

CURRICULUM VITAE



Benson Onyango, Ph.D

Gender: Male; Nationality: Kenyan

Department of Biological Sciences, Jaramogi Oginga Odinga University of Science and Technology, P.O. Box 210 -40600, Bondo- Kenya

Email: benboyih@gmail.com / bonyango@jooust.ac.ke

Education

2012 – 2015	Ph.D in Microbiology, Jaramogi Oginga Odinga University of Science and Technology, Kenya
2007 – 2010	M.Sc in Microbiology, Maseno University, Kenya
1999 – 2003	B.Ed Science, Moi University, Kenya

Professional Career

2022 - Present	Senior Lecturer, Jaramogi Oginga Odinga University of Science and Technology, Kenya
2017 - 2022	Lecturer, Jaramogi Oginga Odinga University of Science and Technology, Kenya
2015 – 2017	Lecturer, Chuka University, Kenya
2012 – 2015	Assistant Lecturer, Chuka University, Kenya
2003 – 2012	Secondary School Teacher, Teachers Service Commission, Kenya

Professional Activities

Since 2015	<i>Reviewer, Board Member for the following international journals, (American Journal of Food Technology, Nature Microbiology, African Journal of Horticultural Sciences)</i>
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Research Interests

Microbiology, Biotechnology, Bio-based products, Microbial Biodiversity, Plant Pathology

Graduate Students Supervision

PhD Students Completed

1.	Name and Reg. No.	Ogolla Fredrick Otieno
	Title of Thesis	Prevalence and Distribution of Foliar Fungal Diseases of Tomato in Different Agro-ecological Regions of Kenya and Evaluation of Rhizosphere Streptomyces Biological Control Agents from Selected Medicinal Plants
	University	Chuka University
	Year	2018

MSc Students Completed

1.	Name	Melkezedek Onyambu
	Title of Thesis	Diversity of <i>Xanthomonas campestris</i> Responsible for Banana Wilt Disease in Tharaka Nithi County
	University	Chuka University
	Year	2021
2.	Name	Ong'au Motari Peterson
	Title of Thesis	Occurrence Of Bacteria Wilt in Potato Farms and the Effect of Temperature and pH on Growth of <i>Ralstonia solanacearum</i> in Runyenjes, Embu County
	University	Chuka University

	Year	2021
3.	Name	Purity KitemeMbithe
	Title of Thesis	Efficacy of Traditional Medicinal Herbs Used for Treatment of Gastro-Intestinal Infections in Tharaka-Nithi County
	University	Chuka University
	Graduation Year	2021
4.	Name	Muthengi Carlene Kathomi
	Title of Thesis	The Potential of <i>Trichoderma harzianum</i> in Management of Vascular Wilt of Tomato Caused by <i>Fusarium oxysporum</i>
	University	Chuka University
	Graduation Year	2021
5.	Name	Fredrick O. Ogolla (NM23/28950/16)
	Title of Thesis	Characterization of Sorghum Leaf Blight [<i>Exserohilumturcicum</i> (Pass.) Leo. and Suggs] and the Effect of Selected Environmental Factors on its Pathogenicity in TharakaNithi County
	University	Chuka University
	Year	2018

MSc Students - Submitted

- Name: Kennedy OdhiamboAchieng
 Title of Thesis: Metagenomic analysis of microbial populations in pollution hotspots at river and stream inlets of Lake Victoria.
 University: JaramogiOgingaOdinga University of Science and Technology
- Name: Norah Aderah
 Title of Thesis: Occurrence and Characterization of Fungal Species Which Cause Sweet Potato (*IpomeaBatatas*) Leaf Spot Disease in Parts of Western Kenya
 University: JaramogiOgingaOdinga University of Science and Technology
- Name: Phoebe AkothObiero
 Title of Thesis: Screening *Actinomycetes* from Sediments of Lake Victoria Shores for Antibacterial Activities and Evaluation of their Growth on Different Media
 University: JaramogiOgingaOdinga University of Science and Technology

Ph.D Students - Ongoing

- University: JaramogiOgingaOdinga University of Science and Technology
 Name: MaryAnneUsagi
 Title of Thesis: Effectiveness of Solar Powered Milk Cooling System on Preserving Quality and Enhancing Earnings of Small Holder Dairy Farmers in Siaya County
- University: Chuka University
 Name & Reg No.: Judith Gitari
 Title of Thesis: Screening *Actinomycetes* isolates for antimicrobial activities from cultivated and compost amended soils in TharakaNithi county.
- University: JaramogiOgingaOdinga University of Science and Technology
 Name: MonicahMisikho
 Title of Thesis: Effects of Pollution of Lake Victoria Gulf on Aquatic Edible Insects: Implications on Food Security

4.	University Name	JaramogiOgingaOdinga University of Science and Technology
	Title of Thesis	Genetic Diversity, Interactions and Phytotoxidal Effects of <i>Alternaria</i> Species Against <i>Strigahermonthica</i> Weed on Selected Maize Varieties
5.	University Name	JaramogiOgingaOdinga University of Science and Technology
	Title of Thesis	Alice Ndege Characterization of <i>Klebsiella</i> sp. among Children Under 5 years Seeking Healthcare in Selected Hospitals in Kisumu County, Kenya

MSc Students – Submitted

- Name: Marceline AdhiamboOloo

Title of Thesis: Comparative Analysis of COVID-19 Detection Techniques Using Different Clinical Samples

University: JaramogiOgingaOdinga University of Science and Technology
- Name: Haira Wilson Onyango

Title of Thesis: Determination of Effective and Affordable Baits for Termites (*Macrotermesbellicosus*) for Use as Alternative Poultry Feeds

University: JaramogiOgingaOdinga University of Science and Technology

MSc Students – Ongoing

- Name: NyongaroraZethOndieki

Title of Thesis: Diversity of Soil Microbial Communities and Physicochemical Parameters From Different Land-Use Systems Along River Nzoia Catchment To Improve Soil Health

University: JaramogiOgingaOdinga University of Science and Technology
- Name: Miriam AwuorOluoch

Title of Thesis: Effects of Land Use Systems on Nutritional Profilesand Antimicrobial Activity of Termites Against Drug-Resistant Bacteria

University: JaramogiOgingaOdinga University of Science and Technology

Research Grant Awards and Fellowships

- Institution: VLIR-OUS

Award Title: VLIR-Institutional University Cooperation (IUC) Program research grant for Strengthening Climate Change Resilience among Communities and Ecosystems in the Lake Victoria Basin

Amount: USD 50,000

Duration: 2021-2031
- Institution: NRF South Africa

Award Title: Towards COVID-19 Containment: Serological, Faecal and Wastewater Epidemiological Surveillance of SARS-CoV-2 in Support of Home-Based Isolation and Care in Kenya

Amount: USD. 10,000

Duration: 2021-2022
- Institution: Horn SandPit One-Health Consortium

Award Title: Molecular Characterization of Milk Bacteria

Amount: USD. 10,000

Duration: 2020-2022
- Institution: Biosciences east and central Africa (ILRI-Beca)

Award: Research Fellow, African Biosciences Challenge Fund

Amount: USD. 10,000

Duration: 2013-2015

5.	Institution	National Commission for Science, Technology and Innovation (NACOSTI)
	Award	Grant on Molecular Characterization of Rhizobium and Seed Treatment Technology
	Amount:	Ksh. 1,200,000
	Duration	2013-2015
6.	Institution	African Institute for Capacity Development
	Award	2-Year Research Grant for Characterization of Native Wood Ear Mushrooms
	Amount:	USD. 2,000
	Duration	2008-2010

Conferences and Workshops

1. Institution NRF South Africa
 Title of Workshop DSI-NRF-CNRS Workshop on Research for Impact
 Venue Pretoria, South Africa
 Date 17th – 20th October, 2022
2. Institution Multistress Consortium
 Title of Workshop Understanding plant water relations: from cellular mechanisms to modelling crop water response behavior
 Venue Online Event
 Date 24th February, 2021
3. Institution Tharaka University
 Title of Workshop Efficacy of Traditional Medicinal Herbs Used for Treatment Of Gastro-Intestinal Infections in Tharaka-Nithi County
 Venue Tharaka University
 Date 24th November, 2021
4. Institution Chuka University
 Conference 4rd International Research Conference
 Title
 Date 26th to 28th October 2018
 Title of Paper Effect of inoculation of native strains of rhizobia on the productivity of soybeans (*Glycine max*Merr.) and bambara groundnuts (*Vignasubterranea* L. Verdc) under field conditions.
5. Institution Chuka University
 Conference 2nd International Research Conference
 Title
 Date 28th to 30th October 2015
6. Title of Paper Molecular characterization of wood ear mushrooms (*Auricularia* sp.) from Kakamega Forest, Western Kenya.
 Institution JaramogiOgingaOdinga University of Science and Technology
 Conference The 1st JOOUST International Scientific Conference
 Title
 Date 24th – 26th June 2015
 Title of Paper Genetic diversity of root nodule bacteria associated with bambara groundnuts (*Vignasubterranea* L. Verdc) in soils of Lake Victoria basin.
7. Institution Jomo Kenyatta University of Agriculture Science and Technology
 Conference Scientific Research and Innovation Conference, SRI - 2014
 Title
 Date 7th – 9th May 2014
 Poster Title Genetic diversity of root nodule bacteria associated with soybeans (*Glycine max*Merr.) and bambara groundnuts (*Vignasubterranea* L. Verdc) in soils of Lake Victoria basin.
8. Institution Kabarak University

Conference Title	Kabarak University 4 th Annual International Conference
Title of Paper	Morphological characterization of root nodule bacteria associated with bambara groundnuts (<i>Vignasubterranea</i> L. Verdc) in soils of Lake Victoria basin.
Date	15 th – 18 th July 2014
9. Institution	Chuka University
Conference Title	First Annual Scientific Conference
Title of Paper	Molecular diversity of root nodule bacteria associated with bambara groundnuts (<i>Vignasubterranea</i> L. Verdc) in soils of Lake Victoria basin.
Date	30 th – 2 nd August 2014

Membership of Professional Bodies

1. Institution: Society for Ecological Restoration
Membership: Registered Member
2. Institution: ILRI BecA Research Group Alumni
Membership: Association of Molecular Biologists
3. Institution: Kenya DAAD Scholars Association
Membership: Western Kenya Chapter
4. Institution: Microbiology Society of Kenya
Membership: Member No. MS0093
5. Institution: Horn Sandpit One-Health Consortium
Membership: Western Kenya Chapter

Publications

1. Odhiambo, K., Ogola, HJO., **Onyango, B.**, Tekere, M., and Ijoma GN.(2022). Contribution of pollution gradient to the sediment microbiome and potential pathogens in urban streams draining into Lake Victoria. (Under review in *Environmental Science and Pollution Research*)
2. Ogolla F.O, Muraya M. M, **Onyango B. O.**(2022). Occurrence of fungal foliar diseases of tomatoes in different agro-ecological zones of Kirinyaga County, Kenya. *Fundamental and Applied Agriculture*, 7(1): 31–46. [doi: 10.5455/faa.140785](https://doi.org/10.5455/faa.140785)
3. Mogaka M. O., **Onyango B. O.**, Muraya, M. M., Ong’au P. M and Ogolla F. O. (2021). Prevalence of banana *Xanthomonas* wilt in Nithi, Tharaka-Nithi County in Kenya. *Journal of Bioscience and Agriculture Research*, 27(02): 2267-2277. <https://doi.org/10.18801/jbar.270221.276>
4. Fredrick O. Ogolla, Ruth Nyakinywa, Samson K. Chabari and **Benson O. Onyango** (2021). *In-vitro* Evaluation of Fungicide Sensitivity of Tomato Leaf Blight Pathogens. *Jurnal Pertanian Tropik*. 8(1): 11-25. [doi: 10.32734/jpt.v8i1.5842](https://doi.org/10.32734/jpt.v8i1.5842)
5. Adera A. Norah, **Onyango O. Benson**, Nyunja Regina and Ogolla O. Fredrick. (2021). Sweet Potato Leaf Spot Diseases and Farmer's Indigenous Knowledge in Parts of Western Kenya. *International Journal of Research Studies in Agricultural Sciences*. DOI: <https://doi.org/10.20431/2454-6224.0710003>
6. **Onyango B. O.** and Ogolla F. O. (2020). Agronomic characterization of soybean and bambara groundnut genotypes grown on different soils of Lake Victoria Basin. *Fundamental and Applied Agriculture* Vol. 5(2), pp. 176–187: 2020. [doi: 10.5455/faa.82652](https://doi.org/10.5455/faa.82652)
7. Usagi M. B., **Onyango B.**, Muok B., Odilla G. A. (2020). Assessment of the Effect of Solar Powered Milk Cooling Technology on Small Holder Dairy Farmer Earnings. *IAR Journal of Agriculture Research and Life Sciences*, 1(3): 76-83.
8. **Onyango B. O.** and Ogolla F. O. (2019). Assessment of rhizobia strain isolates of soils around Lake Victoria Basin for their effectiveness in nodulation and symbiotic efficiency on soybeans and bambara groundnuts. *International Journal of Environment, Agriculture and Biotechnology*, 4 (5) 1469-1479. [doi: 0.22161/ijeab.45.29.](https://doi.org/10.22161/ijeab.45.29)
9. Ogolla F. O., Muraya, M. M., **Onyango B. O.** (2019). Variation in temperature and nutrient source influence the growth of *Exserohilum turcicum* mycelia isolated from sorghum. *Journal of Scientific and Engineering Research*, 6(2): 93-99. [doi: 10.JSAER2019.6.2.93-99.](https://doi.org/10.5455/faa.140785)

10. Ogolla F. O., Muraya, M. M., **Onyango B. O.**, Sioma Mulambula (2018). Morphological characterization of sorghum *Exserohilum turcicum* isolate from different areas of Tharaka Nithi County, Kenya. *Journal of Scientific and Engineering Research*, 5(12):218-226. DOI: <http://ir.jooust.ac.ke:8080/xmlui/bitstream/handle/123456789/9436>.
11. Gitari J. M., Maingi J.M. and **Onyango B.O.** (2018). Biological and chemical approach in the management of crown gall disease of roses under greenhouse conditions. *IOSR Journal of Pharmacy and Biological Sciences*. 13(6): 25-33. <https://www.iosrjournals.org/iosr-jpbs/papers/Vol13-issue6/Version-1/D1306012533.pdf>
12. Emitaro W. O., Musyimi D. M., Otiato D. A, and **Onyango B. O.**(2017). Morphological, biochemical and molecular characterization of *Xanthomonas campestris* pv. *vesicatoria* of African nightshades (*Solanum scabrum* Mill.). *International Journal of Biosciences*, 11(1): 190-197.
13. **Onyango B. O.**, Mbaluto C. M., Otiato D. O., Mutuku C. S. and Jagger H. (2016). Molecular characterization of wood ear mushrooms (*Auricularia* sp.) from Kakamega Forest in Western Kenya. *Current Research in Environmental & Applied Mycology* 6 (1): 51–60.
14. **Onyango B. O.**, Anyango B. A., Nyunja R. A., Skilton R. and Stomeo F. (2015). Morphological, genetic and symbiotic characterization of root nodule bacteria isolated from Bambara groundnuts (*Vigna subterranea* L. Verdc) from soils of Lake Victoria basin, western Kenya. *Journal of Applied Biotechnology and Biology*: 3 (01):2015
15. **Onyango B. O.**, Otiato C.A. and Palapala V. A. (2013). Effect of Wheat bran supplementation with fresh and composted agricultural wastes on the growth of Kenyan native Wood ear Mushrooms [*Auricularia auricular* (L. ex Hook) Underw]. *African Journal of Biotechnology*. 12 (19): 2692-2698.
16. **Onyango B. O.**, Palapala V. A., Arama P. F., Wagai S.O and Gichimu B. M. (2011). Morphological Characterization of Kenyan native Wood ear Mushrooms [*Auricularia auricular* (L. ex Hook) Underw.] and the effect of Supplemented Millet and Sorghum Grains in Spawn Production. *North American Journal of Biology and Agriculture*. 2 (3): 407- 414
17. **Onyango B. O.**, Palapala V. A., Arama P. F., Wagai S.O and Otiato C. A. (2011). Nutritional Analysis of some Composted and Non Composted Substrates used for Cultivation of Kenyan Native Wood ear Mushrooms [*Auricularia auricular* (L. ex Hook) Underw.] *American Journal of Food and Technology*. 6 (9): 804 - 816.
18. **Onyango B. O.**, Palapala V. A., Arama P. F., Wagai S.O and Gichimu B. M. (2011). Suitability of Selected Supplemented Agricultural Substrates for Cultivation of Kenyan Native Wood ear Mushrooms. *American Journal of Food Technology*: 6 (5) : 395 - 403

Referees Contacts

Referee 1

Name Prof. Harrison Tsingalia
 Position Chairman, Department of Biological Sciences
 University Jaramogi Oginga Odinga University of Science and Technology
 E-mail / Mobile mugatsi2005@gmail.com / 0772117903
 phone

Referee 2

Name Prof. Moses Muraya
 Position Director, Board of postgraduate Studies
 University Chuka University
 Email / Mobile moses.muraya@gmail.com / 0704999099
 phone