

OLUGBENGA O. OGUNLABI

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OBJECTIVE

I seek to be part of a Faculty for collaborative development, team work, and academic goals achievement for progressive self-development. I am self-motivated and result-driven. I have hands on research experience in the use of various microbiology and molecular biology techniques. I am passionate about research, teaching and science communication to aid students' interest, enthusiasm and understanding

Research interests

My training in biochemistry, molecular biology, microbiology and biotechnology has stimulated my interest in understanding the molecular and cellular basis of diseases; I seek to study molecular interactions underpinning oxidative stress in some diseases such as diabetes and cancer.

I also have keen interest in metabolic engineering and regulations, development of functional biological systems and protein science.

EDUCATION

1. PhD (Biotechnology) (2018) University of Manchester, United Kingdom

My PhD work was focused on areas of biotechnology and molecular biology

Thesis Title: Metabolic Engineering of Yeast (*S. cerevisiae*) with a view to optimising Butanol Production

Contribution:

Swidah R, **Ogunlabi O**, Grant CM, Ashe MP. (2018) n-Butanol production in *S. cerevisiae*: coordinate use of endogenous and exogenous pathways. *Applied Microbiology and Biotechnology*; doi 10.1007/s00253-018-9305-x.

Skills

- Design and conduct of scientific research in microbial genetics; specifically the engineering of yeast strains for investigative research in biofuel production

- Laboratory-scale fermentation experiments
- Selection and characterization of microorganisms (bacteria and yeast strains)
- Routine use of molecular techniques; cloning, PCR, western blot, restriction digestion, DNA & RNA isolation, electrophoresis
- Engineering and expression of novel protein in yeast,
- Use of Immuno-precipitation techniques and ELISA immunoassay
- Collaboration in the use of DNA sequencing
- Maintenance of microbial culture and Microbiology sterile techniques,
- Use of GC-FID for quantification of alcohol and secondary metabolites
- Standard laboratory safety practices and techniques including biological containment
- Project management and large data analysis

2. MSc (Biochemistry) (2006) Olabisi Onabanjo University, Ago Iwoye, Nigeria

Thesis Title: Purification of Beta-Cyanoalanine Synthase from the Gut of Variegated Grasshopper *Zonocerus variegatus* L

Contribution:

Ogunlabi, O. O. and Agboola, F. K. (2006): A Soluble Beta-Cyanoalanine Synthase From the Guts of Variegated Grasshopper *Zonocerus variegatus* (L.). *Insect Biochem. Mol. Bio.* 37: 72-79.
DOI:10.1016/j.ibmb.2006.10.003

Skills

- Protein (enzyme) isolation, purification and characterisation
- Chromatographic techniques
- Biochemical assays

3. BSc (Biochemistry) (1998) Olabisi Onabanjo University, Ago Iwoye, Nigeria

AWARDS AND SCHOLARSHIPS

- Beneficiary of the Nigeria TETFund scheme for PhD sponsorship (2013)

WORK RELATED EXPERIENCE

1. Lecturer II (May 2018 – date)

Faculty of Basic Medical Science, Olabisi Onabanjo University, Nigeria

Duties

- Independent research
- Teaching undergraduate and postgraduate level biochemistry/molecular biology Courses.
- Design and conduct of lab experiments for students
- Design and supervision of undergraduate and postgraduate research work.
- Management of students' assessment and records.

Teaching Duties

Undergraduate level biochemistry courses taken:

- Special Topics in Medical Biochemistry for Medical Students
- Metabolism of Macromolecules (Carbohydrates, Lipids, Nucleic Acids, Proteins),
- Microbial genetic and molecular biology,
- Genetic engineering

Postgraduate level

- Advanced Genetic Engineering
- Metabolic Regulations

2. Assistant Lecturer

March, 2011 – April, 2018

Other Administrative Duties

Faculty Coordinator (CESAP) (March 2011 – March 2014)

Faculty of Basic Medical Science, Olabisi Onabanjo University, Nigeria

Administrative Duties

- Course management (staff allocation and teaching)

- Examination management.
- Management of students' academic records.
- Management of Faculty budgetary allocations
- Feedback report to Dean of faculty and Program Director

3. Graduate teaching assistant (Sept 2015 - April 2018)

Faculty of Biology, Medicine and Health, University of Manchester, UK

Duties

- Demonstration of laboratory practical sessions (Molecular biology, microbiology, biochemistry) to undergraduate and masters' students
- Laboratory set ups
- Examination supervision
- Grading of scripts

4. Senior Master Teacher (Feb 2003 – March 2011)

Ogun State Teaching service Commission, Abeokuta, Ogun State, Nigeria

Duties

- O'level Biology teacher (senior secondary school)
- Basic science teacher (junior secondary school)
- Class teacher
- Departmental coordinator (science)

Additional Training

- Compressed and cryogenic gas training, University of Manchester
- Biosafety in the Laboratory Training, University of Manchester
- Health and safety induction modules, University of Manchester
- COSHH and Risk Assessment Work Shop for FLS Laboratory Staff and Students

Statement of Teaching Philosophy

Collaborative learning is central to my teaching philosophy because it promotes reflective thinking, student's engagement and it also helps improve the students' subject appreciation. The application of technology and computer-based material in the classroom such as Webboard, wikis, googlescholar and YouTube are helpful tools in the promotion of meaningful learning through collaborative work as well as independent study. My commitment and approach to teaching have spanned over eighteen years and have been rewarded with excellent students who have gone on to pursue higher studies both in Nigeria and abroad.

My personal objective is to be motivated towards goals achievement, to be a dependable faculty member and to help maintain a friendly work environment. I have taught a wide range of courses and I plan my lessons considering the interconnection between the student's knowledge, culture, environment, learning abilities, subject matter and the intended learning objectives. I choose content and activities that are both significant and engaging for the students so that they are stimulated to information mining and synthesis which make them feel involved in their own learning process. I also encourage them to make connections between the subject matter and related disciplines through assignments and journal reviews.

I believe that biological science has solution(s) to the plethora of problems besetting our world today (famine, diseases, pollutions, malnutrition, environmental depletion and so on) that teaching

is a tool that would bring the future to us. Therefore, I endeavor to help my students appreciate the endless possibilities that science holds to encourage their pursuit of solutions.

Published Journal Articles:

- 1) **Ogunlabi, O. O.** and Agboola, F. K. (2006): A Soluble Beta-Cyanoalanine Synthase From the Guts of Variegated Grasshopper *Zonocerus variegatus* (L.). *Insect Biochem. Mol. Bio.* 37: 72-79. DOI:10.1016/j.ibmb.2006.10.003
- 2) Ajani, E.O, **Ogunlabi, O.O.**, Adegbesan, B.O, Adeosun, O.E. and Akinwande, O. (2014). Nigerian mistletoe (*Loranthus micranthus* Linn) aqueous leaves extract modulates some cardiovascular disease risk factors in monosodium glutamate induced metabolic dysfunction. *African journal of Biotechnology.* 13(39):3989-3998. <https://doi.org/10.5897/ajb2014.14029>
- 3) Adegbesan, B.O., **Ogunlabi, O.O.**, Aroyewun, A.O. and Ajani, E.O. (2014). Comparative study of protective effect of separate administration of vitamin C and folic acid in act therapy induced hepatic injury. *Scientific Research and Essays.* 9(7): 189-194. <https://doi.org/10.5897/sre2013.5678>
- 4) Ajani, E.O., **Ogunlabi, O.O.**, Akinwande, O. and Adegbesan, B.O. (2014). *Loranthus micranthus* Leaves Extract Attenuate Risk Factors of Cardiovascular Disease in Fructose Fed Rats. *European Journal of Medicinal Plants* 4(12): 1489-1500. <https://doi.org/10.9734/ejmp/2014/12557>
- 5) **Ogunlabi, O.O.**, Adegbesan, B.O., Odupitan, B.S and Ajani, E.O (2014). Modulating effects of *Allium sativum* (garlic) extract in monosodium glutamate induced injuries in rats. *Medicinal plants*, 6(1):28-35.. <https://doi.org/10.5958/j.0975-6892.6.1.004>
- 6) Ajani, E.O, Adegbesan, B.O., **Ogunlabi, O.O.**, Agbe, A.D, Akinwande, O. (2014). Implication of folic acid supplementation on kidney oxidative stress and ion homeostasis in artemisinin combination therapy induced metabolic alteration. *International Journal of Biological & Pharmaceutical Research* 5(8): 643-650. ISSN 2229-7480
- 7) †*Swidah, R., **Ogunlabi, O.**, Grant CM, Ashe MP. (2018). n-Butanol production in *S. cerevisiae*: co-ordinate use of endogenous and exogenous pathways. *Applied Microbiology and Biotechnology* 102(22): 9857-9866. DOI:10.1007/s00253-018-9305-x
- 8) Adegbesan, B.O., **Ogunlabi, O.O.**, Fasanya, A. T., Adelegan, A. A., and Ajani, E.O. (2018). Investigation of the effects of Alloxan-induced diabetes on reproductive hormones (Follicle stimulating, Luteinizing and Prolactin), lipid profile and serum electrolytes in male and female Wistar rats. *African Journal of Science & Nature.* 7: 40-49.

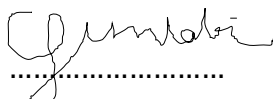
- 9) **Ogunlabi, O.O.**, Adegbesan, B.O., Adebisi, A.A., and Ajani, E.O. (2019) Pre-treatment with *Phyllanthus amarus* stalls dyslipidemia and uterine toxicity in Monosodium glutamate administered rats. *African Journal of Science & Nature*. 9: 1-10
- 10) Adebisi, A.A., Awe, F.E.O., Aderibigbe, R.O., **Ogunlabi, O.O.**, and Adegbesan O. B. (2019). Effects of Antioxidants on Markers for Gentamicin-Induced Oxidative Damage in Rat Kidneys. *LASU Journal of Health Sciences*. 2 (2): 23 – 27
- 11) Adebisi, A.A., **Ogunlabi, O.O.**, Adegbesan, O.B., Sowunmi, O.T., and Ezima N.E. (2019). Nigerian mistletoe (*Loranthus micranthus Linn*) attenuates biochemical and oxidative dysfunctions in Combination Oral Contraceptive (COC) treated rats. *LASU Journal of Health Sciences*. 2(2): 40 – 46.
- 12) Adegbesan, B.O., **Ogunlabi, O.O.**, Ezima, E. N., Adebisi, A.A., and Ajani E.O. (2020). Evaluation of dose-dependent hepatic, renal and lipid modulatory effect of ethanolic root extract of *Mezoneuron benthamianum baill* in adult wistar rats. *LASU Journal of Health Sciences*. 3 (1&2): 9-16
- 13) **Ogunlabi, O.O.**, Adegbesan, B.O., Edema, A.A., Ademiluyi, S.O., Ogundele O.R. (2020) Treatment with Cellgevity improves glycemic index and prevents atherogenic dyslipidemia in Type 2 Diabetic rat mode. *LASU Journal of Health Sciences* 3 (1&2): 24-31
- 14) Adegbesan, B.O., **Ogunlabi, O.O.**, Olatunbosun, O. O., Edema, A. A., and Onasanya, O. O. (2021). Oral Cellgevity® improves antioxidant parameters and stall damages in STZ-diabetic rat pancreas. *FUW Trend in Science and Technology Journal*. 6 (1) 127-131.
- 15) **Ogunlabi, O. O.**, Adegbesan, B. O., Ezima, E. N. (2021). Cellgevity® ameliorates STZ-diabetic neurochemical changes and neuronal damages in male rats. *FUW Trend in Science and Technology Journal*. 6(2): 532-540
- 16) **Ogunlabi, O. O.**, Adegbesan, B. O., Nkechi, E. E., & Adebisi, A. A. (2021). Cellgevity® attenuates liver distruption, oxidative stress and inflammation in STZ-diabetic male rats. *Scientific African*, 14, e01055. <https://doi.org/10.1016/J.SCIAF.2021.E01055>
- 17) Adegbesan, B.O., **Ogunlabi, O.O.**, Odusanya, K.O., Taiwo, O.O. And Ajani, E.O. (Accepted March, 2021). The Response of Brain Antioxidants Defense System and Male Hormones Status To Cellgevity® Supplementation In Streptozotocin-Induced Type 2 Diabetes Rat-Model. *Nigerian Journal of Scientific Research*.

vii). **Published Conference Proceedings:**

1. Agboola, F. K. and **Ogunlabi, O. O.** (2006) Possible Pesticide Target: Preliminary report on the enzymology of Beta-cyanoalanine synthase from the gut of the variegated grasshopper *Zonocerus variegatus l.* **The First African Structural Biology Conference. 24 – 27 October, 2006. The Wilderness, South Africa**

F. CONFERENCES ATTENDED WITH DATES WITH PAPER READ

1. Agboola, F. K and **Ogunlabi, O. O.** Possible Pesticide Target: Preliminary report on the enzymology of Beta - cyanoalanine synthase from the gut of the Variegated Grasshopper *Zonocerus variegatus L.* The First African Structural Biology Conference. 24 – 27 October, 2006. The Wilderness, South Africa
2. **Ogunlabi, O.O.** and Banjoko, I. Studies on the Biochemical Effect of a Local Energy Drink (KPE) on Rats. **Experimental Biology Conference 2012**
3. Adegbesan, B.O and **Ogunlabi.O.O.** The effect of type 1 diabetes on reproductive hormones (Follicle stimulating, Luteinizing and Testosterone hormones) in human male subjects. **Experimental Biology Conference, 2013.** Boston Convention and Exhibition Centre, U.S.A. 20th-24th April, 2013.
4. **Ogunlabi, O.O.** Hypolipidemic potentials of mistletoe exudates in monosodium glutamate induced hyperlipidemia in rats (813.13) **Experimental Biology Conference 2014**
5. **Ogunlabi, O. O.,** Grant C and Ashe, M. P. Metabolic engineering of yeast (*S. cerevisiae*) with a view to optimise butanol production. **SynBio Conference, UK (2018)**


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Signature

January 16, 2022

Date