

Sunday Olabode OLANIYAN

gen2spencer007@gmail.com

Waco, TX, USA.

SUMMARY

Ambitious, career-focused, and ready to launch my career.

RESEARCH INTEREST

Health Risk Assessment
Gene regulation
Environmental impact of Heavy metals
Mitigation and Remediation

EDUCATION

PhD. Biology
Baylor University, Waco, Tx.

MSc Microbiology Dec 2020
Osun State University, Osogbo, Osun State

BSc Microbiology Apr 2015
Osun State University, Osogbo, Osun State

RESEARCH EXPERIENCE

Graduate Teaching Assistant

Employer- Baylor University, Waco, TX 2022-present

- Taught Introduction to Biology, an undergraduate Laboratory course.
- Graded pre-labs, post-labs, and quizzes and provide valuable feedback on all submitted work to all students.
- Handled and coordinated two (2) sections of the course with a total of 50 students.
- Taught introductory Microbiology, a first-year undergraduate laboratory course designed to help pre-nursing students gain microbiological laboratory skills.
- Evaluated students to uncover learning deficiencies and devise improvement plans.
- Scheduled and maintained regular office hours to meet with students.
- Tracked attendance, projects, labs, reports and other class and student metrics.
- Prompt response to students' needs/questions both via emails and in-person.
- Adhered to university requirements for student assignments, testing and grading of work.

Graduate Assistant

Employer- Osun State University, Osogbo, Nigeria Feb 2020-July 2022

- Tutored or mentored students in need of additional instruction.
- Led discussion sections, tutorials, or laboratory sections for both undergraduate and graduate students.
- Taught MCB 206 (Introductory Virology)
- Taught Undergraduate students (a class of 150) FMS 303 (History and Philosophy of Science)

- Served as mentor to other graduate students to facilitate contact among students and between students and faculty.
- Oversaw students in group settings and offered academic guidance.
- Assisted faculty in evaluation of student work and preparation of course materials.
- Performed RNA extraction and purification from different samples using both crude and kit methods.
- Performed DNA extraction from bacteria.
- Designed primers for the amplification of gene of interest.
- Independently learned to operate the ELISA machine, becoming proficient in its use, and subsequently trained others.
- Performed serological analysis/detection using the ELISA reader and well-washer.
- Performed prospecting of bacteriophage in samples, culture, and purification

Team Member/Laboratory Manager

Dec 2017 to Jun 2022

Employer- Osun State Mosquito Xeno-monitoring Team

Location- Osogbo, Ejigbo, Boriipe, Ede and Ife North LGs in Nigeria

- Performed Mosquito Identification/ Analysis
- Performed Mosquito larvae prospecting and collection.
- Performed Insecticide resistance testing on adult mosquitoes using CDC and WHO test kits.
- Monitoring of trap attendants in the field for proper performance
- Maintained compliance with laboratory, company, and legal regulations.
- Managed equipment, building areas and inventory to keep facility running at peak levels.
- Reviewed completed work to verify consistency, quality, and conformance.
- Produced thorough, accurate and timely reports of project activities.

Field Entomologist and Molecular Analyst

Sightsavers Intl. (Funded by Bill & Melinda Gates), Iwo, Osun State

Sep-Dec 2020

- Performed Identification and Dissection of the Blackflies for analysis.
- Performed DNA extractions from Black flies.
- Performed Molecular analysis using Polymerase Chain Reaction (PCR)
- Performed gel electrophoresis to visualize results.
- Contributed to research data pool by collecting and organizing information from various sources.
- Conducted research into habitat and collection of specimens in the wild.
- Collaborated with others to discuss new opportunities.

Laboratory/Molecular Analyst

Sep 2020

Employer- Sightsavers International

Location- Kaduna, Nigeria

- Performed DNA extractions from Black flies.
- Performed Molecular analysis using Polymerase Chain Reaction (PCR)
- Performed gel electrophoresis to visualize results.
- Tutored a group of 15 people on molecular analysis of black flies.
- Liaised with scientists to test hypotheses and pursue valuable new research.

Field Sample Collector

May-Aug 2019

Employer- Sightsavers International

Location- Iwo, Osun State, Nigeria

- Collection and transport of sample from the field
- Performed dissection of flies
- Performed DNA extractions from Black flies
- Performed Molecular analysis using Polymerase Chain Reaction (PCR)
- Followed laboratory guidelines for handling biological specimens.

Research Assistant

Jun-Jul 2018

Employer Ministry of Health Nigeria

Location- Osogbo, Osun State.

- Carried out Identification and Dissection of the Blackflies for analysis.
- Performed DNA extraction and Molecular analysis of the flies for presence of Parasite using PCR.
- Organized, labeled, and stored study specimens.
- Interpreted test results and determined need for retesting.
- Cleaned and prepared lab equipment for solutions, specimens, and samples.
- Kept lab space and equipment clean to prevent contamination with hazardous substances.
- Assisted scientists in laboratory experiments to confirm research hypotheses.
- Prepared reports, presentations and articles using Microsoft Word and PowerPoint.

Clinical Laboratory Scientist

May 2015 to Dec 2016

Employer- General Hospital Gembu, Taraba State (Youth service)

- Followed laboratory guidelines for handling biological specimens.
- Performed Clinical Specimen Culture and Sensitivity and Conducted Hematology analysis.
- Performed Molecular extraction and detection of Mycobacterium tuberculosis using the GeneXpert machine.
- Conducted testing based on process guidelines, improving experiment efficiency.
- Conducted CD4 Count for HIV Samples using flow cytometry analysis,
- Performed Serological detection of viruses in Clinical Samples, etc.

TEACHING EXPERIENCE

Osun State University, Osogbo, Osun State, Nigeria

February 2020- July 2022

Graduate Assistant, Department of Microbiology

- Teaching Bachelor and Master students' practical courses
- Assisting my professors in marking and grading students' examinations
- Taught MCB 206 (Introductory Virology)
- Taught Undergraduate students (a class of 150) FMS 303 (History and Philosophy of Science)

PUBLICATIONS

Journal Publications

- i. S. Olaniyan. (2025). AI-Driven Predictive Maintenance in Oil and Gas: A Path to Reduced Environmental Impact. Journal of Sustainable Development. (Under Review)

- ii. X. Zhang, S. Olaniyan, X. Li, et al., Global effect of copper excess and deficiency on the nonsense-mediated mRNA decay pathway in *Saccharomyces cerevisiae*, *Genomics* (2024), <https://doi.org/10.1016/j.ygeno.2025.111020>
- iii. Olaitan, J., Ozabor, T., Oluwajide, O., **Olaniyan, S.**, Alafe, F., and Stephen, O. (2022). Microbiological Assessment of Irrigation Water That Serves as Watershed for Wastewater in Osogbo and its Impact on Fresh Vegetables. *UNIOSUN Journal of Engineering and Environmental Sciences*, 4(1): 92-100
- iv. Ozabor P.T., Oluwajide O.O., Akeju A.O., Onifade S.J., **Olaniyan S.O.** and Olaitan, J.O. (2022). Isolation and characterization of resistant bacterial species isolated from shallow well water situated close to graves as a public health menace in Oshogbo, Osun state. *Stamford Journal of Microbiology*, (12): 1, p. 47-53.
- v. Oyejobi G. K, **Olaniyan S. O**, Yusuf Nana-Aishat, Ojewande D. A., Awopetu M. J., Oyeniran G. O., Khan F. M., Dare P. A., Adegbite-Badmus M. K. (2022) *Acinetobacter baumannii*: More ways to die. *Microbiological Research*, (261): 127069, ISSN 0944-5013
- vi. Ojetunde, M.M., Alake, M.O., **Olaniyan, S.O.**, Oyejobi, G.K., Olumade, T.J., Otuonye, N.M., and Sule, W.F. (2021) Serologic evidence of exposure to Human Immunodeficiency Virus Type 1 and Dengue Virus among patients attending diagnostic Laboratory, Lagos State, Nigeria. *Scientia Africana*, 20 (3), 21-30
- vii. Oyejobi G. K., **Olaniyan, S. O.**, and Awopetu, M. J. (2020). COVID-19 in Nigeria: Matters arising. *Current Medical Issues*. DOI: 10.4103/cmi.cmi_51_20
- viii. Adeleke, M.A., Muhibi, M.A., Ajayi, E.I.O., Idowu, O.A., Famodimu, M.T., **Olaniyan, S.O** and Hassan, A.N (2016). Dengue virus specific Immunoglobulin G antibodies among patients with febrile conditions in Osogbo, Southwestern Nigeria. *Tropical Biomedicine*, 33(1): 1–7.

CERTIFICATIONS

Working for a sustainable future: concepts and approaches Jan, 2025

Climate Change, Sustainability, and Global Public Health Dec, 2024

Environmental Hazards and Global Public Health – University of Michigan (December, 2024)

Completed an online course examining the relationship between environmental hazards and global public health, including topics such as air and water pollution, climate change, and strategies for mitigating health risks. Developed an understanding of the global burden of environmental health challenges and solutions to address them.

Chemicals and Health – Johns Hopkins University (December, 2024)

Completed an online course exploring the interactions between chemicals and human health, including topics such as toxicology, environmental exposure, and risk assessment. Gained insights into the impact of chemical substances on public health and strategies for mitigating associated risks.

Environmental Public Health – Environmental Public Health Online Course (EPHOC), Tulane University/CDC (November, 2024).

Completed a comprehensive online program covering topics such as environmental health principles, toxicology, and waste management strategies

PROFESSIONAL DEVELOPMENT TRAINING

Conferences

American Society for Microbiology (Texas Chapter)- March 21-23, 2024

Pedagogical Leaders in Africa with Osun State University, 1st July – 1st August, 2021. Online training on the use of synchronous and asynchronous mode for teaching students.

Oxford University and Osun State University, 17th November, 2020. Ethics in Biomedical Research and Global Best Practices in the context of Preventive Chemotherapy Neglected Tropical Diseases (PC-NTDs) Elimination Strategy in Nigeria

Carnegie African Diaspora Fellowship Program in conjunction with Osun State University, Osogbo, Nigeria, 2nd – 4th July, 2018. Hands-on training on Microbial Genomics and Surveillance.

Seminars/Webinars

Ladoke Akintola University, Ogbomoso Webinar on Research Communication and Scholarship Opportunities, September, 2020.

Ghechan Institute for HIV/AIDS. Seminar on HIV/AIDS; The Way Forward. February, 2016

National Agency for Control of AIDS (NACA). Seminar on the use of GeneXpert Machine, organized May 2016.

PROFESSIONAL SERVICE

Reviewer

International Joint Conference on Neural Networks (IJCNN 2025)

Evaluated research submissions in life sciences and earth sciences, focusing on innovative applications of neural networks and computational intelligence to advance knowledge and address critical challenges in these fields

Reviewer

Science Publications (*American Journal of Environmental Sciences*) 2024-2027

Provided constructive critiques for manuscripts focused on **toxic metal detoxification, environmental sustainability, and related disciplines**, contributing to high-quality publications and informed scientific discourse.

Reviewer, *Global Scientific Research (GSR)* (November, 2024)

Assessed research submissions in microbiology, sustainability, and environmental science, ensuring scientific rigor and relevance to maintain the journal's standards.

Reviewer, *Journal of Bioscience and Environment Research* (December, 2024)

Evaluated manuscripts in **bioscience and environmental research**, offering insightful feedback to enhance the quality of published work and support advancements in these fields.

BLOG ARTICLES

- Keeping It Clean: Smarter Ways to Deal with Toxic Trash in Cities
- The Unseen Connection Between Urban Growth and Vector-Borne Diseases

- Microplastics and Their Hidden Impact on Agricultural Productivity- The environmental Blog
- How refinery growth is shaping Nigeria’s environment and climate future- Planet Pulse

AWARDS

Charlie Guantt Award March 2024

American Society for Microbiology

- Award of Outstanding Achievement for Poster Presentation in Molecular and Environmental Microbiology.

Doctoral Research Scholarship February 2022

Baylor University, Department of Biology

- Awarded a competitive scholarship to support research on cadmium exposure and its impact on public health, which covers tuition and research expenses for the entire duration of the doctoral program.

University Scholarship

Osun State University, Osogbo, Nigeria (2012 and 2013)

- Achieved recognition for maintaining a GPA of 4.5 or higher while completing coursework for the two sessions

PROFESSIONAL AFFILIATIONS

Member, RNA Society

American Society for Microbiology

Member Texas Society for Microscopy

GLOBE International STEM Network (GISN)

COMMUNITY SERVICE

Ambassador, Global Center for Engagement

2024 – Present

Baylor University, Waco, TX

- Actively promote cultural exchange and global learning initiatives among students and faculty.
- Facilitate workshops and events aimed at fostering diversity, inclusion, and cross-cultural collaboration within the university community.
- Serve as a liaison between international students and university resources, assisting with their transition and integration into campus life.
- Collaborate with faculty and staff to design and implement programs that encourage global awareness and engagement.
- Mentor students on opportunities for study abroad, global internships, and research exchanges.

Science Fair Judge

Coastal Bend Regional Science Fair at Texas A&M Corpus Christi

2024

Dallas Regional Science and Engineering Fair

2024

Texas Science Engineering and Fair at Texas A&M University

2024

Teaching Volunteer

Department of Zoology Osun state University, Osogbo

2019

Coordinating the Laboratory and assisting undergraduate project students.

Community Development Activities

- Disaster Action Team Member, American Red Cross 2023-Present
Responded to local and regional disasters by providing immediate support and resources to affected individuals and families.
Assisted in the coordination of emergency response efforts, including shelter setup, food distribution, and logistical support.
Participated in training sessions to enhance disaster response skills and ensure preparedness for various emergency scenarios.
- Environmental Health Advocate Volunteer 2019
Promoted awareness and education on environmental health issues within the community.
Organized and led workshops on topics such as waste management, pollution reduction, and sustainable practices.
Collaborated with local organizations to implement initiatives aimed at improving environmental health and safety.
- Community Outreach Volunteer on Malaria and Insecticide-Treated Nets 2019
Educated community members about malaria prevention and the benefits of using insecticide-treated nets.
Distributed nets and provided training on proper use and maintenance to ensure effective protection against malaria.
Conducted follow-up assessments to monitor net usage and gather feedback for continuous improvement of outreach efforts.
- Health Advocacy Volunteer on Onchocerciasis Volvulus 2018
Raised awareness about onchocerciasis (river blindness) and its prevention methods through community presentations and educational materials.
Assisted in organizing and executing mass drug administration campaigns to control and prevent disease.
Engaged with local health workers and stakeholders to strengthen community-based efforts in managing and reducing onchocerciasis.

SKILLS

- Critical Thinking
- Data Entry
- Nucleic Acids Isolation
- Computer Skills
- Good Work Ethic
- Research Management
- Data Analysis
- Electrophoresis
- Diagnostic Tests
- Primer Design
- Molecular Biology
- Transmission Electron Microscopy
- Dissecting Microscope
- Flow Cytometry
- ELISA
- GeneXpert