Mofetoluwa Daniel Akinkoye

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EDUCATION:

Grambling State University | **GPA: 4.0/4.0** (August 2023 – May 2027)

Bachelor of Science with Honors, Biology

Relevant Courses: Biology, Calculus, Organic Chemistry, Microbiology, Ecology, Anatomy and Physiology.

Awards and Honors: Academic Achievement Award Recipient, Earl Lester Cole Honors College Scholar, Louisiana Academy of Science Scholar, **3x** President's List

SKILLS:

Molecular Biology Techniques: RNA Extraction, RNA Quantification, Protein Extraction, Protein Estimation, Western Immuno-Blotting, Quantitative polymerase chain reaction (qPCR), Enzyme-linked immunosorbent assay (ELISA), Tunnel Assay, Flow cytometry, Antibody-Mediated Blocking, Reverse transcriptase synthesizes

Cell Biology: Cell culture, Cell splitting and Harvesting, Cell Seeding, Cell counting, Cryogenic storage

Bioinformatics: STITCH Model, Molecular docking, Insilco method, Python Programming

EXPERIENCE

Grambling State University Molecular Toxicology Laboratory | *Student Researcher* **|** January 2025- Present

- Researched Pentachlorophenol induced cell cycle disruption in TIB-73 mouse liver cells to examine its role in cancer development and genomic instability.
- Investigated p53 regulation and cell cycle checkpoint disruptions to analyze PCP's impact on tumor suppressor function and uncontrolled cell division.
- Performed cell culture, Western blotting, and SDS-PAGE to assess protein expression changes and identify molecular disruptions caused by PCP exposure.

LUMCON Inc. | *Research Fellow* **|** October 2024 - Present

- Conducted research on the Gulf and Mississippi River estuary, focusing on water quality assessment, biodiversity statistics, and environmental data collection.
- Collaborated with research teams to develop hypotheses and execute fieldwork as part of a comprehensive research project.

National Science Foundation |*Research intern at laboratory of pulmonary Immunotoxicology* **|** *May* 2024 – July 2024

- Investigated the impact of environmental pollutants (PCP, TCHQ, ECVC, PFOA, PFOS, Carbon nanotubes) on human lung cells, focusing on inflammatory and apoptotic pathways.
- Explored key pathways (Pan apoptotic, immunoproteasome, and Hippo signaling) to evaluate inflammation, cell death, and lung function impairment.
- Aimed to understand the contribution of pollutants to lung diseases, providing insights into potential therapeutic targets.
- Utilized qPCR, Western blotting, ELISA, molecular docking, and the STITCH modeling system to analyze the impact of pollutants on specific pathways. Used Insilco methods to predict biological interactions of protein and toxins.

Grambling State University Molecular Toxicology Laboratory | *Student Researcher* **|** October 2023- Present

- Current research seeks to study the effects of Pentachlorophenol, a commonly used wood preservative, on inflammatory proteins in TIB-73 mouse liver cells.
- The research seeks to identify the effect of pentachlorophenol on Mouse liver cells, with a focus on understanding the inflammatory microenvironment and identifying inflammatory response proteins.
- Utilized Western immunoblotting to analyze protein expression levels, ensuring accurate detection and quantification of inflammatory proteins affected by Pentachlorophenol exposure.

PRESENTATIONS: Jan 2024- Present

- "Impact of Environmental Toxins on Lung Health: Apoptotic, Hippo, and Immunoproteasome Pathway Alterations" Southern University
- "Cancer development and disruption of the cell cycle in TIB- 73 Mouse Liver Cells Exposed to Pentachlorophenol," Undergraduate Research Symposium, Grambling State University
- "Inflammatory Microenvironment for Cancer Cells in TIB-73 Mouse Liver Cells Exposed to Pentachlorophenol," Undergraduate Research Symposium, Grambling State University
- "Inflammatory Microenvironment for Cancer Cells in TIB-73 Mouse Liver Cells Exposed to Pentachlorophenol," Academic Summit, Louisiana Tech University
- "Inflammatory Microenvironment for Cancer Cells in TIB-73 Mouse Liver Cells Exposed to Pentachlorophenol," 98th Annual Meeting Louisiana Academy of Science, Southeastern Louisiana University

LEADERSHIP EXPERIENCE:

Grambling State University Biology Club | *Secretary* August 2024 - Present

- Organized and documented club activities, facilitating communication and student engagement in biological sciences.

LS-LAMP | *Tutor* August 2024 – Present

- I taught research concepts and techniques, and advanced biology to underrepresent minorities interested in science research.

Grambling State university | *Resident Assistant* January 2024 **-** Present

- Fostered an inclusive community, mentoring students, enforcing policies, and providing academic and personal guidance.

STEM NOLA | *Student Volunteer* September 2023 – Present

- Actively engaged and taught elementary and middle school students' fundamental concepts in physics, biology, and chemistry through hands-on experiments and interactive learning.