

OGUNBIYI, Tosin Segun

Mini-Flat 2b, MTU Staff Quarters, MFM Prayer city annex, Km12 Lagos Ibadan Expressway, Ogun state, Nigeria.

Email: ogunbiyi_tosin@yahoo.com ; Phone Number: +2348168149088

Professional Summary

Skilled graduate of Molecular Biology and Genomics from the African Centre of Excellence for Genomics of Infectious Diseases (ACEGID), with a passion for improving public health through infectious disease surveillance. Highly experienced in the use of cutting-edge molecular biology/genomics techniques and equipment in the surveillance, prevention and control of infectious diseases.

EDUCATIONAL INSTITUTIONS ATTENDED

- Redeemer's University, Ede, Osun – Nigeria
M.Sc. Molecular Biology and Genomics
(Weighted Average: 73.3%), African Center of Excellence
for Genomics of Infectious Diseases (ACEGID). 2016-2018
- Chartered Institute of Customer Relationship Management (CICRM)
Post Graduate Diploma (PGD) in Customer Relation Management 2015-2016
- University of Lagos, Akoka, Lagos – Nigeria
Bachelor of Science Honours in Microbiology (Second Class Upper) 2010-2014
- United Nation Development Programme Oshodi – Isolo local Government
Diploma in Computer Information and Technology 2009-2010
- High Que Secondary School, Osolo, Lagos
Senior Secondary School Certificate (NECO) 2004-2010

PROFESSIONAL QUALIFICATIONS

- Chartered Institutes of Customer Service Relationship Management (Associate Member) 2016
- American Society for Microbiology (Contributing Membership- Global Outreach) 2018
- International Society for Infectious Diseases (Member) 2018

STATEMENT OF EXPERIENCE

Research experience:

- **Research Fellow at Mountain Top University (BSL 2 Lab) –**
 - Surveillance of foodborne diarrheal disease in children under 5 years.
 - Molecular surveillance of diarrhoea diseases of *E. coli*, *Salmonella* spp., *Campylobacter* spp., and *Shigella* spp. of aetiology food index case (stool) and exposure environment (Food and environmental

sources) using classical bacteriological culture techniques and molecular techniques (multiplex PCR) under the FOCAL - Foodborne Disease Epidemiology, Surveillance and Control in African LMIC

- Molecular surveillance of ESBL gene in *E. coli* and *Salmonella* spp.

- Molecular epidemiology of diarrhoeal diseases of viral aetiology (Adenovirus, Norovirus, Astrovirus, Hepatitis A and E virus) using reverse transcriptase PCR. 2019- Till date

- Molecular epidemiology of HTLV-1 and Parvovirus B19 among sickle cell anaemia patients in Lagos

- **Research Fellow at ACEGID (BSL 3 Lab)** – Molecular-characterization of Aflatoxin producing fungi (from Groundnut, Maize, and Soil) using conventional PCR, molecular pathotyping using RFLP, Sanger Sequencing; Detection and Molecular-characterization (Using multiplex PCR) of different *Escherichia coli* patho-types; Molecular typing of Multi-drug Resistant *Mycobacterium tuberculosis*; Characterization of Mosquitoes using Morphological features; DNA and RNA Extraction; Ebola and Lassa fever virus quantification using q-RT PCR; Library Prep and Next Generation Sequencing using the Illumina platform 2017-2019

- **M.Sc. Research Project:** "Bacterial profile in mosquitoes in urban and rural communities in and around Ede metropolis, Osun state, South-West Nigeria" 2016-2018

Techniques learnt: Mosquito identification, PCR, Gel Electrophoresis, Bioinformatics

- **Undergraduate Research Project:** "Determination of bio surfactant production by isolates obtained from the rhizosphere of *Paspalum vaginatum* sw" 2014

Techniques Learnt: Bacteriological Media Preparation and Culturing; Biochemical Identification

- **Molecular Biologist** (Graduate Intern- June – August 2017) – Nigerian Institute of Medical Research, Yaba.

Techniques Learnt: Buffer preparation, Sodium Dodecyl Sulphate Polyacrylamide Gel Electrophoresis (SDS-PAGE), Agarose Electrophoresis, Western Blotting, DNA Extraction, polymerase Chain Reaction (PCR), Protein Extraction, Fluorescent in situ Hybridization (FISH), and Restriction Enzyme Analysis.

- **Research Assistant** (January 2015 – May 2015) – Dr. A. E. Omotayo (Environmental Microbiology), Department of Microbiology, Faculty of Sciences, University of Lagos.

Techniques Learnt: Bacterial media preparation, Biochemical Test for Microbial Identification

Teaching experience:

- *Assistant Lecturer* – Taught courses on methods in recombinant DNA technology, microbial genetics, introductory biotechnology, nucleotide sequence analysis, molecular biology – Mountain Top University, Ogun state.

November 2019 – Till date

- *Adjunct Lecturer* – Reproductive Health Studies (GST 104) – Redeemer's University, Ede, Osun State.

February 2018 – August 2018

- *School Administrator* – Shalom Nursery and Primary School, New Jerusalem, Damaturu, Yobe State (National Youth Service) - June 2015 – April, 2016

Industrial experience:

- Quality Control Microbiologist/Quality Assurance Process Auditor (Volunteer), University of Lagos Holdings Limited – A Bakery, Water & Drinks Processing Business Arm of University of Lagos. June–September 2016
- Industrial Trainee – Central Public Health Laboratories Services, Yaba Lagos – A Federal Ministry of Health and WHO Reference Laboratory for Epidemiological Studies. April, 2013 – December, 2013
Techniques Learnt: Medical Sample collection, Microscopy Culture Sensitivity analysis, qualitative and quantitative IgM for Measles, Rubella and Yellow Fever, Acid Fast Bacilli for *Mycobacterium tuberculosis* and *M. leprae*.

SCHOLARLY PUBLICATIONS:

- Ayoade, F., & **Ogunbiyi, T. S.** (2022). The Potential for Wolbachia-Based Mosquito Biocontrol Strategies in Africa. In *Mosquito Research-Recent Advances in Pathogen Interactions, Immunity, and Vector Control Strategies*. IntechOpen.
- Ayoade, F., Oguzie, J., Eromon, P., Omotosho, O.E., **Ogunbiyi, T.**, Olumade, T., Akano, K., Folarin, O. and Happi, C., 2021. Molecular surveillance of shiga toxigenic *Escherichia coli* in selected beef abattoirs in Osun State Nigeria. *Scientific reports*, 11(1), pp.1-9.
- Ayolabi, C. I., Adesiyun, A. L., **Ogunbiyi, T. S.** and Areh, D. C. (2020). Cytomegalovirus and Herpes Simplex Virus types 1 and 2 infections in febrile paediatric patients in a Health Facility in Lagos. *Journal of Scientific Research and Development*, **19**(2): 263-269
- Owoicho, O., Oguzie, J.U., **Ogunbiyi, T. S.**, Abdulsalam, T., Eromon, P., Onikepe, F., Durugbo, E.U. and Happi, C.T., 2020. *Candida (Diutina) mesorugosa* in Non-Albicans *Candida* Species Clinical Isolates in Southwest Nigeria. medRxiv.
- **Ogunbiyi, T. S.**, Eromon, P., Oluniyi, P., Ayoade, F., Oloche, O., Oguzie, J.U., Folarin, O., Happi, C. and Komolafe, I., 2019. First report of Wolbachia from field populations of *Culex* mosquitoes in south-western Nigeria. *African Zoology*, 54(3), pp.181-185.
- Ayoade, F., Fayemi, S., **Ogunbiyi, T.**, Olukanni, O. and Oluniyi, P. (2019). Disparity in Phenotypic and Genetic Characterization of Lactic Acid Microorganisms Isolated from Spontaneous Fermentation of Yam (*Dioscorea rotundata*). *Asian Food Science Journal*, **8**(2), 1-7.
<https://doi.org/10.9734/afsj/2019/v8i229988>

- Ayoade, F., Fayemi, S., Olukanni, O., **Ogunbiyi, T.** and Oluniyi, P. (2019). Molecular Characterization of Lactic Acid Organisms Isolated from Spontaneous Fermentation of Cassava- fufu and gari. *Asian Food Science Journal*, **8**(2), 1-10. <https://doi.org/10.9734/afsj/2019/v8i229985>
- Omotayo, A. E., Omolabake S. R., **Ogunbiyi, T. S.** and Amund, O. O. (2015). Degradation of Hydrocarbons by *Alcaligenes faecalis* (KF92930) and *Klebsiella varicola* (KF929394) from Rhizosphere of *Paspalum vaginatum* SW. Book of Abstracts 38th Annual General Meeting and Scientific Conference, Nigerian Society for Microbiology. Pp. 230] (Poster presentation)

TRAINING PROGRAMME ATTENDED

- **Foundational Genomics Training** by African Centre of Excellence for Genomics of Infectious Diseases (ACEGID), Summer Boot Camp 2018 (4th – 29th June, 2018).
Techniques learnt: DNA and RNA extraction, PCR (Conventional and RT-qPCR), Teaching pedagogy, Waste management, Laboratory Safety, Restriction Fragment Length Polymorphism (RFLP), High Resolution Melting (HRM) analysis, and Bioinformatics.
- **Advance Genomics Training** by African Centre of Excellence for Genomics of Infectious Diseases (ACEGID), Summer Boot Camp 2019 (5th – 31th May, 2019).
Techniques learnt: Next Generation sequencing using MiSeq Illumina platform; Metagenomics analysis of sequenced data using DNA Nexus; Genome assembly using Geneious; viral quantification using qRT-PCR

OTHER RELEVANT CERTIFICATION (SHORT COURSES)

- Collaborative Institutional Training Initiative Program:

<i>Biomedical Research – Basic/Refresher</i>	2018
<i>Biomedical Responsible Conduct of Research</i>	2018
<i>Health Information Privacy and Security (HIPS) for Clinical Investigators</i>	2018
<i>Conflicts of Interest</i>	2018
- *Bacterial Genomes: Disease Outbreaks and Antimicrobial Resistance* by Wellcome Genome Campus Advanced Courses and Scientific Conferences – May, 2018
- *Bacterial Genomes: From DNA to Protein function using Bioinformatics* by Wellcome Genome Campus Advanced Courses and Scientific Conferences – June, 2018
- *Epidemics - the Dynamics of Infectious Diseases* by The Pennsylvania State University on Coursera. Certificate earned at Monday – June, 2018
- *Epidemiology in Public Health Practice* by Johns Hopkins University on Coursera. Certificate earned at Saturday – June, 2018

Major Conferences and workshop attended with papers read:

- 12th Meeting of the H3Africa Consortium (Rwanda) 2018

38th Annual General Meeting and Scientific Conference, Nigerian Society for Microbiology 2015

AWARD

Best in ICT (United Nation Development Programme Oshodi – Isolo local Government) 2010

Extra-Curricular Activities:

Barbing

African Centre of Excellence for Genomics of Infectious Diseases (ACEGID) Journal Club

Volunteer Laboratory Scientist - Redeemer's University Medical Centre (January – April, 2016)

NAMES AND ADDRESSES OF REFEREES:

Professor Femi Ayoade,

Associate professor,

Department of Biological Sciences,

Redeemer's University, Ede, Osun state.

+2347069633494; ayoade@run.edu.ng

Dr G. B. AKANNI

Coordinator Biotechnology Program

Department of Biological Sciences,

Mountain Top University, Ibafo, Ogun State,

+2347011043330; gbakanni@mtu.edu.ng