

CURRICULUM VITAE

ELIZABETH NANJALA OMUKUNDA PhD

Associate Professor

Masinde Muliro University of Science & Technology

I. : BIO

DOB: 07/17/1965

STATUS: Married

II. CONTACTS:

1. ADDRESS

C/O Department of Biological Sciences

Masinde Muliro University of Science & Technology

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III. EDUCATION:

1. PhD: Cell and Molecular Biology **Maseno University 2008.**
2. MSc in Zoology **University of Potchefstroom South Africa 2000**
3. BSc. Honours in Zoology (Cum Laude). **University of Potchefstroom South Africa 1998**
4. Bachelor of Education (Sc) Botany/Zoology/Education: **Kenyatta University 1989.**
5. KACE **Misikhu Girl's High school, 1983-1984** (2 P 3 Sub.)
6. KCE **Misikhu Girl's High School 1979-1982** (Div II)
7. CPE **Kiminini Primary School 1971-1978** (26/36 Points)

IV. EMPLOYMENT STATUS

TEACHING POSITIONS

20 Sept 2021 –Date	Associate Professor of Zoology (Cell and Molecular Biology) Biological Sciences Department Masinde Muliro University of Science and Technology
2013-Sept 2021	Senior Lecturer, Department of Biological Sciences Masinde Muliro University of Science and Technology
2007-2013	Lecturer, Department of Biological Sciences, Masinde Muliro University of Science and Technology
2003 – 2007	Assistant Lecturer Western University of Science and Technology
2001– 2003	Part-time Lecturer Zoology Department, Maseno University.
2001- 2002	Graduate Teacher II, Ebusakami Secondary School.
1993 - 1996	Graduate teacher I – Ebusakami Secondary School
1989 - 1992	Graduate teacher I – Awasi Secondary School

V. LEADERSHIP ROLES

Oct. 2020 to date	Associate Dean School of Natural Sciences -MMUST
2016 to date	Chair AIDs Control Committee MMUST
2011- 2014	Coordinator: AIDs Control Unit, MMUST
2008-2011	Acting Coordinator AIDs Control Unit
2019 to date	Chair, Outreach Committee African Women in Science and Engineering MMUST Chapter.
2011 to date	Deputy Chair of Board of Management for Makunga Secondary School
2016 to date	Patron Alumni Kiminini Primary School
2017	Organized sensitization seminar and launch of the MMUST/WESTERN REGION AWSE/INWES CHAPTER at MMUST 2017
July 2020	Organized community outreach to Mahiakalo (July) and Amalemba (September) in response to the impacts of COVID to vulnerable school going girls
September 2020	
Nov 2021	Chebwai Empowerment outreach

2018	Chair to Evaluation of malaria indices in Kakamega Town and its environs to highlight achievements, preparedness and challenges in the control of the disease proposal to the National Research Fund (NRF). Kshs 19million Proposal submitted to National Research Fund for funding.
2020	Chair of team Home based care as an adaptability skill in Covid 19 response in Navakholo Sub-County, Kakamega, Western Kenya Proposal submitted
2009-date	Pastor Kakamega Pentecostal Church

VI. Awards Received

2021	University Innovation Fund “Formulation of herbal larvicide against <i>Anopheles gambiae</i> larvae 400000KSH.
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2020	University Research Fund Home based care as an adaptability skill in covid 19 response in navakholo sub-county, Kakamega, western Kenya 1000000 Ksh
2020	University Research Fund “University- community led response to adolescents’ sexual and reproductive health crisis in the wake of Covid- 19 pandemic” 1000000KSH 2020
2018	National Commission for Science Technology and Innovation Research grant for Multi-disciplinary research (10000000Ksh)
2016:	National Commission for Science Technology and Innovation Research grant for MSc student Kevin Werunga (150000 Ksh).
2013	Association of African Universities HIV and AIDS support (9600USD)
2012	Inter-University Council of East Africa. HIV prevention at Masinde Muliro University of Science and Technology (7000USD)
2012	National AIDS Control Council. Enhancing prevention of HIV transmission at Masinde Muliro University of Science and Technology (4,000000KSH)
2010	National AIDS Control Council. Behavior Change Education at Kenyan .
2010	Association of African Universities. Strengthening HIV and AIDS prevention at the University (249000KSH)
2008	Masinde Muliro University of Science and Technology Research fund. Water pollution in River Nzoia Drainage Basin (Multidisciplinary 500000KSH),

VII Supervision

- 2021 Werunga Kevin Daniel ‘Prevalence of Intestinal Helminth Infections in Pre-school Pupils in Lugari Sub-County, Kakamega County Kenya’
- 2018 Wekesa Antony Wanyonyi PhD. ‘Effects of geohelminthiasis and malaria on maternal health and birth outcomes in Bungoma County, Kenya’
- 2018 Felistus Muyeka MSc. in Disaster Management and Humanitarian Assistance ‘Factors that affect utilization of VCT in Western Kenya’
- 2015 Dolorita Muyekho MSc. Environmental ‘Effects of agricultural effluents on water quality and macro invertebrate diversity in canals within Nzoia Factory Sugar Nucleus in Western Kenya’
- 2012 Karani Yameme MSc crop protection ‘Evaluation of the effect of maize stem borers on maize in upper midland I and upper highland I agro ecological zones of Western Kenya’
- 2012 Fredrick Wotia MSc Crop protection ‘Study of the relationship between maize ear rot and stem borer incidences and yield losses in Western Kenya’.
- Ayuya Stephen MSc ‘Presence, Abundance and Distribution of *Aedes aegypti* in Mahanga Market and its environs-Vihiga County, Kenya’, *Ongoing*
- Linnet Lozaria Siangi MSc “Spatial distribution of immature stages of *Aedes aegypti* in Kakamega Town” *ongoing*
- Hellen Jaoko MSc “Ecology of mosquitoes in relation to mountain slopes in Western Kenya” *Ongoing*
- Beatrice Aleyo Muzame PhD ‘Temporal distribution and response of malaria parasites to artemether-lumefantrine and sulfadoxine-pyrimethamine antimalarial treatment in Vihiga Sub-county, Western Kenya’ *Ongoing*
- Jacob Namanda PhD ‘Comparative evaluation of three termite species (Isoptera: termitidea) about swarming behaviour, amino acid profiles, substrate suitability and swarming quantities’ *Ongoing*
- Zedekiah Odira PhD ‘Impacts of agrochemical contamination on soil-dwelling macro-invertebrates in large-scale agricultural farms in Trans-Nzoia County, Kenya’ *Ongoing*
- John Uhuru Manyengo PhD “Economic Analysis Of Pollination Services To Indigenous Vegetables In Relation To Landscape Structure Among Smallholder Farmers In Kakamega, Kenya” *Ongoing*

VIII Examination

- 2019 Chrisostin Wafubwa amang'oli 'Assessment of the effect of anthropogenic activities on insect pollinator and entomophilous plants diversity and abundance within Kakamega forest, Kenya
- 2018 Elsebe Amolo Imbaya 'Efficacy of leaf extracts of *Artemisia annua* and *Thevetia peruviana* against *Aphis fabae* and non-target organisms *Solanum Scabrum* in Kakamega Kenya
- 2013 Zedekia Odira Onyando 'Physico chemical conditions and microinvertebrates variation along a land use gradient in the rainy season in River Isiukhu, Kenya
- 2013 Claris Nyongesa Omuse 'Prevalence, Distribution and Virulence of Begomoviruses infection cassava in Western Kenya'

IX Publications

- 1 Osoro, J.K., Machani, M.G., Ochomo, E. Wanjala C , **Omukunda E.**, Munga S, Githeko Ak , Yan G and Afrane AY.2022. Insecticide resistant *Anopheles gambiae* have enhanced longevity but reduced reproductive fitness and a longer first gonotrophic cycle. *Sci Rep* **12**, 8646 (2022). <https://doi.org/10.1038/s41598-022-127>
- 2 Makila N. J, Ndong A. M, **Omukunda E.** 2022. Food Preference and Survival Rates of *Allodontermes tenax* (Isoptera: Termitidea). *Egypt. Acad. J. Biolog. Sci. (A. Entomology)* Vol. 15(2) pp.11-17 (2022) DOI: 10.21608/EAJBSA.2022.239709
- 3 Osoro JK, Machani G M., Ochomo E , Wanjala C , **Omukunda E.**, Munga S, Githeko Ak , Yan G and Afrane AY. Insecticide resistance exerts significant fitness costs in immature stages of *Anopheles gambiae* in western Kenya. *Malar J* **20**, 259 (2021). <https://doi.org/10.1186/s12936-021-03798-9>
- 4 Kiiti, R W, **Omukunda EN** and Korir CJ 2020. Risk Factors Associated with Helminthic Intestinal Infection in Lurambi Subcounty, Kakamega, Kenya. *Journal of Parasitology Research* Volume 2020, Article ID 8810519, 9 pages <https://doi.org/10.1155/2020/8810519>

- 5 Werunga D K, **Omukunda EN** and Korir CJ. 2020. Prevalence and intensity of intestinal helminths infections in Pre-school pupils in Lugari Sub-County, Kakamega County, Kenya. *Journal of Parasitological Research* Volume 2020 |Article ID 8871042 | <https://doi.org/10.1155/2020/8871042>
- 6 Wekesa A Wanyonyi, Chrispinus S Mulambalah, **Journal** David H. Mulama, **Elizabeth Omukunda**, Malaria prevalence and risk analysis among pregnant women in Bungoma county, Kenya. *Medicine Science* 2019;8(2):301-5 doi: 0.5455/medscience.2018.07.8947
- 7 Wekesa A. Wanyonyi, Mulambalah, Mulama DH, **Elizabeth Omukunda** and Darwin Injete Siteti. 2018. Malaria and Geohelminthiasis Co-infections in Expectant Women: Effect on Maternal Health and Birth Outcomes in a Malaria Endemic Region in Kenya. *Journal of Parasitology Research* 2018 Article ID 2613484, 8 pages
- 8 Wekesa A Wanyonyi, **Elizabeth Omukunda**, Chrispinus S Mulambalah, David Mulama 2018. Geohelminthiasis: risk factor analysis, prevalence and infection intensity among pregnant women in Bungoma County, Kenya **International Journal of Healthcare Sciences ISSN 2348-5728 (Online)** Vol. 6, Issue 2, pp: (41-48), Available at: www.researchpublish.com
- 9 Wamalwa NIE, C.A.O. Midega CAO, Ajanga S, **Omukunda EN**, Muyekho FN, Asudi GO, Mulaa M, Khan ZR. 2017. Screening Napier grass accessions for resistance to Napier grass stunt disease using the loop-mediated isothermal amplification of DNA (LAMP). *Crop Protection* 98: 61-69
- 10 Wotia1 F, **Omukunda. E** 2021. Incidence of Maize Ear Rot and Stem Borer Participatory Rural Appraisal Efficacy Relationship by Farmers in Western Kenya. *Plant*. Vol. 9, No. 1, 2021, pp. 10-15. doi: 10.11648/j.plant.20210901.12.
- 11 Martin Karani, **Elizabeth Omukunda**, Dennis Omayio Samuel Ajanga. 2016. ‘Comparative Evaluation of the Distribution and Severity of *Busseola fusca* and *Chilo partellus* in Selected Agro- Ecological Zones of Western Kenya. *Journal of Agriculture and Veterinary Science (IOSR-JAVS)* e-ISSN: 2319-2380, p-ISSN: 2319-2372. 9 (9): 56-61 August 2016
- 12 **Elizabeth Omukunda**, Andrew Githeko, Millicent F. Ndong’a, Emmanuel Mushinzimana, Harrison Atieli & Peter Wamae. 2013. Malaria vector population dynamics in highland and lowland regions of western Kenya. *J Vector Borne Dis* 50: 85–92
- 13 **Elizabeth Omukunda**, P D Theron & E A Ueckermann. 2012. *Spinibdella* Thor (Acari: Bdellidae) from southern Africa: descriptions of five new species and the redescription of *S. thori* (Meyer & Ryke). *Zootaxa* 3304: 1–24

- 14 *Effective* **Elizabeth Omukunda**, Andrew Githeko, Millicent F. Ndong’a, Emmanuel Mushinzimana and Guiyun Yan. 2012 Effect of swamp cultivation on distribution of anopheline larval habitats in Western Kenya. *J Vector Borne Dis* 49: 61–71
15. **Elizabeth Omukunda** P D Theron & E A Ueckermann. 2007. New Species of the genus *Biscirus* (Acari: Bdellidae) from South Africa. *Acarina* 15(2): 269-282
- 16 Noboru Minakawa, **Elizabeth Omukunda**, Guofa Zhou, Andrew Githeko and GuiyuYan. 2006. Malaria vector productivity in relation to the highland environment in Kenya *Am. J. Trop. Med. Hyg* 75(3): 448-453
- 17 Bryson Ndenga, Andrew Githeko, **Elizabeth Omukunda** Harrysonne Atieli, Peter Wamai, Godwil Otsyula, Harrysonne Atieli, Peter Wamai, Noboru Minakawa, Ghoufa Zhou and Guiyun Yan. 2006. Population dynamics of malaria vectors in Western Kenya. *J. Med. Ent.* 43(2):200-206

X Book Chapter

- 1 Lalah JO, Omwoma S, Osano FO, **Omukunda E**, Wafubwa G, Muyekho D, Schramm KW (2018). [View on ScienceDirect](#) Integrated Analytical Approaches for Pesticide Management (**Editors:** Britt Maestroni Andrew Cannavan) **eBook ISBN:** 9780128161562, **Paperback ISBN:** 9780128161555 **Imprint:** Academic Press. **Published Date:** 19th July 2018 Nov. 2015

XI Workshops/Seminars

- 1 AWSE Seminar “chatting our research agenda for the year 2020/2021” July 2020
- 2 National African Conflict Resolution Initiative May 2020
- 3 Bioinformatics training MMUST January 2019
- 4 Workshop on transition, change and impact awareness training for implementers at MMUST 2018

- 5 AWSE conference at MMUST 2017
- 6 AWSE workshop in the sensitization seminar and launch of the
MMUST/Western Region AWSE/INWES chapter at MMUST 2017
- 7 Workshop Africa-EU Climate Change Research Platform: strengthening
research capacities for applied research into human health and climate change
at Kabira Country Club, Kampala, Uganda, 22-24 March 2017
- 8 Workshop on Kenya AIDS Strategic Framework 2014/2015-2018/2019 at
Jamindas Hotel Kakamega, 26-27 June 2014
- 9 Workshop on strengthening HIV & AIDS mainstreaming in university education in
Kenya held at Mombasa beach hotel, Mombasa, 18 – 22 march, 2013
June 2014
- 10 Workshop for NACC TOWA Project at Nakuru August 2012
- 11 Workshop on HIV and AIDS mainstreaming at the workplace in July 2012
- 12 Female Workshop on Research Methodology at Kenyatta University, May
2012
- 13 Coordinated Workshop for TOWA Project Public sector HIV
mainstreaming Nairobi September 2011
- 14 Workshop on HIV in public sector in Nakuru March 2011 .
- 15 Workshop on APHIAplus Project through the Work Place intervention
held from 1 – 3 September 2020
- 16 Workshop at Koho Library Management System at MMUST 2013
- 17 Organized AIDS control unit training workshop Busia Farmers Training
Institution 2012th
- 18 Training and sensitization workshop on intellectual property policy development
and patenting 2011
- 19 Women's health empowerment workshop on gender based violence
and prevention in Kenya 2011
- 20 Workshop on implementation of ISO 9001:2008 Kakamega Kenya 2011
- 21 Workshop on monitoring and evaluation by CHE in Naivasha January 2010
- 22 Workshop on Monitoring and evaluation of HIV and AIDS at workplace
Nakuru 2009

- 23 Workshop on HIV/AIDS baseline survey for East African Universities in Nairobi in February 2009
- 24 Workshop for dissemination of HIV sero-behavioural studies by EAC/AMREF/EALP in Entebbe Uganda March 2012
- 25 Alexander Von Humboldt Alumni Kenyan Kolleg Conference at Meridian Court Hotel Kenya 2010
- 26 Workshop in Research Methodology of the association of African Universities (AAU)-EASRN of Tertiary Institution Against the HIV/AIDS Pandemic July 2009
- 27 The Gender sensitization workshop conducted at Savona Isle Resort April 2008
- 28 Workshop on HIV/AIDS and Gender streamlining into the University Curriculum in Dar es Salaam in November 2008
- 29 Workshop on Introduction to Materials Development for Open and Distance Learning (ODL) MMUST November 2008
- 30 Scientific Communication and Publishing Course in Nairobi December 2008
- 31 Scientific Communication and Publishing Course in Nairobi December 2007
- 32 Proposal Writing Training Course University of the Witwatersrand, Johannesburg, South Africa Faculty of Health Sciences August 2005
- 33 Workshop on Spatial Analysis of GIS Data – Applied Statistics for Public Health June, 2005 Nairobi, Kenya

XII Conferences

- 1 Fourteenth Multi-Disciplinary International Virtual Conference, 2021 “Comparative Amino Acid Profiles of *Pseudocanthotermes grandiceps*, *Macrotermis jeanelli* and *Allodontermes tenax* (Isoptera: Termitidea)” MMUST

- 2 STEM Education International Conference 2020 (STEMEIC2020)
“Integrating Pedagogy and Technology to Ensure Resilience, Quality, Equity
and Sustainability” 25th – 27th November, 2020 MMUST
.
- 3 13th Multi-disciplinary International Conference 2019 Masinde Muliro University of
Science and Technology 19th-21st June 2019 Kakamega, Kenya, Presented paper
Prevalence of Intestinal Helminth Infections in Pre-School Pupils in Lugari Sub-County,
Kakamega County Kenya
- 4 2nd International Conference on the Future of Education 13th -14th June 2019 Bangkok,
Thailand, Presented paper
- 5 Leveraging the HIV Response to Accelerate Impact for UHC. Kenya School
of Monetary Studies, Nairobi May 9-10 2019
- 6 **AVH-TUK** INTERNATIONAL WORKSHOP IN KISUMU, KENYA. ‘Species Diversity and
Population changes in Lake Victoria’ 2017
- 7 2nd National biennial HIV and AIDS conference, Nairobi 2013
- 8 Humboldt Alumni Association Conference, Nairobi, Kenya. Presented paper on “Effects
of swamp cultivation on malaria vectors in highland regions of Western Kenya” 2010
- 9 Third World Academy of Sciences, Kakamega, Kenya 2006
- 10 Second African Symposium, ICIPE, Nairobi, Kenya 2001
- 11 Entomological Society of Southern Africa, Potchefstroom, South Africa, 2000
- 12 First African Acarology Symposium, Pretoria, South Africa Poster presentation “Effects
of eriophyoid mites on nine *Rhus* Spp”, 1999

Professional Association

Association of African Acarology
African Women in Science and Engineering
Entomological Society of Kenya

Reviewer

Journal of Vector Borne Diseases



Referees

1. Andrew Githeko PhD
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