

CURRICULUM VITAE



Name: OLAWOLE O. OBEMBE

Date of Birth: 10TH APRIL, 1968

Place of Birth: Igangan-Ijesa

State: Osun State

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College of Science and Technology

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PROFESSIONAL EXPERIENCE (22 YEARS)

2014- Till Date	Professor of Plant Biotechnology: Department of Biological Sciences, Covenant University, Ota, Nigeria
2012 - 2014	Associate Professor of Plant Biotechnology: Department of Biological Sciences, Covenant University, Ota, Nigeria
Nov. 2007- 2012	Senior Lecturer: Department of Biological Sciences, Covenant University, Ota, Nigeria

Jan 2009 – Jan 2010	Postdoctoral Fellow: International Centre for Genetic Engineering and Biotechnology, New Delhi, India
Nov.2006-Nov. 2007	Lecturer I: Department of Biotechnology, Bells University of Technology, Ota, Nigeria
April 2001–Jan. 2006	Ph.D Position: Laboratory of Plant Breeding, Wageningen University, Wageningen, The Netherlands
Oct.1998– March 2001	Visiting Scientist: Biotechnology Unit, International Institute of Tropical Agriculture (IITA), Nigeria
Sept. 1994– March 2001	Assistant Lecturer/Lecturer II: University of Agriculture, Abeokuta Nigeria

ACADEMIC QUALIFICATIONS

April 2001- Jan 2006	Ph.D in Plant Sciences, Wageningen University, Wageningen, The Netherlands
Jan. 1992- April 1994	MSc. in Botany, Obafemi Awolowo University, Ile-Ife, Nigeria
Sept. 1986- Oct. 1990	BSc. in Botany, Obafemi Awolowo University, Ile-Ife, Nigeria

PUBLICATIONS

Theses / Dissertations

1. **O.O. Obembe (1990).** Effects of 2,4,5-Trichlorophenoxyacetic acid and 2,4-Dichlorophenoxyacetic acid on germination and early seedling growth of *Cucumeropsis edulis*. **BSc. Dissertation,** Obafemi Awolowo University, Ile-Ife Nigeria.
2. **O.O. Obembe (1994).** Micropropagation of *Cola nitida* through plant tissue culture technique. **MSc. Thesis,** Obafemi Awolowo University, Ile-Ife Nigeria.
3. **O.O. Obembe (2006).** Bioengineering cellulose-hemicellulose networks in plants. **Ph.D Thesis,** Wageningen University, Wageningen, The Netherlands.

Articles in Learned Journals

1. B. E. Ayisire, **O.O. Obembe** and A.C. Adebona (1997). Effects of concentrations of two phenoxyacetic acid herbicides on germination and early seedling growth of *Cucumeropsis edulis*. Nigerian Journal of Botany 10: 71-81.
2. M. Kadiri and **O.O. Obembe** (1999). Biochemical studies on human milk from Abeokuta, Nigeria. Global Journal of Pure and Applied Sciences 5: 59-61.
3. **O.O. Obembe**, A.C. Adebona and E.B. Esan (1999). Effect of plant growth regulators on callus growth of *Cola nitida* (Malvales: Sterculiaceae). Biosciences Research Communications. 11(1): 53-57.
4. **O.O. Obembe** (2000). Studies on Kola tissue culture I: Protocols for establishing Kola tissues *in vitro*. Nigerian Journal of Science 34: 271-276.
5. **O.O. Obembe** (2000). Studies on Kola tissue culture II: Effect of plant growth regulators on callus induction. Nigerian Journal of Science 34: 277-281.
6. **O.O. Obembe**, A. Adesoye and J. Machuka (2005). Evaluation of the Effectiveness of Selected Antibiotics in the Suppression of *Agrobacterium* from Cowpea (*Vigna Unguiculata* L. Walp.) Embryo Explants and as Potential Selective Agents in *Agrobacterium*-Mediated Transformation. Journal of Tropical Microbiology and Biotechnology 1: 27-33.
7. **O.O. Obembe**, E. Jacobsen, R.G.F. Visser, and J.-P. Vincken (2006). Cellulose-hemicellulose networks as target for *in planta* modification of the properties of natural fibres. Biotechnology and Molecular Biology Review 1: 76-86.
8. **O.O. Obembe**, E. Jacobsen, R.G.F. Visser and J.-P. Vincken (2007). Expression of an expansin carbohydrate-binding module affects xylem and phloem formation. African Journal of Biotechnology 6: 1608-1616.
9. **O.O. Obembe**, E. Jacobsen, J. Timmers, H.J. Gilbert, A.W. Blake, J.P. Knox, R.G.F. Visser and J.-P. Vincken (2007). Promiscuous, non-catalytic, tandem carbohydrate-binding modules modulate cell wall structure and development of tobacco plants. Journal of Plant Research 120: 605-617. **Springer ISI-indexed, Impact Factor = 1.746**
10. **O.O. Obembe**, E. Jacobsen and R.G.F. Visser (2008). Molecular analysis and phenotype characterization of the progeny of two antisense potato plants. African Journal of Plant Science 2:38-41.

- 11.Obembe O.O.** and D.A. Agboola (2008). Seed pretreatments enhance germination in *Occimum gratissimum* (Lameacea). Life Science Journal 5 (1): 46 – 48. **ISI-indexed, Impact Factor = 0.073**
- 12.O. O. Obembe** and J.-P. Vincken (2008). Progeny from the crosses of two antisense potato plants exhibit ectopic xylem differentiation. Scientific Research and Essays 3:320-322. (Science Citation Indexed, Impact Factor 0.324, <http://science.thomsonreuters.com/cgi-bin/jrnlst/jlresults.cgi?PC=MASTER&ISSN=1992-2248>).
- 13.O.O. Obembe** (2009). Expression of the C-terminal family 22 carbohydrate-binding module of xylanase 10B of *Clostridium thermocellum* in tobacco plant. African Journal of Biotechnology Vol. 8 (22): 6036-6039.
- 14.O.O. Obembe** (2009). Irregular deposition of cell wall polymers resulting from defective cellulose synthase complexes. Indian Journal of Science and Technology 2 (3): 5-8.
- 15.O.O. Obembe** (2009). Exciting times for cowpea genetic transformation research. Australian Journal of Basic and Applied Science 3 (2): 1083-1086. (Science Citation Indexed, <http://science.thomsonreuters.com/cgi-bin/jrnlst/jlresults.cgi?PC=MASTER&ISSN=1991-8178>).
- 16.O. O. Obembe,** E. Jacobsen, J._P. Vincken and R.G.F. Visser (2009). Differential expression of Cellulose synthase (CesA) gene transcripts in potato as revealed by QRT-PCR. Plant Physiology and Biochemistry 47: 1116-1118. **Elsevier ISI-indexed, Impact Factor = 2.775**
- 17.O. O. Obembe** (2010). Plant Biotechnology on a flight: Is Africa on board? African Journal of Biotechnology 9: 4300- 4308.
- 18.O.O. Obembe,** Khan T., Popoola J.O., Singh A.K., Pant A.C. (2010). Endogenous levels of reducing sugars, free amino acids and phenols during various stages of *in vitro* culture of cotton (*Gossypium Spp.*). International Journal of Biological and Chemical Sciences 4 (6), pp. 2371-2378.
- 19.O.O. Obembe,** Popoola J.O., Leelavathi S., Reddy V.S. (2010). Recent Advances in Plastid Transformation. Indian Journal of Science and Technology 3(12): 1229-1235

- 20.O.O. Obembe (2010).** Offspring of the crosses of two anti-sense potato plants exhibit additive cellulose reduction. *African Journal of Plant Science* 4(12), pp. 474-478.
- 21.O.O. Obembe, T. Khan, Popoola J.O. (2011).** Use of somatic embryogenesis as a vehicle for cotton transformation. *Journal of Medicinal Plant Research* 5 (17): 4009-4020.
- 22.O.O. Obembe, Khan T. and Popoola J.O. (2011).** High frequency multiple shoots induction from Indian elite cotton (*Gossypium Spp.*) cultivars. *Canadian Journal of Pure and Applied Sciences* 5(1), pp. 1385-1389. **ISI-indexed, Impact Factor = 2.657**
<http://science.thomsonreuters.com/cgi-bin/jrnlst/jlresults.cgi?PC=MASTER&Full=canadian%20journal%20of%20pure%20and%20applied%20sciences>
- 23.O.O. Obembe, Popoola J.O., Leelavathi S., Reddy V.S. (2011).** Advances in Plant Molecular Farming. *Biotechnology Advances* 29 (2), pp. 210-222. **Elsevier ISI-indexed, Impact Factor = 9.646**
- 24.Popoola, J.O., A.E. Adegbite, O.O. Obembe, B.D. Adewale and B. O. Odu (2011).** Morphological intraspecific variabilities in African yam bean (AYB) (*Sphenostylis stenocarpa* Ex. A. Rich) Harms. *Scientific Research and Essay* Vol. 6(3), pp. 507-515. *Scientific Research and Essay* Vol. 6(3), pp. 507-515. (**Science Citation Indexed, Impact Factor 0.324,** <http://science.thomsonreuters.com/cgi-bin/jrnlst/jlresults.cgi?PC=MASTER&ISSN=1992-2248>).
- 25.Popoola J.O., Adegbite A.E., Obembe O.O. (2011).** Reproductive mechanisms and pollen characterization in some accessories of an underutilized legume: *Sphenostylis stenocarpa* Hochst Ex. A. Rich Harms. *International Journal of Biodiversity and Conservation* 3 (6):185-192.
- 26.Popoola J.O., Adegbite A.E., Obembe O. O (2011).** Cytological studies on some accessions of African yam bean (AYB) (*Sphenostylis stenocarpa* Hochst. Ex. A.Rich. Harms). *International Research Journal of Plant Science* Vol. 2(8) pp. 249-253.
- 27.Dike I.P. and Obembe O.O. (2012).** Towards conservation of Nigerian medicinal plants. *Journal of Medicinal Plants Research* Vol. 6(19), pp. 3517-3521. DOI: 10.5897/JMPR10.612.

28. Dike I.P., **Obembe O.O.***, Adebisi E.F. (2012). Ethnobotanical survey for potential anti-malarial plants in South-western Nigeria. *Journal of Ethnopharmacology* 144: 618-626. Elsevier ISI-indexed, Impact Factor = 3.646
29. Usikalu M.R., **Obembe O.O.***, Akinyemi M.L. and Zhu J. (2013). Short-duration exposure to 2.45 GHz microwave radiation induces DNA damage in Sprague Dawley rat's reproductive systems. *African Journal of Biotechnology* Vol. 12: 115-122.
30. Dike I. P. and **Obembe O. O.** (2013). Effect of sucrose and propylene glycol on the vitrification of sheep oocytes. *Journal of Cell and Animal Biology* Vol. 7: 25-30. (Science Citation Indexed, <http://science.thomsonreuters.com/cgi-bin/jrnlst/jlresults.cgi?PC=MASTER&ISSN=1996-0867>).
31. Aborisade D. O., Oladipupo, O. O., Oyelade, O. J., **Obembe O. O.**, Obagbuwa, I. C., Ewejobi, I. T. (2013). Comparative Analysis between Split and HierarchyMap Treemap Algorithms for Visualizing Hierarchical Data. *International Journal of Computer Science and Information Security* 11 (3): 131-142.
32. Jacob O. Popoola and **Olawole O. Obembe** (2013). Local knowledge, use pattern and geographical distribution of *Moringa oleifera* Lam. (Moringaceae) in Nigeria. *Journal of Ethnopharmacology* 150(2):682-691. Elsevier ISI-indexed, Impact Factor = 3.646
33. Popoola J. O., Oluyisola B.O. and **Obembe O.O.** (2014). Genetic diversity in *Moringa oleifera* from Nigeria using fruit morpho-metric characters and Random Amplified Polymorphic DNA (RAPD) markers. *Covenant Journal of Physical and Life Sciences* 1 (2): 43-60).
34. Rotimi, S. O., Rotimi O.A., **Obembe, O.O.** (2014). In silico analysis of compounds characterized from ethanolic extract of *Cucurbita pepo* with NF-κB-inhibitory potential. *Bangladesh Journal of Pharmacology* 9: 551-56.
35. Oyelade J., Soyemi J., Isewon I., **Obembe O.O.** (2015). Bioinformatics, Healthcare Informatics and Analytics: An Imperative for Improved Healthcare System. *International Journal of Applied Information Systems* : 8 (5), DOI 10.5120/ijais15-451318.
36. Popoola J.O., Bello O.A. and **Obembe O.O.** (2016). Phenotypic intraspecific variability among some accessions of drumstick (*Moringa oleifera* lam.). *Canadian Journal of Pure and Applied Sciences* 10: 3681-3693.

Book Chapters

Book Chapter

37. Machuka, Adesoye A. and **Obembe O.O.** (2002). Regeneration and genetic transformation in cowpea, in: C.A. Fatokun, S.A. Tarawali, B.B. Singh, P.M. Kormawa, M. Tamò (Eds.), *Challenges and Opportunities for Enhancing Sustainable Cowpea Production*, Proceedings of the World Cowpea Conference III held at the International Institute of Tropical Agriculture (IITA), Ibadan, Nigeria, 4-8 September 2000, pp. 185-196. **ISBN 978-131-190-8**, IITA, Ibadan, Nigeria.

Paper Presented in Conference

38. **Obembe O.O.** and Bello O.A (2015). Biotechnology education and future development in Africa. To be presented at the 2nd Covenant University International Conference on African Development Issues from 11th - 13th May, 2015, Covenant University, Nigeria.
39. **Obembe O.O.** and Dike I.P. (2009). India's biotechnology boom: A lesson for Africa. Presented During the 2009 Knowledge Management Africa Conference held in Senegal on 4-7 May 2009.

Book

40. **O.O. Obembe** (2006). *Bioengineering cellulose-hemicellulose networks in plants*. 126 p, **ISBN 90-8504-352-2** PrintPartners Ipskamp Publishers, the Netherlands.

PEER RECOGNITION

Conferences attended and Papers presented

1. J Machuka, **O. O. Obembe**, A.I. Adesoye (2000). Cowpea regeneration and transformation in vitro and in planta. Page 53 *in* Book of Abstracts, 6th **International Congress of Plant Molecular Biology**, June 18 - 24, 2000, **Canada**.
2. **O.O. Obembe**, A. Adesoye, M. Kadiri, and J. Machuka (2000). The role of antibiotics in the control of *Agrobacterium* and as potential selective agents in

- Agrobacterium*-mediated transformation of cowpea. Page 19 in Abstracts, **World Cowpea Research Conference III**, 4–7 September 2000, Ibadan, **Nigeria**. 32 p.
3. **O.O. Obembe**, M. Kadiri, and J. Machuka (2000). Induction of multiple shoots and regeneration from cotyledonary nodes and epicotyls. Page 20 in Abstracts, **World Cowpea Research Conference III**, 4–7 September 2000, Ibadan, **Nigeria**. 32 p.
 4. **O.O. Obembe**, Carolina Cifuentes, Dirkjan Huigen, Henk Kieft, Evert Jacobsen, Anne Mie C. Emons, Richard Visser and Jean-Paul Vincken (2005). Deposition of cellulose in cell corners by defective cellulose synthase complexes. Page 7 in Abstracts, the **2nd Cell Wall biosynthesis Meeting**, August 4 – 7, 2005 Pacific Grove, CA, **USA**, 104p.
 5. **O.O. Obembe**, L Trindade, E Jacobsen, J Timmers, H Gilbert, A Blake, P Knox, RGF Visser, J-P Vincken (2007). Tandem carbohydrate-binding modules alter cell wall structure and development in transgenic tobacco plants. Presented at the **XIth Cell Wall Meeting**, 12-17 August 2007, Copenhagen, **Denmark**.
 6. **Obembe O.O.** (2008). Molecular Genetic Analysis and phenotype characterization of the progeny of two antisense potato plants. **21st Annual Conference of the Biotechnology Society of Nigeria**, 16–19 July 2008, University of Agriculture, Abeokuta (UNAAB), **Nigeria**.
 7. **Obembe O.O.** (2008). Additive cellulose reduction observed in the progeny of the crosses of two antisense potato plants. 21st Annual Conference of the Biotechnology Society of Nigeria, 16–19 July 2008, University of Agriculture, Abeokuta (UNAAB), **Nigeria**.
 8. Adebayo AH, **Obembe OO**, Dike EJ, Ajayi AA, Ogunlana OO and Adebisi EF (2008). Tracking lead compounds in African species of *Commiphora*. **16th Annual International Conference Intelligent Systems for Molecular Biology**, 19-23 July 2008, Metro Toronto Convention Centre (South Building) Toronto, **Canada**.
 9. **Obembe O.O.** and I.P. Dike (2009). India's biotechnology boom: A lesson for Africa. Presented at the **3rd Knowledge Management Africa 2009 Conference**, 4-7 May, 2009, Dakar, **Senegal**.
 10. Popoola J.O. and Obembe O.O. (2013). Ethnobotany and geographical distribution of *Moringa oleifera* Lam (Moringaceae) in Nigeria. Presented at the 61st International Congress and Annual Meeting of the Society for Medicinal Plant and Natural

Product Research (GA) 1st -5th September, 2013, Munster Germany. **Planta Med 2013; 79 - PE20 DOI: 10.1055/s-0033-1352039**

11. Dike I.P., **Obembe O.O.**, Rotimi O., Adebisi E.F. Ethnobotany and phytochemical screening of potential anti-malarial plants in South-West Nigeria. Presented at the 61st International Congress and Annual Meeting of the Society for Medicinal Plant and Natural Product Research (GA) 1st -5th September, 2013, Munster Germany. **Planta Med 2013; 79 - PE21 DOI: 10.1055/s-0033-1352040.**

ACADEMIC LINKAGES

1. Research linkage and collaboration:

- a. Dr. V.S. Reddy, International Centre for Genetic Engineering and Biotechnology, Italy.
- b. Dr. M. Gedil, International Institute of Tropical Agriculture, Nigeria.
- c. Prof. R.G.F. Visser, Plant Breeding Laboratory, Wageningen University, the Netherlands.
- d. Prof. Ogi Okwumabua, Department of Pathobiological Sciences/WVDL, University of Wisconsin, Madison, USA.
- e. Professor Dr Rainer Fischer, Fraunhofer Institute for Molecular Biology and Applied Ecology (IME), Germany and RWTH Aachen University, Germany
- f. Prof. Ed Rybicki, University of Cape Town, South Africa
- g. Prof. Vittorio Colizzi, University of Rome, Italy and Director, Molecular Biology and Immunology, Holy Spirit Hospital, Sierra Leone (UNESCO CHAIR in Biotechnology)
- h. Dr. Peter Twumasi, Kwame Nkrumah University of Science and Technology, Ghana
- i. Professor James Ogbonna, UNESCO Category 2 Biotechnology Centre, University of Nigeria, Nsukka, Nigeria

2. Active Member of Scientific Bodies:

- a. Biotechnology Society of Nigeria
- b. Botanical Society of Nigeria

- c. Member of the African Biotechnology Network
- d. Fellow of the Society for Applied Biotechnology, India

3. Editorship of Reputable Journals

- a. **Associate Editor**, International Journal of Biotechnology Applications
- b. **Associate Editor**, Covenant Journal of Physical and Life Sciences
- c. **Editorial Board Member**, Biosafety Journal
- d. **Editorial Board Member**, Journal of Virology and Biotechnology
- e. **Editorial Board Member**, Indian Journal of Science and Technology
- f. **Editorial Board Member**, Journal of Microbial & Biochemical Technology
- g. **Editorial Board Member**, Asian Pacific Journal of Tropical Medicine

4. Reviewer for Reputable Journals

- a. **Plant Cell Reports**
- b. **Molecular Biology Reports**
- c. **Journal of Ethnobiology and Ethnomedicine**
- d. **African Journal of Biotechnology**
- e. **Journal of Plant Growth Regulation**
- f. **Editorial Board Member**, Asian Pacific Journal of Tropical Medicine
- g. **Biotechnology and Molecular Biology**
- h. **Scientific Research and Essays Review**
- i. **The Kasetsart Journal (Natural Science)**

5. External Assessment for Ph.D Thesis Defence

- a. Department of Botany, Annamalai University, Tamilnadu, India

CURRENT RESEARCH ACTIVITIES

- 1. In vitro conservation of endangered (medicinal) plants
- 2. Identification and isolation of lead compounds in plants for new drugs discovery
- 3. Production of bio-pharmaceuticals and industrial proteins in plants

LEADERSHIP (SKILLS AND TRAITS)

- Director, Covenant University Centre for Research Innovation and discovery (2016-Till Date)
- Director, Industry Partnership (2015-2016)
- Deputy Dean, School of Natural and Applied Sciences (2012-2014)
- Chair, Convocation Planning Committee 2013
- Chair, College Postgraduate Committee
- Member, Committee of the School of Postgraduate Studies
- Member, Strategic Planning Committee
- Member, Prize and Awards Committee
- Member, Curriculum Committee
- Member, Library Committee
- Member, AD-Hoc Committee on Excess Work Load
- Postgraduate Supervision

GRANTS/AWARDS

1. ICGEB Postdoctoral Fellow (Jan. 5 2009 - Jan. 4 2010) - International Centre for Genetic Engineering and Biotechnology, Trieste Italy.
2. TWAS-DBT Postdoctoral Fellow (2008) - Third World Academy of Science, Trieste Italy (Not honoured).
3. Wageningen University PhD Research Grant (2004-2006) - Laboratory of Plant Breeding, Wageningen University, the Netherlands.
4. WOTRO Pre-doctoral Fellow (2001-2004) - The Netherlands Foundation for the Advancement of Tropical Research (WOTRO), the Netherlands.
5. IITA Visiting Research Fellow (1998-2001) - International Institute for Tropical Agriculture, Ibadan Nigeria.

INVITED TALKS AND PAPERS PRESENTED

1. **O.O. Obembe (2006)**. Applications of hybridisation techniques in Recombinant DNA Technology. 8th UNAAB Summer Courses in Practical Biotechnology, October 6-20, 2006 Biotechnology Centre, University of Agriculture Abeokuta, Nigeria.
2. **O.O. Obembe (2007)**. Applications of blotting techniques in Gene Cloning and Transformation. 9th UNAAB Summer Courses in Practical Biotechnology, July 16-27, 2007 Biotechnology Centre, University of Agriculture Abeokuta.
3. **O.O. Obembe (2007)**. Understanding the biology of *Agrobacterium*-Plant Cell interactions. 10th UNAAB Summer Courses in Practical Biotechnology, September 9-20, 2007 Biotechnology Centre, University of Agriculture Abeokuta.
4. **O.O. Obembe (2007)**. Plant Genetic Transformation Techniques. 10th UNAAB Summer Courses in Practical Biotechnology, October 9-20, 2007 Biotechnology Centre, University of Agriculture Abeokuta.
5. **O.O. Obembe (2008)**. Plant Genetic Transformation Techniques. International Hands-on Training Workshop in Molecular Biology and Applied Biotech. 28 July -2 August, 2008, College of Science and Technology, Covenant University, Ota.
6. **O.O. Obembe (2010)**. 14th UNAAB Summer Training Course in Polymerase Chain Reaction (PCR) and Protein Analytical Techniques and their Applications", which was held between 4th through to 8th October, 2010 at the Biotechnology Centre University of Agriculture, Abeokuta.

COMMUNITY SERVICE EXPERIENCE

1. ***In-loco parentis* programme of the Covenant University**
2. **Chairman Organizing Committee, International Biotechnology Symposium, Covenant University**
3. **Chair, Covenant University Convocation Planning Committee 2013**