

Ayodeji Osmund Falade, *PhD*

Department of Biochemistry, University of Medical Sciences, Ondo, Ondo State, Nigeria

E-mail: afalade@unimed.edu.ng; ayodeji.falade@yahoo.com

Phone: +2348066402770

Google Scholar: https://scholar.google.com/citations?user=pyL_vg0AAAAJ&hl=en&oi=ao.

Research Gate: https://www.researchgate.net/profile/Ayodeji_Falade

WORK EXPERIENCE

Biochemistry Lecturer

April 2019-Present

University of Medical Sciences, Ondo, Nigeria

- Teach biochemistry to undergraduate students of biochemistry.
- Teach biochemistry to undergraduate students of medical and dental sciences; medical laboratory science; nursing; physiotherapy; anatomy and physiology.
- Prepare and deliver lectures to students and conduct laboratory sessions or discussion groups.
- Prepare, administer and grade examinations, laboratory assignments and reports.
- Advise students on course and academic matters and career decisions.
- Direct research programs of undergraduate students.
- Provide mentoring and support to students.
- Coordinate biochemistry technique option of the science laboratory program.
- Perform related administrative duties including serving as Examination Officer.

Teaching/Research Assistant

April 2015 – Dec 2017

Department of Biochemistry and Microbiology, University of Fort Hare, Alice, South Africa

- Conducted tutorials; supervised weekly laboratory sections; graded undergraduate scripts; and supervised research projects.

Research Mentoring

- Supervision of four undergraduate students in applied biochemistry research- completed.
- Graduate research mentor: AEMREG Laboratory, Department of Biochemistry and Microbiology, University of Fort Hare, Alice, South Africa.
- Mentored and trained four postgraduate biochemistry (honours) students in enzyme-related research during my doctoral study.

EDUCATION

University of Fort Hare, Alice, South Africa

May 2018

Doctor of Philosophy in Biochemistry

Federal University of Technology, Akure, Nigeria

June 2012

Master of Technology in Applied Biochemistry

RESEARCH INTEREST

Therapeutic potentials of endophytes-derived compounds.

AWARDS

South Africa Medical Research Council Doctoral Bursary Award - 2015-2017.

Ondo State Government of Nigeria Merit Scholarship Award for undergraduates - 2005.

Ondo State Government of Nigeria Merit Scholarship Award for undergraduates - 2006.

RESEARCH GRANTS

- Tertiary Education Trust Fund (TETFund) intervention for institution-based research entitled: Biochemical studies on the molecular basis of epilepsy and epileptogenesis using rat model-\$4300.
Role on the project: Co-investigator.
 - Tertiary Education Trust Fund (TETFund) intervention for institution-based research entitled: Assessment of *Morinda lucida* leaf phytosterol-enriched extract for anti-benign prostatic hyperplasia and histone deacetylase inhibitory potentials- \$4500.
Role on the project: Co-investigator.
-

SKILLS

- Bioinformatics tools: chromas, MEGA, BioEdit, geneious and PyRx (molecular docking) softwares; Microsoft office programs.
-

PUBLICATIONS

PhD thesis: Production and molecular characterization of peroxidases from novel ligninolytic proteobacteria and bacillus strains.

Articles published in peer-reviewed journals

1. **Falade, A. O.**, Omolaiye G. I., Adewole, K. E., Agunloye, O. M., Ishola, A. A., Okaiyeto, K., Oboh, G. and Oguntibeju, O. O. (2022). Aqueous extracts of Bay leaf (*Laurus nobilis*) and Rosemary (*Rosmarinus officinalis*) inhibit iron-induced lipid peroxidation and key-enzymes implicated in Alzheimer's disease in rat brain-*in vitro*. *American Journal of Biochemistry and Biotechnology*, 18 (1): 9-22.
2. **Falade, A. O.**, Adewole, K. E. and Ekundayo, T. C. (2021a). Aptitude of endophytic microbes for production of novel biocontrol agents and industrial enzymes towards agro-industrial sustainability. *Beni-SuefUniv J Basic Appl Sci*, 10: 61.
3. Okaiyeto, K., **Falade, A. O.** and Oguntibeju, O. O. (2021). Traditional uses, nutritional and pharmacological potentials of *Clerodendrum volubile*. *Plants*, 10: 1893.

4. **Falade, A. O.**, Adewole, K. E. and Ekundayo, T. C. (2021b). Therapeutic potentials of endophytes for healthcare sustainability. *Egyptian Journal of Basic and Applied Sciences*, 8 (1): 117-135.
5. **Falade, A. O.** (2021). Valorization of agricultural wastes for production of biocatalysts of environmental significance: towards a sustainable environment. *Environmental Sustainability*, 4, 317–328.
6. **Falade, A. O.** and Ekundayo, T. C. (2021). Emerging biotechnological potentials of DyP-types peroxidases in remediation of lignin wastes and phenolic pollutants: a global assessment (2007-2019). *Letters in Applied Microbiology*, 72 (1): 13-23.
7. Agunloye, O. M., Oboh, G. and **Falade, A. O.** (2021). *Pleurotus ostreatus* and *Lentinus subnudus* supplemented diets restore altered acetylcholinesterase and butyrylcholinesterase activities and improve antioxidant status in transgenic *Drosophila melanogaster* model. *Journal of Dietary Supplements*, 18 (4):372-386.
8. **Falade, A. O.**, Mabinya, L. V., Okoh, A. I. and Nwodo, U. U. (2020). Agroresidues enhanced peroxidase activity expression by *Bacillus* sp. MABINYA-1 under submerged fermentation. *Bioresources and Bioprocessing*, 7: 55.
9. **Falade, A. O.**, Mabinya, L. V., Okoh, A. I. and Nwodo, U. U. (2019a). Biochemical and molecular characterization of a novel dye-decolourizing peroxidase from *Raoultella ornithinolytica* OKOH-1. *International Journal of Biological Macromolecules*, 121: 454-462.
10. **Falade, A. O.**, Mabinya, L. V., Okoh, A. I. and Nwodo, U. U. (2019b). Agrowastes utilization by *Raoultella ornithinolytica* for optimal extracellular peroxidase activity. *Biotechnology and Applied Biochemistry*, 66: 60-67.
11. **Falade, A. O.**, Mabinya, L. V., Okoh, A. I. and Nwodo, U. U. (2019c). Peroxidases produced by new ligninolytic *Bacillus* strains isolated from marsh and grassland decolourized anthraquinone and azo dyes. *Polish Journal of Environmental Studies*, 28 (5): 3163-3172.
12. **Falade, A. O.**, Jaouani, A., Mabinya, L. V., Okoh, A. I. and Nwodo, U. U. (2019d). Exoproduction and molecular characterization of peroxidase from *Ensifer adhaerens*. *Applied Sciences*, 9: 3121.
13. **Falade, A. O.**, Mabinya, L. V., Okoh, A. I. and Nwodo, U. U. (2019e). Studies on peroxidase production and detection of *Sporotrichum thermophile*-like catalase-peroxidase gene in a *Bacillus* species isolated from Hogsback forest reserve, South Africa. *Heliyon*, 5: e03012.
14. **Falade, A. O.**, Mabinya, L. V., Okoh, A. I. and Nwodo, U. U. (2018). Ligninolytic enzymes: versatile biocatalysts for the elimination of endocrine-disrupting chemicals in wastewater. *Microbiology Open*, 7: e722.
15. **Falade, A. O.**, Eyisi, O. A. L., Mabinya, L. V., Nwodo, U. U. and Okoh, A. I. (2017a). Peroxidase production and ligninolytic potentials of freshwater bacteria *Raoultella ornithinolytica* and *Ensifer adhaerens*. *Biotechnology Reports*, 16: 12-17.
16. **Falade, A. O.**, Nwodo, U. U., Iweriebor, B. C., Green, E., Mabinya, L. V. and Okoh, A. I. (2017b). Lignin peroxidase functionalities and prospective applications. *Microbiology Open*, 6: e00394.
17. **Falade, A. O.**, Oboh, G. and Okoh, A. I. (2017c). Potential health implications of the consumption of thermally-oxidized cooking oils. *Polish Journal of Food and Nutrition Sciences*, 67 (2): 95-105.

18. **Falade, A. O.**, Oboh, G., Ademiluyi, A. O., Odubanjo, O. V. (2015). Consumption of thermally oxidized palm oil diets alters biochemical indices in rats. *Beni-Suef University Journal of Basic and Applied Sciences*, 4 (2): 150-156.
19. **Falade, A. O.** and Oboh, G. (2015). Thermal oxidation induces lipid peroxidation and changes in the physicochemical properties and β -carotene content of arachis oil. *International Journal of Food Science*, vol. 2015, Article ID 806524, 7 pages, 2015.
20. Oboh, G., **Falade A. O.**, Ademiluyi, A. O. (2014). Effect of thermal oxidation on the physico-chemical properties, malondialdehyde and carotenoid contents of palm oil. *Riv. Ital. delle Sostanze Grasse*, 91(1): 59-65.

Book chapter

1. Unuofin, J. O., **Falade, A. O.** and Aladekoyi, O. J. (2020). Applications of Microbial Laccases in Bioremediation of Environmental Pollutants: Potential Issues, Challenges and Prospects. In Saxena, G., Kumar, V. and Shah, M. P. (Eds.), *Bioremediation for Environmental Sustainability: Toxicity, Mechanisms of Contaminants Degradation, Detoxification, and Challenges*. Elsevier, Pp. 519-540.
2. **Falade, A. O.** and Omojokun, O. S. (2017). Influence of Food Processing and Preservation Techniques on Functional Food Product Development. In *Functional Foods: Unlocking the Medicine in Foods*. Oboh, G. (eds). Graceland, Akure, Ondo State, Nigeria. Pp 98.

Conference proceedings

1. **Falade, A. O.** (2021). Global trend of lignin modifying enzymes studies: progress and prospect. E-poster presentation at the 10th Early Career Scientists Research Symposium, Society for Applied Microbiology (Sfam), UK (23-26 March).
2. **Falade, A. O.**, Mabinya, L. V., Nwodo, U. U. and Okoh, A. I. (2018). Molecular Characterization of Lignin Modifying Enzymes in *Raoultella ornithinolytica* OKOH-1. Proceedings of the annual conference of the American Society for Microbiology (ASM), Microbe 2018, Atlanta, Georgia, USA (7-11 June). **Poster**.
3. **Falade, A. O.**, Mabinya, L. V., Nwodo, U. U. and Okoh, A. I. (2018). Peroxidase Production by *Raoultella ornithinolytica* OKOH-1 Isolated from Tyhume River Sediments. Proceedings of the 20th Biennial Conference of the South African Society for Microbiology (SASM), Muldersdrift, Johannesburg (4– 7 April). **Oral**.
4. **Falade, A. O.**, Mabinya, L. V., Jaouani, A., Nwodo, U. U. and Okoh, A. I. (2016). Ligninolytic and Peroxidase Production Potentials of Novel Bacterial Strains Isolated from Freshwater and Terrestrial Milieux of the Nkonkobe Municipality, Eastern Cape, South Africa. Proceedings of the 1st Tunisian-South African International Conference, ISBST, Sidi Thabet, Tunisia (4– 6 November). **Oral**.

Nucleotide sequences published in the NCBI GenBank

1. **Falade, A.O.**, Nwodo, U.U., Mabinya, L.V. and Okoh, A.I. (2018). *Raoultella ornithinolytica* strain OKOH-1 16S ribosomal RNA gene, partial sequence. [Accession number KX640917] *Locus* KX640917; 816 bp; DNA linear.
2. **Falade, A.O.**, Nwodo, U.U., Mabinya, L.V. and Okoh, A.I. (2018). *Ensifer adhaerens* strain NWODO-2 16S ribosomal RNA gene, partial sequence. [Accession number KX640918] *Locus* KX640918; 820 bp; DNA linear.

3. **Falade, A.O.**, Nwodo, U.U., Mabinya, L.V. and Okoh, A.I. (2018). *Bacillus* sp. strain NWODO-3 16S ribosomal RNA gene, partial sequence. [Accession number KX640919] *Locus* KX640919; 775 bp; DNA linear.
4. **Falade, A.O.**, Nwodo, U.U., Mabinya, L.V. and Okoh, A.I. (2018). *Bacillus* sp. strain MABINYA-1 16S ribosomal RNA gene, partial sequence. [Accession number KX640920] *Locus* KX640920; 804 bp; DNA linear.
5. **Falade, A.O.**, Nwodo, U.U., Mabinya, L.V. and Okoh, A.I. (2018). *Bacillus* sp. strain MABINYA-2 16S ribosomal RNA gene, partial sequence. [Accession number KX640921] *Locus* KX640921; 803 bp; DNA linear.
6. **Falade, A.O.**, Nwodo, U.U., Mabinya, L.V. and Okoh, A.I. (2018). *Bacillus* sp. strain FALADE-1 16S ribosomal RNA gene, partial sequence. [Accession number KX640922] *Locus* KX640922; 634 bp; DNA linear.
7. **Falade, A.O.**, Nwodo, U.U., Mabinya, L.V. and Okoh, A.I. (2017). *Raoultellaornithinolytica* strain OKOH-1 peroxidase gene, partial cds. [Accession number MF370527] *Locus* MF370527; 478 bp; DNA linear.
8. **Falade, A.O.**, Nwodo, U.U., Mabinya, L.V. and Okoh, A.I. (2017). *Raoultellaornithinolytica* strain OKOH-1 multicopper oxidase gene, partial cds. [Accession number MF374335] *Locus* MF374335; 509 bp; DNA linear.
9. **Falade, A.O.**, Nwodo, U.U., Mabinya, L.V. and Okoh, A.I. (2017). UNVERIFIED: *Bacillus* sp. strain FALADE-1 genomic sequence. [Accession number MF407314] *Locus* MF407314; 321 bp; DNA linear.
10. **Falade, A.O.**, Nwodo, U.U., Mabinya, L.V. and Okoh, A.I. (2017). UNVERIFIED: *Ensiferadhaerens* strain NWODO-2 genomic sequence. [Accession number MF374336] *Locus* MF374336; 830 bp; DNA linear.

MEMBERSHIP OF PROFESSIONAL BODIES/LEARNED SOCIETIES

- South African Society of Biochemistry and Molecular Biology (SASBMB).
- Nigerian Society of Biochemistry and Molecular Biology (NSBMB).
- Society for Applied Microbiology (SfAM).
- South African Society for Microbiology (SASM).
- American Society for Microbiology (ASM).

REVIEW OF ACADEMIC AND PROFESSIONAL JOURNALS

- Journal of Complementary and Integrative Medicine
- Water and Environment Journal
- Indian Journal of Experimental Biology
- Waste and Biomass Valorization

REFEREES

- i. **Prof. A. I. Okoh**
 Director, SAMRC Microbial Water Quality Monitoring Centre
 Faculty of Science and Agriculture, University of Fort Hare, Alice, 5700,
 South Africa. **E-mail:** AOkoh@ufh.ac.za.

- ii. **Prof. G. Oboh**
Director, Centre for Research and Development (CERAD)
Federal University of Technology, Akure, Nigeria.
E-mail: goboh2001@yahoo.com.

- iii. **Prof. U. U. Nwodo**
Department of Biochemistry and Microbiology
University of Fort Hare, Alice, 5700, South Africa.
E-mail: UNwodo@ufh.ac.za.