CURRICULUM VITAE

I	**(**a) Name:	Olubukola Titilope Oyebode
	(b) Department:	Biochemistry
	(c) Faculty:	Basic Medical Sciences
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II.	**(**a) First Academic Appointment:	Assistant Lecturer (9 August, 2012)
	(b) Present Post (With Date):	Lecturer I (01 October, 2018)
	(c) Date of Last Promotion:	01 October, 2018
	(d) Date Last Considered:	Not Applicable

III. University Education (With dates)

- University of Ibadan, Ibadan 2011 - 2017
- University of Ibadan, Ibadan 2008 - 2010
- Federal University of Abeokuta 2002 - 2006

IV. Academic Qualifications (With dates and granting bodies)

- Doctor of Philosophy (Biochemistry, University of Ibadan) 2017
- Master of Science (Biochemistry, University of Ibadan) 2010
- Bachelor of Science (Hons) (Biochemistry, Federal University of Abeokuta) 2006

V. Professional Qualifications (With dates)

(a) Doctor of Philosophy (PhD) in Biochemistry 2017

VI. Scholarships, Fellowships and Prizes (With dates)

(a) Sao-Tome International Postgraduate Fellowship 2009
(b) Oyo State Government of Nigeria Postgraduate Scholarship 2010
(c) University of Ibadan Postgraduate Publication Award 2014
(d) University of Ibadan TETFUND Award 2015
(e) UI- College of Medicine Award of Deserving Staff 2015

(f) TWAS-DFG Fellowship Award 2018

VII. Honours, Distinctions and Membership of Learned Societies

(a) Biochemical Society, UK

(b) European Association of Cancer, UK

(c) Nigerian Society of Biochemistry and Molecular Biology

VIII. Details of Teaching/Work Experience

(a) **Details of Teaching**

(i) Organization, demonstration and supervision of weekly practical classes: MBBS/BDS and Biochemistry students

(ii) Biochemistry lectures for B.Sc., M.Sc Biochemistry and MBBS/BDS students.

(iii) Biochemistry lectures for students from Physiotherapy, B. Pharmacy, Microbiology, BMLS, Nursing and Human Nutrition Departments.

(b) **Undergraduate Courses Taught**

(i) BIC 305 : Biological Membranes

(ii) BIC 306:Introductory Enzymology

(iii) BIC 311:Inducstrial Work Experience

(iv) BIC 341: Enzymes and Intermediary Metabolism

(v) BIC 401: Comparative Plant Biochemistry

(vi) BIC 405: Enzymology

(vii) BIC 406: Membrane Biochemistry

(viii) Medical Biochemistry Courses

(c) **Administrative duties**

(i) Assistant Departmental Examinations Coordinator, Biochemistry programmes, Department of Biochemistry, University of Ibadan, Ibadan Nigeria (2012-2016)

(ii) Member, Departmental Examinations Committee, Department of Biochemistry, University of Ibadan, Ibadan Nigeria (2016- date)

(iii) Member, MBBS/BDS Committee, University of Ibadan, Ibadan Nigeria

IX. Research Focus:

1. **Regulation of cell death and Drug development**: A number of diseases are characterized by dysregulated cell death. Assessment and characterization of the inductive or inhibitory effects of certain local medicinal herbs on regulated cell death may generate interesting results that could culminate in the discovery of novel compounds that will become useful in the chemotherapy of diseases involving dysregulated cell death. Bcl-2 proteins that cause Mitochondrial Outer Membrane Permeabilization (MOMP) are important targets in understanding the role of mitochondria in regulation of cell death

2. **Mitochondrial Permeability Transition (MPT) pore and Cell Death induced by toxicants**: Toxicants-induced cell death may arise when mitochondrial integrity is compromised via the opening of the MPT pore and its resultant downstream effects. Certain environmental contaminants/ drugs/ food additives may induce cell death via the opening of the MPT pore. An assessment of the toxicant effect along the lines of MPT pore opening will enhance our understanding of the toxicology of these compounds.

In-progress:

1. Purification of the active principles of the methanol fraction of *Calliandra portoricensis and Ficus mucoso*

Having previously shown that methanol fraction of *C. portoricensis and Ficus mucoso* is the most potent solvent fraction in modulation of mitochondrial-dependent cell death in cancer cells and STZ-induced diabetes mellitus respectively, using bioactivity-guided assay and contemporary spectroscopic techniques in chemistry (e.g Prep-TLC, Column chromatography, LC-MS etc), we intend to identify the exact putative agents responsible for regulation of mitochondrial-mediated cell death in these disease conditions characterized by dysregulated cell death.

2. Characterization of the role of Bcl-2 proteins in the mechanism of apoptosis induction by *C. portoricensis* in prostate cancer cells.

Mitochondrial outer membrane permeabilization is tightly controlled by the dynamic interplay of the Bcl-2 family, pro and anti-apoptotic proteins whose complex interactions determine the response of cells to death signals. Hence, selective targeting of Bcl-2 family proteins have become attractive therapeutic targets for anticancer drug design. Natural products are a rich source of bioactive compounds capable of modulating the activity of Bcl-2 family proteins. *Calliandra portoricensis* (*CP*) is used in combination with

Plumbago zeylanica in the management of prostate enlargement in traditional medicine. We have recently demonstrated that methanol fraction of CP altered levels of pro-apoptotic Bax and anti-apoptotic Bcl-2 protein which correlated with its cytotoxic activity against prostate cancer cells (Oyebode, 2017) leading to release of the apoptogenic protein cytochrome C. We intend to quantify the role/mechanism of interaction of the bioactive agents isolated from *C. portoricensis* in prostate cancer cells.

(3) Elucidation of the role of ferroptotic cell death in various disease conditions and targeting the key regulatory proteins involved

Given the recent discovery that ferroptosis, a recently identified irondependent regulated cell death, plays a role in the etiology and progression of various diseases including diabetes, cancer, cardiovascular, neurodegenerative, hepatic diseases etc, targeting ferroptosis is now a novel therapeutic strategy for modulation of diseases progression.

(c) Project, Dissertation and Thesis

- **BSc:** Determination of plasma sodium and calcium levels in pregnant women in Abeokuta metropolis.
- **MSc:** Effects of methanol and ethylacetate fractions of *C. portoricensis* on rat liver mitochondrial permeability transition pore (*in vitro and in vivo).*

(iv) **PhD:** Modulation of mitochondrial-mediated apoptosis by partially purified fractions of *Calliandra portoricensis* Benth.

X. Publications

a) Books already published: Nil

b) Chapters in Books already published: Nil

c) Articles that have already appeared in Refereed Conference Proceedings: Nil

d) Patents and Copyrights: Nil

e) Articles that have already appeared in learned journals

1. **Oyebode, O.T.,** Odejide, T.T., Kukoyi, A.J., Adebisi, L.A. and Olorunsogo, O.O. (2012). Effects of Different Fractions of *Calliandra portoricensis* Root Bark on Isolated Rat Liver Mitochondrial Membrane Permeability Transition Pore. *African Journal of Medicine and Medical Sciences* Vol. 2. No. 41:399- 409. (Nigeria)

2. Adaramoye, O., Erguen, B., **Oyebode**, O., Nitzsche, B., Hopfner, M., Jung, K. and Rabien, A. (2015). Antioxidant, Antiangiogenic and Antiproliferative Activities of Root Methanol Extract of *Calliandra portoricensis* in Human Prostate Cancer Cells. *Journal of Integrative Medicine* Vol. 13. No. 3: 185-193. (India) (Contribution: 20%).

3. Adewoye, E.O., Okunola, M.A., Adele, B.O. and **Oyebode, O.T** (2016). Effects of monopotasium glutamate on mitochondrial membrane permeability transition and lipid peroxidation: An *in vitro* study. Archives of Basic and Applied Medicine Vol. 4. No. 1:33-36. (Nigeria)

4. **Oyebode, O.T.,** Owaboye, W.R., Akinbisoye, O.F. and Olorunsogo, O.O. (2017). Evaluation of the effects of fractions of *Jatropha curcas* (Linn) leaves on mitochondrial permeability transition in rat liver. *Annual Research & Review in Biology* Vol. 16. No. 2: 1-15. (United States of America)

5. **Oyebode, O.T.,** Akinbusuyi, O.T., Akintimehin, S.E. and Olorunsogo, O.O. (2017). Modulation of cytochrome C release and opening of the mitochondrial Permeability Transition pore by *Calliandra portoricensis* (Benth) Root Bark Methanol Extract. *European Journal of Medicinal Plants* Vol. 20. No. 1: 1-14. (India)

6. Olanlokun J.O., **Oyebode O.T.**, and Olorunsogo, O.O. (2017). Effects of Vacuum Liquid Chromatography (Chloroform) Fraction of the Stem Bark of *Alstonia boonei* on Mitochondrial Membrane Permeability Transition Pore. *J. Basic Clin Pharmacy* Vol. 8. No. 4: 221-225. (Singapore)

7. **Oyebode, O.T.,** Akinyelu, J.O., Oamen, E.O and Olorunsogo, O.O. (2018). Methanol fraction of *Calliandra portoricensis* root bark activates caspases via alteration in mitochondrial viability *in vivo*. *Journal of Herbmed Pharmacology* Vol. 7. No. 4: 251-258 (Iran)

*8. **Oyebode, O.T.,** Adebiyi, O.R., Olorunsogo, O.O (2019). Toxicity of broad spectrum antibacterials in normal rat liver: role of mitochondrial membrane permeability transition pore. *Toxicological mechanisms and methods* Vol. 29. No. 2: 128–137. (UK)

*9**. Oyebode O.T.,** Owumi S.E., Oyelere A.K., Olorunsogo O.O. (2019). *Calliandra portoricensis* Benth exhibits anticancer effects via alteration of Bax/Bcl-2 ratio and growth arrest in prostate LNCaP cells. *Journal of Ethnopharmacology* Vol. 233: 64–72. (Netherlands)

*10**. Oyebode, O.T**., Ogunbiyi, F.O. and Olorunsogo, O.O. (2019). Opening of liver mitochondrial permeability transition pore in streptozotocin-induced diabetic rats and its inhibition by methanol fraction of *Ficus mucuso* (Welw) root bark. *Journal of Integrative Medicine*. Vol. 17. No. 6: 446-454. (India)

*1l**. Oyebode O.T**, Teniola O.E, Olowofolahan A.O, Olorunsogo O.O. (2019). Alpha Stone Decoction, a Polyherbal Formulation, Induces Liver Mitochondrial-mediated Apoptosis in a Monosodium Glutamate Model of Hyperplasia. *Arch. Bas. App. Med* Vol. 7: 109 – 115. (Nigeria)

*12**.** Achem, J., **Oyebode, O.T**., Akinwole, M., Bolarin, O., Malgwi J.M. and Olorunsogo O.O. (2020). Solvent fractions of *Daniellia oliveri* stem bark modulate rat liver mitochondrial permeability transition pore opening in vitro. *Arch. Bas. Appl. Med* Vol. 8. No. 1: 27-34. (Nigeria)

*13**. Oyebode, O.T**., Giwa, O. D. and Olorunsogo, O.O. (2020). Comparative effects of galactoseinduced aging on mitochondrial permeability transition in rat liver and testis. *Toxicology Mechanisms and Methods,* Vol. 30. No. 5: 388-396 (UK)

*14**. Oyebode, O.T**., Abolaji, A.O., Oluwadare, J.O., Adedara A. O and Olorunsogo, O. O. (2020). Apigenin ameliorates D-galactose-induced lifespan shortening effects via antioxidative activity and inhibition of mitochondrial-dependent apoptosis in *Drosophila melanogaster*. *Journal of Functional Foods* Vol. 69: 103957

*15.Olowofolahan A.O., **Oyebode O.T**. and Olorunsogo O.O. (2020). GCMS analysis of partially purified chloroform sub fractions of methanol extract of *Drymaria cordata* (Linn) and their effects on mitochondrial membrane permeability transition pore. *Arch. Bas. App. Med*. Vol 8: 3 – 11. (Nigeria)

***16. Oyebode, O.T**., Obiekwe, M. and Olorunsogo, O.O. (2020). Protective effects of Alpha stone, a poly-herbal formulation, on Monosodium glutamate-induced uterine hyperplasia in female Wistar rats. *Journal of Ayurveda and Integrative Medicine*. Vol. 11. No. 3: 217-223. (Netherlands)

*17**. Oyebode, O.T**., Olowofolahan A.O., Olorunsogo, O. O. (2021) "Influence of unripe Carica papaya (Linn) fruit extract on isolated rat liver mitochondria". *Traditional and Integrative Medicine* Vol. 6. No. 2: 126 -137. (Iran)

*18. Bello I. J., **Oyebode, O.T**., Olanlokun, J.O., Omodara T.O and Olorunsogo, O. O (2021). Plumbagin induces testicular damage via mitochondrial-dependent cell death. *Chemico-Biological Interactions* No. 7: 109 – 115. (Ireland)

***19**. Olowofolahan A.O., **Oyebode O.T**. and Olorunsogo O.O. (2021) Methyl palmitate reversed estradiol benzoate-induced endometrial hyperplasia in female rats. *Toxicology Mechanisms and Methods* . Vol 31. No. 1: 43 – 52. (UK)

f) Books, Chapters in Books and Articles already accepted for publication: Nil

g) Technical Reports and Monographs: Nil

***** Publications that appeared after the last promotion.

X. Major Conferences Attended with Papers Read (in the last 5 years)

a. Twenty-fifth Biennial Congress of the European Association for Cancer Research (EACR), Amsterdam, Netherlands. June 30 – 3 July, 2018.
Abstract presented: Oyebode, O.T., Owumi, S.E., Oyelere, O.A. and Olorunsogo, O.O. Methanol Fraction of *Calliandra portoricensis* induces Apoptosis and Growth Arrest in Prostatic Tumour Cell Lines (PO-075).

b. Sixth Unibadan Conference of Biomedical Research, University of Ibadan, Ibadan, Nigeria. July 10– 14, 2018
Abstract presented: Oyebode O.T., Adebiyi, O. R. and Olorunsogo, O.O. Toxicity of Amoxycillin/Clavulanate (Augmentin) and Ciprofloxacin in normal rat liver: The role of mitochondrial membrane permeability transition pore.

c. Droso-Africa ICGEB workshop on Drosophila melanogaster in Biomedical Research and First Scientific Conference of African Society of Drosophilists, University of Ibadan, Ibadan, Nigeria. September 17-19, 2019.
Abstract presented: Oyebode, O.T., Oluwadare, J., Adedara A., Abolaji, A and Olorunsogo O. Apigenin ameliorates D-galactose-induced aging via antioxidative activity and inhibition of mitochondrial-dependent apoptosis in *Drosophila melanogaster*.

d. EMBO/FEBS Lecture Course. Mitochondria in life, death and disease, Herceg Novi, Montenegro. September 24-28, 2019.
Abstract presented: Oyebode, O.T., Giwa, O.D and Olorunsogo O. O. Mitochondrial-mediated apoptosis in liver but not in testis of galactose-induced aging rats.

e. **Nigerian Academy of Science** (NAS) Women Workshop: Women in Science and Nigeria's Development, 20-22nd of October, 2019, Abuja, Nigeria.

f. **European Association for Cancer Research (EACR**) 2020 Virtual Congress on 18-19 June, 2020.

g. **Virtual Young Mitochondrial Investigator Symposium**, September 15-17, 2021

September, 2022