AKINJIDE SAMUEL ANIFOWOSE

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PROFESSIONAL SUMMARY

Trained as a parasitologist, I combine wet-lab expertise in high-throughput technologies with computational approaches to analyse large biological datasets, model host–pathogen interactions, and investigate immune responses. This integrative approach allows me to generate insights that can inform strategies to prevent, control, and ultimately eliminate infectious diseases.

KEY SKILLS AND COMPETENCE

Molecular & Cellular Biology:

- Culturing and genetic manipulation of *Trypanosoma brucei* parasites
- Fluorescent microscopy and high-throughput image acquisition
- Protein expression analysis and correlation with cell cycle stages
- Nucleic acid and protein extraction and sample preparation
- Realtime quantitative PCR (qPCR) – optimization and data analysis
- Gel electrophoresis and Next Generation Sequencing (NGS)

Bioinformatics & Data Analysis:

- Workflow management (Galaxy and Nextflow)
- Coding and data processing (Python, R, and Unix shell)
- Large-scale microscopy image analysis
- Integrative analysis of proteomic and transcriptomic datasets
- Version control (Git)

Scientific and Critical Writing, Data Presentation, and Visualization (Excel, Word, and PowerPoint).

EDUCATION

2025-2026 **Newcastle University, United Kingdom**
MRes., Biomedical Informatics (in-view),
Courses to be completed: Bioinformatics for Biomedical Scientists, Human Health and Impact of Microbial Genomics, Enabling Technologies and Methodologies (High-Throughput Technologies) for Biomedical Research, Research Skills and Principles for Biosciences.

2017-2019 **Federal University of Agriculture, Abeokuta, Ogun State, Nigeria**
M.Sc. Pure and Applied Zoology (Parasitology)
CGPA:3.3/4.0 (MERIT/Ph.D grade)
Thesis: Epidemiological status of Lymphatic Filariasis and its assessment towards elimination in Abeokuta North Local Government, Ogun state, Nigeria.
Courses completed: Parasitology, Advanced Immunology and Immunochemistry, Biostatistics, Epidemiology, Transmission of Tropical Diseases,

2008-2013 **Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria.**
BSc. (*Hons*) Zoology
CGPA: 2.7/4.0
Thesis: Biodiversity of Anuran species on Obafemi Awolowo University Campus, Ile-Ife, Nigeria

ACADEMIC AWARDS

- **2023:** Amazon Employee UK Career Choice Programme award
- **2021:** Royal Society of Tropical Medicine and Hygiene, Early Career Research Grant (Principal Investigator)
- **2018:** Best Seminar Presentation, Postgraduate Studies, Department of Zoology
- **2011:** Best Student in Mathematics (300 level), Department of Zoology, Obafemi Awolowo University.
- **2010:** Best Student in Mathematics (200 level), Department of Zoology, Obafemi Awolowo University.

RELEVANT RESEARCH AND ACADEMIC EXPERIENCE

09/2025 – Date: Postgraduate Research Scientist (Emma Briggs Lab), Newcastle University, UK

- Conducting molecular and cellular biology experiments to understand the biology of trypanosome parasites.
- Using genetic editing technics and generating a lot of fluorescent microscopy images to understand protein expression patterns during the cell cycle of the parasites.
- Large-scale image analysis using Python and/or MATLAB
- Comparative analysis of protein expression and transcriptomic datasets
- Integrating multi-omics data (proteomics and transcriptomics)
- Managing datasets from both experiments and published studies

06/2023 – 03/2025: Research Scientist, HackBio Internship, Remote

- Developed computational tool for Drug Discovery in Peadiatric Cancer (Leukemia)
- Developed a Shiny app that leverages the TCGAanalyze_EAcomplete() and TCGA_EAbarplot() function from the TCGAbiolinks package in R to perform functional enrichment analysis in other to reproduce the development of an interactive R shiny created by South Dakota University.
- Using computational tools (R programming) to determine the prevalence of malaria using the two detection techniques
- Analyse Whole Genome Sequencing (WGS) data from 100+ Bacterial isolates collected during the 2017–2018 South African outbreak using bash scripting and Python for downstream analysis.
- Classifying Cancer Subtypes Using Methylation Data using R and Machine Learning.
- Perform Transcriptomics analysis using R

11/2024 – 12/2024: Bench Work, Inqaba Biotech - Africa's Genomic Company

- Nucleic acid extraction (DNA & RNA) from human blood (malaria-infected samples)
- RNA → cDNA synthesis and qPCR (gene expression analysis and assay optimisation)
- Gel electrophoresis and Sanger sequencing (amplicon validation)
- Downstream bioinformatics: read QC, alignment, expression quantification, and sequence analysis
- Sample handling and documentation compliant with ethical approvals and biosafety procedures

01/2021 – 03/2023: Principal Investigator, Royal Society of Tropical Medicine and Hygiene, UK

- Conducted an analytical cross-sectional and community based within health care centres and communities.
- Assessment of demographic information and participants knowledge, attitude and practices (KAP).
- Collection of fresh faecal samples from study participants and samples were examined using the Kato-Katz technique.
- Data analysis using Statistical Package for Social Sciences (SPSS) and using binomial logistic regression model to identify predictors of Soil Transmitted Helminths (STH) Infections and to examine the associations between STH infection status and stunting, underweight, and wasting.

11/2019 – 01/2021: Research/Teaching Assistant, Information and Computer Technology, Lead City University, Nigeria

- Review of project procedures and laboratory methodologies
- Supervision of undergraduate research studies by increasing Supervisor and student relationship
- Developed Course curriculum that made student deep dive into the core course by fully understanding the course.
- Data analysis and bioinformatics

03/2018 – 03/2019: Graduate Research Student, Federal University of Agriculture, Abeokuta, Nigeria

- Field epidemiology (surveys, sampling, interviews): Collection of demographics, clinical, and behavioural data from community members through household surveys, blood sampling, and structured interviews to determine LF prevalence and risk factors.
- Laboratory diagnostics (microscopy, and RDTs): Analysing blood samples using microscopy, and rapid diagnostic tests to detect microfilariae.
- Entomology (vector surveillance): Capture and examine mosquito vectors through trapping and molecular xenomonitoring to assess ongoing transmission of *Wuchereria bancrofti*.
- Data analysis: Use descriptive statistics, prevalence estimates, and regression models to quantify infection patterns, identify determinants, and evaluate progress toward elimination thresholds.
- Program evaluation (MDA coverage, elimination assessment): Review mass drug administration records and community compliance to measure coverage, effectiveness, and alignment with WHO elimination targets.

06/2017 – 04/2018: Independent Monitor, World Health Organization, South-West Region, Nigeria

- Assisted in conducting the National School based Deworming Programme (NSCDP) in Nigeria.
- Monitoring Teacher's Training observation survey (TT OBS)

- Community Mobilization and sensitization survey (CMS)
- Deworming day survey (DD main)
- Data audit process monitoring

02/2011-12/2011: Undergraduate Research Student, Obafemi Awolowo University, Nigeria

- Field surveys (visual and auditory encounters**):** Conduct systematic day and night transect walks, recording both sightings and calls of anurans across diverse habitats on campus.
- Sampling and identification: Capture specimens using hand collection, then identify species using morphological keys and call libraries.
- Habitat assessment: Document environmental parameters (e.g., vegetation type, water availability, disturbance level) to relate species presence to habitat characteristics.
- Biodiversity analysis: Calculate species richness, abundance, and diversity indices (Shannon–Wiener) to assess community structure.
- Conservation evaluation: Compare species distribution and abundance to conservation status (IUCN Red List) and recommend campus-level biodiversity protection strategies.

PUBLICATION (S)

- Olaitan Olamide Omitola, Cynthia Uchechukwu Umunnakwe, Adedotun Ayodeji Bayegun, **Samuel Akinjide Anifowose**, Hammed Oladeji Mogaji, Akinola Stephen Oluwole, Simon Nnayere Odoemene, Taiwo Sam Awolola, Adebola Adedoyin Osipitan, Sammy Olufemi Sam-Wobo, Uwem Friday Ekpo (2021). Impacts of ivermectin mass drug administration for onchocerciasis on mosquito populations of Ogun state, Nigeria. *Parasites & Vectors* **14**, 212 (2021). https://doi.org/10.1186/s13071-021-04716-3
- **Akinjide Samuel Anifowose,** Temilade Mariam Adeyemo, Oluwasegun Thomas (2025) Comparative Diagnostic Performance of Microscopy and PCR for Detecting Submicroscopic *Plasmodium falciparum* Infections (Under review).

PROFESSIONAL DEVELOPMENT/ CERTIFICATION(S)

- **2025 -Date:** Python for Genomic Data Analysis, John Hopkins University Certification Course.
- **2025:** Machine Learning Track, Galaxy Training Academy 2025.
- **2025:** Bioinformatics for Biologists: Analysing and Interpreting Genomics Datasets, Wellcome Connecting Science.
- **2024:** Bioinformatics for Biologists: An Introduction to Linux, Bash Scripting, and R, Wellcome Connecting Science.
- **2024**: Metagenomics Data Analysis, School of Biological Sciences Bioinformatics Training, University of Cambridge
- **2024**: Foundations of phylogenetic inference, School of Biological Sciences Bioinformatics Training, University of Cambridge.
- **2024:** Transcriptomic Learning Track, Galaxy Training Academy 2024
- **2024:** Introduction to Python for Biologists, School of Biological Sciences Bioinformatics Training, University of Cambridge.
- **2023:** Introduction to Genomic Technologies, John Hopkins University Certification Course.
- **2023**: Data Science with R for Life Scientist, HackBio Training Workshop

CONFERENCES ATTENDED

- **2024:** Virus Genomics, Evolution and Bioinformatics Conference, Wellcome Connecting Science, UK (Virtual, Attendee)
- **2024:** Online Research in Progress, Royal Society for Tropical Medicine and Hygiene, UK (Virtual, Attendee)
- **2023:** Global Genomic Medicine Consortium (G2MC) 7th International Conference organized by Campus Biotech, Geneva, Switzerland (Virtual, Attendee)
- **2023:** Genomic England Research Summit, London, UK (Attendee)
- **2019:** 11th European Congress on Tropical Medicine and International Health, UK

Titled: "Impact of Ivermectin Mass Treatment on malaria vector populations in Ogun state" (Poster Presentation).

- **2019:** 43rd Parasitology and Public Health Society of Nigeria (PPSN) Conference, Nigeria.

Title: "Epidemiological Status of Lymphatic Filariasis and its assessment towards elimination at Abeokuta North, Ogun state, Nigeria (Oral Presentation)

- **2019:** 1st Neglected Tropical Diseases (NTDs) International Scientific Conference, Ogun State, Nigeria (Attendee)

PROFESSIONAL AFFILIATION

- International Society for Computational Biology (ISCB)
- American Society of Cell Biology (ASCB)
- American Society for Tropical Medicine, and Hygiene (ASTMH)
- American Society of Microbiology (ASM)
- Royal Society of Tropical Medicine, and Hygiene (RSTMH)
- Genetics Society, UK
- British Society of Parasitology (BSP)

LEADERSHIP POSITIONS

- **2024-2025:** Team Lead, Data Management and Analysis, Amazon Fulfilment Centre, UK
- **2022-2024:** Lead, Student Ambassador in Nigeria, Royal Society for Tropical Medicine and Hygiene, UK
- **2013-2014:** Program Coordinator, National Agency for Food and Drug Administration (NAFDAC), NYSC CLUB
- **2008-2012:** Course Rep (100 Level – 400 Level), Department of Zoology, Obafemi Awolowo University, Nigeria
- **2011-2012:** General Secretary and Sport Director, Zoology Students Association, Obafemi Awolowo University, Nigeria
- **2011-2012:** Program Coordinator, PAVO Annual Conference in Honour of Professor Adetoye Faniran Imevbore

RELEVANT VOLUNTEERING EXPERIENCE

- **2022: Volunteer, Junior Bioinformatics Advisor, HackBio**

I was involved in a remote workshop where I Guide mentees and assist and work trainees through different Bioinformatic workflows

- **2022: Volunteer, Student Ambassador, Royal Society for Tropical Medicine and Hygiene, UK**

I was involved in facilitating orientations for students, organized forums and meetings to sensitize students on RSTMH activities, distributed RSTMH souvenirs to students towards awareness at Federal University of Abeokuta, Nigeria.

- **2014: Volunteer, Royal Heritage Health Foundation, Nigeria**

Contributed and Participated in the following projects across the entire Kwara State: Roll back on malaria and prevention; Prevention on HIV/AIDS; Monitoring and Mentoring Scheme on Education System (ESSPIN); Evaluation of Secured Livelihood; Testing, Counselling, and facilitation of trainings; Report documentation.

- **2022: Volunteer, Charity Organization, Nigeria**

I led and participated in a program organized for the orphanage home. Gave them gifts, played with them, taught them different handcrafts.