monicah Wambugu. Perceived Quality of Health Care Provided to Mothers during Immediate Postpartum Period at Health Facilities in Kakamega County, Kenya. *Texila International Journal of Public Health*. 2023; 11(3): 132-146
7. Kung'u, Mary; Onsongo, Lister; **Ogutu, James O**. Factors influencing quality of life among cancer survivors in Kenya. *African Health Sciences*. 2022; 22: 87-95
8. Mwangi, Samuel N; Onsongo, Lister; **Ogutu, James O**. Factors effecting quality of life for family caregivers of cancer patients in Kenya. *Canadian Oncology Nursing Journal*. 2022; 32: 542 (Mwangi, Samuel N; Onsongo, Lister; **Ogutu, James O**. Facteurs influençant la qualité de vie des proches aidants de patients kényans atteints de cancer. *Canadian Oncology Nursing Journal*. 2022; 32 (4): 550).
9. Obora, Maximillar; Onsongo, Lister; **Ogutu, James O**. Determinants of sexual function among survivors of gynaecological cancers in a tertiary hospital: a cross-sectional study. *Ecancermedicalscience*. 2022; 16: 1384
10. Mwasiaji, ET; Githae, EN; **Ogutu, JO**. Research direction on entrepreneurs' mental health and wellbeing for global sustainability agenda. *International Academic Journal of Innovation, Leadership and Entrepreneurship*. 2022; 2:339-356
11. Asava, Diana Navalya; Ochieng, James Otieno; **Ogutu, James O**. Uptake of intrauterine contraceptive device among HIV positive women at selected health facilities in Nairobi City County, Kenya. *International Academic Journal of Health, Medicine and Nursing*. 2022; 2(1): 220-241
12. Kung'u, Mary; Onsongo, Lister; **Ogutu, James O**. Impacts of Social Support on Quality of Life of Cancer Patients in Kenya. *International Journal of Innovative Research and Development*. 2021; 10 (9):
13. Gikonyo, Catherine W; Onsongo, Lister; **Ogutu, James O**. Professional Quality of Life among Nurses Caring for Cancer Patients. *Public Health Nursing* 2021; 4: 13-29
14. Mwasiaji, ET; Jagongo, AO; **Ogutu, JO**. Coronavirus Disease Outbreak and the Supply Chain of Selected Small and Medium Manufacturing Enterprises in Kenya. *International Journal of Business and Social Science*. 2020; 11(4): 16
15. Agustino, Sora; Kimiywe, Judith; **Ogutu, James**. Influence of Food Taboos and Beliefs on Anaemia among Pregnant Women in Isiolo County, Kenya. Research Square. 2020
16. Rapando, Japheth Wambani; Ngugi, Mathew Piero; Muturi, Margaret; **Ogutu, James Opiyo**. Phytochemical composition and antibacterial activities of the ethyl acetate leaf extract of *Ocimum basilicum*. Research Square. 2020.
17. Wenli Zhang, Ying Zhang, Xinxin Wang, Fengshu Ding, Yingmei Fu, Jizi Zhao, Wuqi Song, **Ogutu James Opiyo** and Fengmin Zhang. Siderophores in clinical isolates of *Klebsiella pneumoniae* promote ciprofloxacin resistance by inhibiting oxidative stress. *Biochemical and Biophysical Research Communication* doi: 10.1016/j.bbrc.2017.04.108. [Epub ahead of print].

18. Zhao J, Chen J, Zhao M, Qiu X, Chen X, Zhang W, Sun R, **James Opiyo Ogutu**, Zhang F. Multilocus sequence types and virulence determinants of hypermucoviscosity-positive *Klebsiella pneumoniae* isolated from community-acquired infection cases in Harbin, North China. *Japanese Journal of Infectious Diseases*.2016; 69: 357-360.
19. Jing Wu, Aimei Li, Yujun Li, Xiaoguang Li, Qingmeng Zhang, Wuqi Song, Yao Wang, **James O. Ogutu**, Jindong Wang, Jianbo Li, Renkuan Tang , Fengmin Zhang. Chlorpromazine inhibits mitochondrial apoptotic pathway via increasing expression of tissue factor. *The International Journal of Biochemistry & Cell Biology*. 2015; 70: 82-91.
20. **James O. Ogutu**. Antimicrobial Resistance in Human Health. Editorial in the *East and Central Africa Medical Journal*. 2015; 2:59.
21. **James O Ogutu**, Qingmeng Zhang, Ying Huang, Huo Yan, Lijie Su, Bo Gao, Wenli Zhang, Jizi Zhao, Wenhui Cai, Wenjing Li, Hong Zhao, Yang Chen, Wuqi Song, Xiaobei Chen, Yingmei Fu and Fengmin Zhang. Development of a multiplex PCR system and its application in detection of blaSHV, blaTEM, blaCTX-M-1, blaCTX-M-9 and blaOXA-1 group genes in clinical *Klebsiella pneumoniae* and *Escherichia coli* strains. *Journal of Antibiotics*. 2015; 68: 725-733
22. Ying Huang, **James O. Ogutu**, Jiarui Gu, Fengshu Ding, Yuhong You, Yan Huo, Hong Zhao, WenjingLi, ZhiweiZhang, Wenli Zhang, XiaobeiChen, Yingmei Fu, and Fengmin Zhang. Comparative Analysis of Quinolone Resistance in Clinical Isolates of *Klebsiella pneumoniae* and *Escherichia coli* from Chinese Children and Adults. *BioMed Research International*. Volume 2015, Article ID 168292, 6 pages <http://dx.doi.org/10.1155/2015/168292>

1.2.2 Patented Invention or innovations

1. **Patent Title:** "产超广谱B-内酰胺酶肺炎克雷伯菌耐药性及基因分型" (New group-specific multiplex PCR primer set for rapid detection of β -lactamase (*bla*) genes).

Inventors: Zhang Fengmin, **James O. Ogutu**, Song Wuqi, Fu Yingmei, Zhang Wenli and Cai Wenhui.

Patent number: CN 104293925B

Applicant: Harbin Medical University.

Date of approval: 2016-04-27.

1.2.3 Non-reviewed Conference Papers

Presented a paper titled "***MDR Escherichia coli isolated from chicken: a potential source of MDR infections in man.***" at the International Conference on Infectious Disease Prevention and Control held at Harbin Medical University on 28th–29th December, 2018.

1.2.4 Editorship of a Book or Conference Proceedings

I was an **Editor** of the **Conference Proceedings for the International Reproductive Health Conference**, organized by the School of Public Health, Kenyatta University in 2017.

1.3 QUALITY TEACHING, LEARNING AND MENTORSHIP

1.3.1 Student Evaluations

An excellent lecturer of Medical Bacteriology, Immunology, Parasitology, Mycology and Molecular Diagnostics. The student-lecturer evaluation exercise has consistently awarded me very exceptionally high points (95% and above) from time to time.

1.3.2 Training in Higher Education

1. I have attended several retooling trainings on **Curriculum Delivery** and **Supervision Skills** by Teaching Programmes, Kenyatta University.
2. Attended Faculty Development Workshop on Active Learning Methodology by RIC360 Institute for Global Health Technologies.
3. Attended Pedagogical Skills training by Kenyatta University.

1.3.3 Completed postgraduate supervision

S.No.	Name of student	Research topic	Level	Current Status
1.	Japheth Rapando	Immunomodulatory and antibacterial effects of <i>Ocimum basilicum</i> ethyl acetate leaf extract on vancomycin-sensitive methicillin-resistant <i>Staphylococcus aureus</i> .	PhD	Graduated
2.	Diana Asava	IUCD uptake among HIV-positive women at selected health facilities in Nairobi City County, Kenya.	MPH	Graduated
3.	Gonjobo Sora	Common food taboos and belief during pregnancy and their influence on anaemia among antenatal mothers attending clinic in health facilities in Isiolo County, Kenya.	MPH	Graduated
4.	Mary M. Kung'u	Quality of life of cancer survivors in Kijabe Mission Hospital, Kiambu County, Kenya.	MSc Nursing	Graduated
5.	Samuel N. Mwangi	Determinants associated with quality of life of family care-givers of cancer patients in Kenyatta National Hospital, Kenya.	MSc Nursing	Graduated

6.	Catherine W. Gikonyo	Burnout and coping strategies among oncology nurses working at Kenyatta National Hospital, Kenya	MSc Nursing	Graduated
7.	Maximillar Obara	Sexual dysfunction among patients with gynaecological cancer at Kenyatta National Hospital, Kenya.	MSc Nursing	Graduated

1.3.4 Ongoing postgraduate supervision

S.No.	Name of student	Research topic	Level	Current Status
1.	Jacinter Amacar	Molecular Characterization of multidrug resistant Enterobacteriaceae associated with nosocomial infection at Kenyatta National Hospital, Nairobi Kenya	PhD	Proposal writing
2.	Jane Omari	Access to HIV prevention services at selected healthcare facilities in Kisii and Kisumu Counties of Kenya	PhD	Thesis writing
3.	Edriey Ronniey	Evaluation of quality of nursing care during immediate postpartum period among nurses in Butere SubCounty, Kakamega County, Kenya	MPH	Thesis examination
4.	Peris W. Wanjiku	Utilization of shared decision making in cancer care at AIC Kijabe Mission Hospital, Kiambu County, Kenya	M.Sc Nursing	Data collection
5.	Gakinya Samuel Mukono	Autophagy and its association with clinicopathological characteristics and treatment outcome in colorectal carcinoma	PhD	Thesis examination

1.3.5 Student Mentorship

May 2018 – was appointed as a Staff Mentor for students in the School of Medicine.

1.4 PROFESSIONAL WORK/CONSULTANCY

1.4.1 Consulting for organizations/institutions

1. August 1 2025 - Appointed as Subject Expert by the National Council for University Education, Namibia for the accreditation of the University of Namibia – Hage Geingob Campus to offer two programmes: **Master of Philosophy in Biomedical Sciences (Medical Microbiology)** and **Doctor of Philosophy in Biomedical Sciences (Medical Microbiology)**.

1.4.2 Networks/Collaborations

1. My networks have continued to grow:

Collaborative research with **Dr. Harrison T. Muturi, Snr. Research Scientist at Ohio University, USA** led to the expansion of the scope of the existing MoU between Ohio University and Kenyatta University.

2. I am a member of **Prof. Zhang Fengmin's research team** based at the Department of Microbiology, Harbin Medical University, China where I am involved in collaborative research.

1.4.3 Membership to academic/professional bodies

1. May 2016 to date – member of European Society of Clinical Microbiology and Infectious Diseases (ESCMID) – Member ID: 133020.
2. February 2016 to date – member of Infection Prevention Network (IPNET)-Kenya (Membership ID - IPNET-K42).

1.4.4 Any other (editorship/peer review, external examiner, etc)

1. Peer Reviewer for the following international journals:
 - a. **BMC Infectious Diseases Journal** – since January 2017.
 - b. **PLOSONE Journal** – since June 2016.
2. Appointed as the External Examiner for Medical Microbiology, Parasitology and Immunology in the School of Pharmacy, Kabarak University, Kenya.

1.5 ADMINISTRATIVE RESPONSIBILITIES

1.5.1 Recognized University Administrative Positions

1. November 2024 to date – **Deputy Executive Dean, Graduate School, Kenyatta University.**
2. April 2020 to March 2024 – **Chairman, Department of Medical Microbiology and Parasitology, School of Health Sciences, Kenyatta University.**
3. January 2016 to January 2020 – **Chairman, Department of Pathology, Kenyatta University.**
4. January 5th to 31st 2017 (and on several other occasions) – **Acting Dean/Deputy Executive Dean, School of Medicine, Kenyatta University.**
5. January 2016 to January 2020 – **Section Head (Microbiology), Department of Pathology, Kenyatta University.**

1.5.2 Other Responsibilities in the University

1. May 9th 2019 to date – Risk Management Champion, Kenyatta University.
2. April 2019 – appointed by the DVC (Academic) to Committee to Address the Issue on the Implementation of Two-Thirds Lecture Attendance Rule.
3. March 2019 – appointment on secondment as Mortuary Services Manager to work in the Kenyatta University Hospital.
4. August 2018 to date – Risk Management Coordinator, School of Medicine, Kenyatta University.
5. July 2018 – appointed by the Vice Chancellor to a Committee on Biosecurity and Biopreparedness.
6. December 2016 to January 2020 - Secretary, School Library Committee, School of Medicine, Kenyatta University.

7. November 2015 to January 2016 – Time tabler, Department of Pathology, Kenyatta University.

1.6 COMMUNITY ENGAGEMENTS AND OTHER CONTRIBUTIONS

1.6.1 Research Funding

1. March 2021 to December 2024 – COVID-19 Africa Rapid Grant Fund by the Nation Research Foundation, South Africa – I am a Co-Investigator in this multi-institution collaborative project titled: “Uptake of preventive measures, sero-surveillance and complementary management of COVID-19 in Kenya.” (KES 10,000,000).
2. July to August 2018 – **Carnegie African Diaspora Fellowship Programme Grant** by the International Institute of Education, Washington DC USA to conduct studies on Type 2 Diabetes Mellitus (KES 1,500,000).
3. July 2016 – **National Commission for Science, Technology and Innovation (NACOSTI) PhD Research Grant** (KES 1,137,150).

1.6.2 Community Outreach

1. March 2026 to date – Director, CITAM Education Services Ltd. Governance oversight of CITAM Education Services, a newly created company to profitably run CITAM schools.
2. 2023 to 2025 – Chair of CITAM Education Committee of CITAM. Oversight of the running of CITAM's 12 schools across Kenya.
3. 2022 to date – Church leadership as member of the Deacon Board of Christ Is The Answer Ministries (CITAM). The Deacon Board is the governance organ overseeing all the administrative and legal operations within CITAM.
4. Regularly contributes to and participates in the **Mater Heart Run** organized to fundraise towards the treatment of children with heart problems.

1.6.3 Professional Affiliation and Portfolios

1. December 2015 to date – member of American Society for Microbiology (ASM) - Member ID: 57404956.
2. February 2015 to date – member of the International Society for Computational Biology (ISCB).

1.6.4 Any other Sub-category

1.6.4.1 Other Roles I have played at the University.

1. January 2024 – January 2025: Chaired the MBChB Programmes Review Committee in the School of Health Sciences
2. 2020-2024 – Oversaw the team that developed MSc Medical Microbiology, MSc Medical Parasitology and MSc Clinical Immunology programmes in the Department of Medical Microbiology and Parasitology, Kenyatta University currently awaiting accreditation by the Commission for University Education.
3. May 8th – 11th 2019 – Participated in the Curriculum Mapping Workshop for Programmes in the School of Pharmacy, Kenyatta University in Naivasha, Kenya.

4. January 22nd 2019 – Appointed by the Dean, School of Medicine to a Committee to Develop Course Units to be taught for PhD Programme in the School of Medicine and Enhance PhD Training.
5. 2017 - 2018 – Member of the team that developed the “Diploma in Mortuary Science Programme” in the Department of Pathology that was approved by Kenyatta University Senate in August 2018.

1.6.4.2 Key Skills and Competencies

Administrative and Leadership Skills

- Integrity and value-based and transformative leadership.
- Effective task assigning, review and supervisory skills.
- Proven written and verbal communication skills.
- Proficient in handling administrative correspondence.
- Proven ability to organize personal work priorities.
- Solid planning skills and knowhow on general office procedures and processes.
- Can work independently and in a team.
- Exceptional attention to detail and proven interpersonal skills.
- Self-motivated and flexible working hours.
- Strong ability to use standard administrative software and applications.
- Excellent writing and reporting skills.
- Good data management skills.
- Good problem-solving abilities and many more.

***In-silico* competencies**

- Designing of oligonucleotide primers for different applications using a variety of on-and offline design programs.
- Assessment and evaluation of oligonucleotide primers for suitability and applicability in polymerase chain reactions.
- Translation of DNA sequences into protein sequences.
- Multiple sequence alignment, identification using on- and off-line programs.
- Analysis and identification of DNA/RNA sequencing data.
- Protein or nucleotide sequence BLAST search, evaluation and/or analysis.
- Generation of phylogenetic trees and determination of genetic relatedness.
- Preparation of nucleotide and protein sequences for submission to GenBank and other databases.

Clinical Lab proficiencies

- Isolation, identification and preservation of clinical bacterial strains.
- PCR and sequencing primer optimization and validation techniques.
- Extraction and preservation of DNA and RNA from bacterial cells.
- Polymerase chain reaction and other nucleic acid-based techniques.

- Tissue and cell culture techniques.
- Chromatography, electrophoresis, centrifugation and colorimetric techniques.
- Sterilization and disinfection of equipment, media; and many others.

1.6.4.3 DNA Sequences Deposited at NCBI's GenBank

1. Gene sequences detected in my previous works on β -lactamases are accessible in the NCBI's GenBank under accession numbers KP698217 through KP698229 and KR338940 through KR338951.

1.6.4.4 Training/Workshops/Symposia attended

1. February to August 2022 – SMLD Training Programme Covering several topics on related to leadership by Christ Is The Answer Ministries Clay City Assembly.
2. October 3rd 2018 – Leadership and Strategy Development Workshop organized by Collaboration for Entrepreneurial Universities at Kenyatta University.
3. May 9th-11th 2018 – Participated in a training on Risk Assessment Techniques by OneSource Africa organized by the Directorate of QMS&PC, Kenyatta University.
4. January 9th 2018 – Training on the Role of the Chairpersons of Departments on the Implementation of University Policy organized by the administration Division, Kenyatta University.
5. October 28th-30th – Training on Beyond Management to Leadership: A Transformative Leadership Programme organized by Africa Centre for Transformative and Inclusive Leadership (ACTIL) and Kenyatta Universities and held at Kenyatta University Conference Centre.
6. Different dates - Others.

1.6.4.5 Personal Statement

I am trained in medical microbiology, molecular diagnostics, global health diagnostics, medical mycology and related areas. Currently, I am performing the role Deputy Executive Dean, Graduate School, Kenyatta University after completing my tenures as the Chairman, Department of Medical Microbiology and Parasitology (2020-2024) and Department of Pathology (2016-2020). My research interests focuses on finding novel targets for therapeutic, prognostic or diagnostic use and/or application(s) in both infectious and non-communicable diseases affecting Kenya and beyond. Previously, I developed a multiplex PCR system (diagnostic tool) for the detection of β -lactam resistance genes in bacteria obtained from clinical sources giving remarkable specificity and sensitivity on application. The primers used in this system were patented in China in 2016. Currently, I am investigating the *Candida* phenotypes and genotypes responsible for oral and genital candidiasis in HIV[+] patients in Siaya County, Kenya with the aim of developing a diagnostic tool for the same. As shown in the list of publications, I have participated in several relevant studies along with the research team at Harbin Medical University, China. Key among them was an investigation of the role of bacterial siderophores (iron acquisition proteins) and the role played by oxidative stress in ciprofloxacin (fluoroquinolone) resistance. Moreover, in another study we found out and described the mechanism by which Chlorpromazine inhibits mitochondrial apoptosis. These studies involved in-

depth experiments and analyses of molecular pathways that control cell functioning and cell death. These studies have equipped me with immense experience and expertise for future work. Another current study aims to investigate possible novel role(s) of carcinoembryonic antigen-related cell adhesion molecule 1 (CEACAM-1) and *Canjanus cajan* (pigeon pea) in the management of type 2 diabetes mellitus and related cardiovascular abnormalities. With scientific and experimental aspects of my research now rolling, I am now looking forward serve at senior management levels providing the transformative leadership required for institutional growth and progress. This is in line with my long-term objective(s) of solving existing societal problems through innovative translational research and transformative leadership.

1.7 REFEREES:

1. Prof. B. M. Okello Agina

Executive Dean
School of Health Sciences
Kenyatta University
P. O. Box 43844 – 00100
Nairobi
Mobile: 0722526728
Email: okelloagi@yahoo.com

2. Prof. Alloys Orago

Department of Medical Microbiology and Parasitology
Kenyatta University
P.O. Box 43844, 00100 Nairobi Kenya
Mobile: 0722483827
Email: orago.alloys@kn.ac.ke, oragoalloys@yahoo.com

3. Prof. Walter Jaoko

Department of Medical Microbiology
College of Health Sciences
University of Nairobi
P. O. Box 19676 – 00202
Nairobi, Kenya. Phone: +254 20 272 5404
Email: wjaoko@kavinon.org