

PROF. EUCHARIA KENYA

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Brief Bio

Prof. Eucharia Kenya is the Deputy Vice-chancellor in-charge of Planning, Administration and Finance (PAF), at the University of Embu. She is also a consultant on Biotechnology, Biosafety and Biosecurity issues with international experience and expertise. Previously she taught at the Department of Biochemistry and Biotechnology, Kenyatta University, Nairobi, for over 10 years. During this period, she supervised over 30 postgraduate students and published several peer-reviewed papers. She has attracted substantial grants that have benefited many students in the greater East African Region and fostered collaborative projects and partnerships that have contributed in strengthening capacity in different aspects of biotechnology.

She is a very active player in the agricultural biotechnology sector in Kenya and served as a member of the steering committee under the Ministry of Agriculture, that developed the 'Agricultural Biotechnology Awareness Strategy for Kenya (2008)'. She was deeply involved in the discussions that culminated in the enactment of the Kenya Biosafety Act (2009) and has also participated on regional efforts at harmonizing these laws.

As an educator, she has participated in many outreach activities to key biotech stakeholders including policy makers & technocrats, parliamentarians, scientists, teachers, farmers and the media. These activities have covered areas spanning General Biotechnology, Risk Communication (Safety of GM technology), Media Relations (for Scientists), the Art of reporting Science (for journalists), Policy formulations and Regulatory landscaping and Practice in Africa, with reference to adoption of GM Technology/Biosafety and Biosecurity.

Prof. Kenya is a founding member of the Open Forum for Agricultural Biotechnology in Africa, a flagship project of the African Agricultural Technology Foundation, headquartered in Nairobi, Kenya.

On the international scene, she has been very active in the activities of the Biological Weapons Convention (BWC) and the Organization for the Prevention of Chemical Weapons (OPCW) and is a member of the Chemical Weapons Convention Coalition. Her thrust in these organizations is to articulate the need for increased capacity strengthening and enactment of laws that will enable African countries gain from international efforts by the global community in making everywhere safe for human existence.

RESEARCH INTERESTS:

1. Agri-Biotechnology
2. Biosafety & Biosecurity

PUBLICATIONS IN JOURNALS

2020

1. Nthiwa D., Bett B., Odongo D., **Kenya E.**, et al (2020). Seroprevalence of foot-and-mouth disease virus in cattle herds raised in Maasai Mara ecosystem in Kenya. *Preventive Veterinary Medicine* 176 (2020) 104929. <https://doi.org/10.1016/j.prevetmed.2020.104929>

2019

2. Nthiwa, D. M., Alonso, S., Odongo, D., **Kenya, E.**, Bett, B. (2019) Zoonotic Pathogen Seroprevalence in Cattle in a Wildlife–Livestock Interface, Kenya. *EcoHealth* ISSN 1612-9202. DOI 10.1007/s10393-019-01453-z

3. Nthiwa, D. M., Alonso, S., Odongo, D., **Kenya, E.**, Bett, B. (2019) A participatory epidemiological study of major cattle diseases amongst Maasai pastoralists living in wildlife-livestock interfaces in Maasai Mara, Kenya. *Trop Anim Health Prod* . <https://doi.org/10.1007/s11250-018-01790-1>

2018

4. Kinyanjui, G., Khamis, F. M.; Ombura, F. L. O., **Kenya, E. U.**, Ekesi, S., Mohamed, S. A. (2018) Infestation Levels and Molecular Identification Based on Mitochondrial COI Barcode Region of Five Invasive Gelechiidae Pest Species in Kenya. *Journal of Economic Entomology*, XX(XX), 2018, 1–11
5. Kipnyargis, A.C., Khamis, F.M. **Kenya, E. U.**, Ekesi, S. & Fiaboe, K.K.M. (2018) Genetic diversity of aphid (Hemiptera: Aphididae) species attacking amaranth and nightshades in different agro-ecological zones of Kenya and Tanzania *African Entomology* 26(2): 407–421 (2018) DOI: <https://doi.org/10.4001/003.026.0407> ISSN 1021-3589 [Print]; 2224-8854 [Online]
6. Nthakania N.P. and **Kenya, E. U.** (2018). Role of Latent Local Technologies and Innovations to Catapult Development in Kenya. In *Decolonial Pedagogy; Examining Sites of Resistance Resurgence and Renewal* by Wane N.N and Todd K. L (Eds). ISBN 978-3-030-01538-1 ISBN 978-3-030-01539-8 (eBook) <https://doi.org/10.1007/978-3-030-01539-8>. Palgrave Macmillan Springer Nature Switzerland AG.

2015

7. Okun D.O, F. M. Khamis, G. M Muluvi, J. J Ngeranwa, F. O Ombura, M. O Yongo and **Kenya, E. U.** (Distribution of indigenous strains of atoxigenic and toxigenic *Aspergillus flavus* and *Aspergillus parasiticus* in maize and peanuts agro-ecological zones of Kenya *Agriculture & Food Security* 4:14

2012

8. Abubakar, L.U., Mutie, A.M., **Kenya, E.U.** and Muhoho, A. (2012). Characterization of Algae oil (oilgae) and its potential as biofuel in Kenya. *Appl. J. Phytotechnology in Environ. Sanitation*. 1 (4):147-153.
9. Kaduka L., Y.Kombe, **Kenya, E. U.**, E. Kuria, J.K. Bore, Z. N. Bukania and M. Mwangi (2012). Prevalence of Metabolic Syndrom among an Urban Population in Kenya. *J. Diabetes Care*, 35(4):887 – 893.

2009

10. Onyango A.O., **Kenya, E. U.**, J.J. Mbithi and M.O. Ng'ayo. (2009). Pathogenic Escherichia coli and food handlers in luxury hotels in Nairobi, Kenya. *J. Travel Medicine and Infectious Diseases*, 7: 359 –366. (Available online at www.sciencedirect.com/science).
11. Mireji P.O., J. Keating, A. Hassanali, D.E. Impoinvil, C. M. Mbogo, M. N. Muturi, H. Nyambaka, **Kenya, E. U.**, J. I. Githure and J. C. Beier. (2009). Expression of metallothionein and tubulin in heavy metal-tolerant *Anopheles gambiae* sensu stricto (Diptera:Culicidae). *Ecotoxicology and Environmental Safety*, 73:46 – 50 (Available online at www.elsevier.com/locate/ecoenv).
12. Kihara J.H., E. N.M. Njagi, **Kenya, E. U.**, M. T. Mwanje, A. E. Odek, G. Van Dam, A. I. Kahama, J. H. Ouma. (2009). Urinary soluble egg antigen levels in Schistosoma haematobium infection in relation to sex and age of Kenyan schoolchildren following praziquantel treatment. : 103, 1024—1030.

2008

13. J. Kagai, S. Mpoke, R. Manohar and **Kenya, E. U.** (2008). Diagnosis of *Wuchereria Bancrofti* Infection in Kenya: The potential Application of a Molecular Urine Diagnosis. *J. Nature Conservation*, Vol 20 (2): 327 – 336.

14. Ambundo T., J. O. Oundo, R. Manohar, J, Mbithi and **Kenya, E. U. (2008)**. Impregnated dry Filter paper as an Alternative medium for Transporting Diarrhoeal Stool Samples. *J. Nature Conservation*, Vol 20 (2): 281 – 291.
15. **Kenya, E. U. (2008)**. Ch4: Biosecurity: Engaging Scientists in Biosecurity – An African Perspective. In ‘Promoting Biosafety and Biosecurity within the Life Sciences’ (Reviewed by Andrew Kigundu, Celestino Obua, David Franz, Miph Musoke, Rachel Chikwamba and Emmaunelle Tuerlings) Pages 107 – 112
16. Fathiya K., Karam, N., Guglielmino, C, Ekesi, S., Masiga, D., De Meyer, M., **Kenya, E. U., Malacrida, A. (2008)**. Isolation and characterization of microsatellite markers in the newly discovered invasive fruit fly pest in Africa, *Bacterocera invadens* (Diptera: Tephritidae). *Molecular Ecology Resources* Vol 8 (6): 1509 - 1511.
17. Sengooba T., R. Grumet, J. Hancock, B. Zawedde, L. Kitandu, C. Weebadde, M.V Karembu, **Kenya, E. U., K. Meredia, P. Nampala, J. Ochanda, H. Quemada and M. Rubindamayugi. (2008)**. Biosafety Education Relevant to Genetically Engineered Crops for Academic and non-Academic Stakeholders in East Africa, *Electronic Journal of Biotechnology*.
18. Kagai, J. M., Mpoke, S., Hamburger, J. H., Muli, F. W., **Kenya, E. U. (2008)**. Application of a molecular technique utilizing sputum for detecting *Wuchereria bancrofti* infection in Mpirani, Malindi District, Kenya, *East African Medical J.* Vol 85 (3): 28 – 33.
19. D. O. Okun, D. O., **Kenya, E. U., Oballa P. O., Odee, D. W. And G. M. Muluvi (2008)**. Analysis of Genetic Diversity in *Eucalyptus grandis* (Hill ex Maiden) Seed Sources Using ISSR Molecular Makers. *A. J. of Biotechnology*, Vol. 7 (13): 2119-2123. Available online at <http://www.academicjournals.org/AJB> .
20. Odek A.E, **Kenya, E. U., M. T. Mwanje, C.M. Reimert, J. H. Kihara, B, J. Vennervld, J.H. Ouma and R R. Sharma. (2008)**. A comparative study of eosinophiluria in single and mixed *Schistosomiasis* infection in Kenyan School Children. *J. Nature Conservation*, Vol 20 (1):81 – 96.
21. M. W. Burugu, B. N. Mbatia, E. O. Osir, **Kenya, E. U. And L. U. Abubakar. (2008)**. The Glossina proteolytic lectin (Gpl) gene is expressed only in members of Glossina species. *International Journal of Insect Science*, Vol 27 (3/4):145-151.

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22. **Kenya, E. U.**, E. Osir, J.Kabii and S. Rekha. (2007).Efficacy and Compatibility of Fungi, Neem and Commercial Acaricide as Control Agents for Ticks. *Journal of Nature Conservation*,Vol 19 (2):321-331.
23. Mwangi, E.M. and **Kenya, E. U.** (2007).Ch 20 - Overview of Principles and Applications of Environmental Risk Assessment. In Environment and Sustainable Development: A Guide for Higher Education in Kenya Vol II. School of Environmental Studies and Human Sciences. (Edited by Waswa, F., Otor, S.,Olukoye, G. and Mugendi, D.) Pages 335 – 348

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24. Mireji, P., Keating, J., **Kenya, E. U.**, Mbogo. C., Nyambaka, H., Osir, E., Githeru, J. And Beier, J. (2006). Differential Induction of Proteins in *Anopheles gambiae sensu stricto* (Diptera: Culicidae) Larvae in Response to Heavy Metals selection. *International J. of Tropical Insect Science* 26 (4): 214-226 .
25. **Kenya, E. U.**, Okun, D. O., Gachuche, D. N., Abdulahi, A., Abubakar, L. U. And R. Manohar (2006). Detection and Presumptive Identification of *Clostridium perfringes* in Drinking Water. *Aquaculture* 7 (1): 27 – 36

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26. Ng'ayo, M. O., Njiru, Z. K., **Kenya, E. U.**, Muluvi, G. M., Osir, E. O. And Masiga, D. K. (2005). Detection of *trypanosomes* in small ruminants and pigs in western Kenya: Important reservoirs in the epidemiology of sleeping sickness. *J. Kinetoplasid Biology and Disease*, 4 (5): 18 – 24. (<http://www.kinetoplastids.com/content/4/1/5>).

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27. **Kenya, E.U.**, Osir, E.O. and Imbuga, M.I. (2004). Effect of *Bacillus thuringiensis* bdelta-endotoxin on partially purified midgut ATPase from the tsetse fly *Glossina morsitans centralis*. *Journal of Nature Conservation*, 16 (2): 235 - 241

1995

28. **Kenya, E.U** (1995). Mechanisms for Selective Toxicity of Locally Isolated strains of *Bacillus thuringiensis* (Berliner). Ph thesis. University of Science & Technology, Port Harcourt, Nigeria. 176 pages

1993

29. Osir, E.O., Magoma, G.N., Vundla, M.W. And **Kenya, E.U.** (1993). *Bacillus thuringiensis* endotoxins active against *Chilo partellus* and *Glossina morsitans morsitans* in Management of Insect Pests: Nuclear and related molecular and genetic techniques. IAEA, 513-522.

1988

30. **Kenya, E. U.** And Nwaorgu, O.C. (1988). *Urinary Schistosomiasis* in two family populations, using school children as tracers. *Nig. J. Parasitol.*, 9-11:14-26.

1992

31. Nwaorgu, O.C. and **Kenya, E. U.** (1992). The diagnostic value of haematuria and proteinuria in *Schistosoma haematobium* infection in Southern Nigeria. *J. Helminthol.*, 66:177-185.

PRESENTATION OF PAPERS AT ACADEMIC AND PROFESSIONAL CONFERENCES

1. Kenya, EU. (2012). Prospects of Biofuel Production in Kenya from Microalgae. International Conference on GM Crops and Foods. Organized by the Faculty of Agriculture, Cairo University, Egypt. 26th – 29th Nov. 2012
2. Kenya, EU. (2012). Promises and Reality of the GM Revolution. African Science Journalist Conference. Organized by the Media in Environment, Science, Health and Agriculture (MESHA). Nakuru, Kenya. 20th – 23rd August 2012.
3. Kenya, EU and Karembu, MW (2012). Communicating Biosafety Issues in Modern Biotechnology. African Science Journalist Conference. Organized by the Media in Environment, Science, Health and Agriculture (MESHA). Nakuru, Kenya. 20th – 23rd August 2012.
4. Eucharika Kenya, Margaret Muturi, Chandre Gould. (2012). Assessment of Capacity in Research and Diagnostic Laboratories in Nairobi: Implications for Biosafety and Biosecurity. 1st National Biosafety Conference. Organised by the National Biosafety Authority. Nairobi, Kenya. 6th – 9th August 2012.
5. Okun, D. O., Kenya, E.U., Muluvi, G. M. (2011). Distribution of Indigenous Isolates of *Aspergillus flavus* and *Aspergillus parasiticus* in Kenya. International Conference of Women in Science and Engineering (WISE), 28 – 29th September 2011, Malaysia.
6. Kenya, E.U and Muturi, M.W. (2011). The Preparedness for Implementation of the Chemical Weapons Convention Requirements in Kenya. Seminar on OPCW's Contribution in the Security & Non- Proliferation. Organized by the Organization for the prohibition of Chemical Weapons. 11 – 13th April 2011. The Hague Netherlands.
7. Kenya, E.U. and Muturi, M.W. (2010). Country Report for Kenya: Bioweapons Monitoring Project. BioWeapons Monitor Coordination Meeting: A side event of the Expert Committee Meeting of the United Nations Bioweapons Convention. 23rd – 27th August 2010, Palais des Nations, Geneva, Switzerland.

8. KENYA, E.U. (2010). Public Acceptance of GM Crops: The OFAB Experience. An AATF side Event during the 5th African Agriculture Week and FARA General Assembly. 19 - 24th July 2010, Ouagadougou, Burkina Faso.
9. KENYA, E. U. (2009). Encouraging Women in Business: From Challenges to Success. A Regional Leadership Training Workshop on Reporting on Agriculture and Women. 23rd – 26th February, 2009, Kampala Uganda.
10. KENYA, E. U. (2008). Engaging Scientists in Biosecurity: An African Perspective. An International Workshop in East Africa: Promoting Biosafety and Biosecurity within the Life Sciences. 11-12th March, 2008, Kampala, Uganda.

GRANTS AND AWARDS

1. World Health Organization, GAR Grant No.200370707: An Assessment of Research & Diagnostic Laboratories in Nairobi and Surrounding Areas, Kenya. Eucharia Kenya (PI) and Margaret Muturi. 2011 – 2012. USD 31,731.
2. Bill & Melinda Gates Foundation Global Development Grant No. OPP1026630. Member of African Agricultural Technology Foundation team. 2010 – 2011. USD 200,000.
3. European Union – African, Caribbean and Pacific Group of States (EU-ACP Group): Developing Capacity for Participatory and Marker Assisted Plant Breeding to mitigate low Crop productivity and poor Food Security (CAPACITATE East Africa). 2009 – 2013. Charles Ssekyewa (PI, Uganda Martyrs University, Uganda), Katherine Steele (Bangor University, UK), Eucharia Kenya (Kenyatta University, Kenya), Valerie Palapala (Masinde Muliro University of Science and Technology, Kenya), Segenet Kelemu (BECA-ILRI, Kenya), Dan Kiambi (ICRISAT, Kenya). € 785,074)
4. National Council for Science and Technology: Microalgae species diversity, abundance, and their potential for biofuel in Kenya. 2009. Laila Abubakar (PI), Eucharia Kenya and Alfred Muhoho 2009. Ksh 1,909,000.
5. Monsanto (Kenya), Biotechnology Training Workshop for High School teachers: A Mentorship Programme for Strengthening the Teaching of Biotechnology by Science Teachers. Margaret Karembu (PI), Danette Ward and Eucharia Kenya. 2008. USD 50,000
6. The German Academic Exchange Service (DAAD) – Postgraduate support grant on –Geographical distribution and Molecular Characterization of Aflatoxin Producing and Non-producing Isolates of *Aspergillus flavus* and *Aspergillus parasiticus* in Kenya– 2008 – 2010. Daniel Okun (PhD student), Eucharia Kenya and Geoffery Muluvi. USD

4,200.

7. British Council/DfID - Developing Partners in Higher Education (DeLPHE-KENYA Project No. -290) – Inter University Collaboration to Strengthen Human and Institutional Capacity in Eastern and Central African Countries Emerging from Conflicts. 2008-2012. Eucharia Kenya (PI), Essa Ali (Sudan), Bendantunguka Tiisekwa (Tanzania), Goeffrey Tusiime (Uganda) and Daniel Rukazambuka (Rwanda). POUNDS STRERLING 105,000.
8. TDR/WHO - Establishment of a Reference Training Centre in Effective Project Planning and Evaluation in Biomedical Research for Eastern and Central Africa. 2008-2009. Grace Murilla (PI), Johnson Ouma and Eucharia Kenya. USD 30,000.
9. Regional Universities FORUM for Capacity Building in Agriculture – Nurturing grant to support M. Sc students. 2007-2009. Eucharia Kenya (PI), Ethel Monda and Samuel Otor. USD 66,250.
10. Association of African Universities Leadership - Senior Executive Attachment Programme for Senior University Managers 2007. Eucharia Kenya. USD 5,000.