

CURRICULUM VITAE

Prof. Nancy L.M. Budambula

Name: Prof. Nancy L.M. Budambula (Ph.D. MSc. BSc.)
Nationality: Kenyan.
Languages: English, Kiswahili, German
Current position: Associate Professor and Director Board of Postgraduate Studies
 University of Embu
Recognition: In Who's Who in Science and Engineering 10th Anniversary Edition of 2008-2009
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EDUCATIONAL BACKGROUND

1999-2003 **Ph.D.** Microbiology, JKUAT and George-August University Göttingen Germany
 1991-1993 **MSc.** Genetics. Kenyatta University
 1988-1991 **BSc.** Botany, Zoology and Geography
 1986-1987 **A-level.** Kenya High School, Nairobi.
 1982-1985 **O-level.** Kenya High School, Nairobi.
 1975-1981 Certificate of Primary Education. Kamimei Primary School, Nandi County

PROFESSIONAL EXPERIENCE

Teaching experience at the University

2014 to Present: Associate Professor, University of Embu
2007 to 2014: Senior Lecturer Jomo Kenyatta University of Agriculture and Technology (JKUAT).
1998 to 2007: Lecturer Jomo Kenyatta University of Agriculture and Technology (JKUAT).
1995 to 1998: Assistant Lecturer at JKUAT. Taught Genetics based course to undergraduate students in the Department of Botany.

Management and Administration

July 2014 to Present: Director BPS, University of Embu
September 2013 to June 2014: Dean, School of Biological Sciences- JKUAT
February 2013 to August 2013: Associate Dean, Faculty of Science - JKUAT
October 2012 to January 2013: Acting Associate Dean. Faculty of Science – JKUAT
2009 to 2013: Chairman, Department of Botany 2009 to 2013 - JKUAT

Programme Management

2004 to 2006: Programme Coordinator. Medical Microbiology Programme -JKUAT
1998: Environment Consultant: Environment Liason Centre International
1995 to 1997: Environment Consultant Kenya Energy and Environment Organizations (KENGO).
1994 to 1995: Project officer at KENGO

Public Office

2012 to date Member-Ministry of Health Task force on genetically modified foods.
2010 to date Member -Monitoring and Evaluation Committee Innovation Fund, JKUAT.
2009 to 2012 Co-chairperson JKUAT graduation protocol committee
2008 to 2012 Member JKUAT Laboratory Management Board

FOCUS RESEARCH AREAS: Bioprospecting for novel microorganisms from the environment, antibiotic resistance, bacterial systematics, biotechnology, viral genetics and water pollution

PUBLICATIONS IN JOURNALS

1. Ghilamical A.M., H.I. Boga, S. E. Anami, T. Mehari and **N.L.M. Budambula (2018)**. Potential human pathogenic bacteria in five hot springs in Eritrea revealed by next generation sequencing. *PLoS ONE* 13(3): e0194554. <https://doi.org/10.1371/journal.pone.0194554>
2. Koech C.C., Lwembe R.M., Odari E.O., **Budambula N.L.M. (2018)**. Prevalence and Associated Risk Factors of HTLV/HIV Co-Infection among People who inject Drugs (PWIDs): A Review. *Journal of Human Virology and Retrovirology* 6(1): 00188. DOI: 10.15406/jhvr.2017.06.00188
3. Nzivo M.M., R. Lwembe, E.O Odari and N.L.M. **Budambula NLM (2017)**. Human Herpes Virus Type 8 among Female-Sex Workers. *Journal of Human Virology and Retrovirology* 5(6): 00176. DOI: 10.15406/jhvr.2017.05.00176
4. Muli J.K., C. Mweu, **N. Budambula** and S.E. Anami (2017). Yeast Extract Peptone Based Co-cultivation Media Promotes Transient GUS Expression in Tropical Maize Genotypes. *Asian Journal of Crop Science* 9:
5. Ghilamical A.M., **N. L. M. Budambula**, S. E. Anami, T. Mehari and H. I. Boga (2017). Evaluation of Prokaryotic Diversity of Five Hot Springs in Eritrea. *BMC Microbiology* 17:203. <https://doi.org/10.1186/s12866-017-1113-4>.
6. Ghilamical A.M., H.I. Boga, S. E. Anami, T. Mehari and **N.L.M. Budambula (2017)**. Physical and Chemical Characteristics of Five Hot Springs in Eritrea. *Journal of Natural Sciences Research* 7(12): 88-94.
7. Budambula V. and **N. L. M. Budambula (2017)**. Chasing the Dragon: Drug Use and Abuse. ISBN: 9789966103024
8. Imbo M.C., **N. L. M. Budambula**, C.M. Mweu, J. K. Muli and S. E. Anami (2016). Genetic Transformation of Sweet Potato for Improved Tolerance to Stress: A Review. *Advances in Life Science and Technology* 49:67-76
9. Muli J.K., N. L. M. Budambula, C. Mweu, M. C. Imbo and S. E. Anami (2016). Genetic Improvement of African Maize towards Drought Tolerance: A Review. *Advances in Life Science and Technology* 48: 1-9.
10. Muwawa E.M, **N. L. M. Budambula**, Z. L. Osiemo, H. I. Boga and H.M. Makonde (2016). Isolation and characterization of some gut microbial symbionts from fungus-cultivating termites (*Macrotermes* and *Odontotermes* spp). *African Journal of Microbiology Research* 10:994-1004 DOI: 10.5897/AJMR2016.8060.
11. Missiani O., J. H. Kimotho, J. Oyugi, F. Okoth, H. Kioko, S. Mining, **N. L. M. Budambula**, E. Giles, A. Andonov, E. Songok and C. Osiowy (2016). Hepatitis B infection is highly prevalent among patients presenting with jaundice in Kenya. *BMC Infectious Diseases* 16:101 DOI 10.1186/s12879-016-1409-2
12. Kerosi D.O., **N. L.M. Budambula**, E. Odari, R. Lihana, S. Osman, A. Omire, H. Langat, R. Aman and R. Lwembe (2015). Human Immunodeficiency Virus -1 and Hepatitis B Virus Co-Infections among Injecting Drug Users in Malindi, Kenya. *Journal of Biology, Agriculture and Healthcare* 5 (22): 45-50
13. Kiama C., **N. L.M Budambula**, S. Okoth, R. Kagali and V. Matiru (2015). Cultural Characterization of Fungi Isolated From Oil Contaminated Soils. *Journal of Biology, Agriculture and Healthcare* 5: 16-21

14. Onchwari R. G., **N. L. M. Budambula**, H.M. Makonde, J.Mugweru , V.N. Matiru (2015). Potentially beneficial rhizobacteria associated with banana plants in Juja, Kenya. *Journal of Biodiversity and Environmental Sciences* 7:181-188
15. Webale M.K., V. Budambula, R. Lihana, F.O. Musumba, A. K. Nyamache, **N. L. M. Budambula**, A. A. Ahmed, C. Ouma and T. Were (2015). Hepatitis B virus sero-profiles and genotypes in HIV-1 infected and uninfected injection and Non-injection drug users from coastal Kenya. *BMC Infectious Diseases* 15:299. DOI 10.1186/s12879-015-1060-3
16. Odari E.O, **N.L.M Budambula** and H. Nitschko (2014). Evaluation of an Antigen-Antibody “Combination” Enzyme Linked Immunosorbent Assay for Diagnosis of Hepatitis C Virus Infections. *Ethiopian Journal of Health Sciences* 24: 343-352.
17. Omire A., **N. Budambula**, W. Ochieng, C. Baliach, D. Kerosi, H. Langat, M.Okemwa, L. Kirumbi, R. Aman, B. Ogutu and R. Lwembe (2014). Assessment of Risk Predisposition to Human Papilloma Virus through Cervical Infections Screening of Women Attending an Outpatient Health Facility in Nairobi, Kenya. *Journal of Biology, Agriculture and Healthcare* 4: 28-36
18. Muwawa E.M., H.M. Makonde, **N.L.M. Budambula**, Z.L. Osiemo and H.I. Boga (2014). Chemical properties associated with guts, soil and nest materials of *Odontotermes* and *Macrotermes* species from Kenya. *Journal of Biodiversity and Environmental Sciences* 4: 253-263
19. Odari E. O., S. G. Odhiambo and **N. L. M. Budambula** (2014). Laboratory surveillance of cholera in Nyanza Province. *Journal of Agriculture, Science and Technology*. 16 (1):79-91.
20. Njire M.M., **N. L. M. Budambula** and J. Kiiru (2014). Antimicrobial activity of *Warbugia ugandensis* against Gram-negative Multi-drug resistant bacteria. *Journal of Agriculture, Science and Technology*. 16(2): 45-57
21. Ogot H. A, H. I Boga, **N. Budambula**, M.Tsanuo, D.O. Andika and H. J, Ogola (2013). Isolation, characterization and identification of roundup degrading bacteria from the soil and gut of *Macrotermes michaelsoni*. *International Journal of Microbiology and Mycology* 1:31-38.
22. Ogot H.A., H. I Boga, **N. Budambula**, M. Tsanuo and D.O.Andika (2013). Isolation, characterization and identification of Diazinon degrading bacteria from the soil and gut of *Macrotermes* *Journal of Biodiversity and Environmental Sciences* 3: 70-79.
23. Ronoh R.C., **N.L.M.Budambula**, R.K. Mwirichia and H.I. Boga (2013). Isolation and Characterization of Actinobacteria from Lake Magadi, Kenya. *African Journal of Microbiology Research* 7: 4200-4206.
24. Kwange S.O., **N. L.M. Budambula**, M. K. Kiptoo, F. Okoth, M. Oduor, J. M. Ochwoto and J. H. Kimotho (2013). Hepatitis B virus subgenotype A1, occurrence of subgenotypeD4 and S gene mutations among voluntary Blood Donors in Kenya. *Virus Genes* 47: 448-455
25. Muhonja C., **N. Budambula**, J. Kiiru and S. Kariuki (2012). Characterization of antibiotic resistance in environmental enteric pathogens from Kibera slum in Nairobi-Kenya. *Journal of Bacteriology Research* 4: 46-54.
26. Kwange S.O. and **N.L.M. Budambula** (2010). Effectiveness of antituberculosis treatment among patients receiving highly active antiretroviral therapy at Vihiga District Hospital in 2007. *Indian Journal of Medical Microbiology* 28: 21-25.
27. Mwirichia R.K., **N. M.Budambula** and H.I. Boga (2009). Isolation, characterization and identification of *Enterobacteriaceae* from well water in Juja Town in Kenya. *Journal of Tropical Microbiology and Biotechnology* 5:31-36.
28. **Budambula** N.L.M., E.C. Mwachiro and N.M. Gitonga (2006). Antibiotic resistance of bacteria isolated from Nairobi River. *Asian Journal of Microbiology, Biotechnology and Environmental Science* 8: 9-12.

29. **Budambula** N.L.M. and E.C. Mwachiro (2006). Isolation and characterization of naphthalene utilising bacteria from Nairobi River. *Asian Journal of Microbiology, Biotechnology and Environmental Science*. 8: 1-8.
30. **Budambula** N.L.M and E.C. Mwachiro (2006). Metal status of Nairobi River Waters and Bioaccumulation of Metals in *Labeo Cylindricus*. *Water, Air and Soil Pollution* 169:275-291.
31. **Budambula** N.L.M.,E.C. Mwachiro, N.M. Gitonga and S. Kariuki (2004). Isolation of Mercury, Zinc and Cadmium resistant bacteria from Nairobi River. *Proceedings of the 2nd Regional Microbiology Conference Recent advances in microbial research and their implications to Health, Agriculture and Environment*. Pages 181-190.
32. **Budambula** N and P. Wangari (1998) *Proceedings of the International workshop on Women and Desertification*. Environmental Liason International Centre.
33. **Budambula** N. (1995). *Implementing the Desertification Convention: The Kenyan Experience*. The Network.

SELECTED CONFERENCE PAPERS

1. Kinyua D.M and N.L.M **Budambula** (2013). Antibiotic resistance of metal tolerant bacteria isolated from soil in Juja, Kenya. JKUAT Scientific, Technological and Industrialization Conference November
2. Njire M.M., **N.L.M. Budambula** and J.N. Kiiru (2010). Antimicrobial effects of selected herbal extracts on Multi-drug resistant Gram-negative bacterial strains. Proceedings of the 2010 JKUAT Scientific, Technological and Industrialization Conference. Pages 131-138
3. Ndegwa D.W, **N.L.M. Budambula**, S. Kariuki, G.Revathi and J.N. Kiiru (2010). Aminoglycoside modifying enzymes detected in strains of *Escherichia*, *Klebsiella*, *Pseudomonas* and *Acinetobacter* implicated in invasive infections in Nairobi Kenya. Proceedings of the 2010 JKUAT Scientific, Technological and Industrialization Conference. Pages 109 -119
4. Wahiu F. W. and **N.L.M. Budambula** (2007). Characterization of bacterial contaminants in milk hawked at Kahawa West. Proceedings of the 2007JKUAT Scientific, Technological and Industrialization Conference.Pages 292-302.
5. Nzau B., S. Kariuki and **N.L.M .Budambula** (2007). Antimicrobial resistance in *Salmonella enterica* serotype typhimurium and *Salmonella enterica* serotype enteritids. Proceedings of the 2007 JKUAT Scientific, Technological and Industrialization Conference. Pages 227-233.

STUDENT/THESES SUPERVISION

Doctor of Philosophy Students

1. **Amanuel Menghs Ghilamicael** Graduated

Prokaryotic Diversity and Thermozyms from Thermophilic Bacteria from Hot Springs in Eritrea.

2. **Peter Onkware** On going

Mycobacteria and bacterial coinfections among patients at Kenyatta National Hospital and their susceptibility to antibiotics and selected plant extracts.

3. **Kiende Karambu Gatimu** On going

Sustainability of the Small-Scale Holder Tea Enterprise in Kenya

4. **Jusine Majau Miriti** On going

Effectiveness of f Performance Appraisal On Employee Performance. A Case of Management

Employees in Public Teachers' Training Colleges In Kenya

5. Joshua Kiilu Muli

On going

Genetic Diversity of *Crotalaria Brevidens* (Mitoo), an Economically Important Medicinal Vegetable.

6. Samwel Morris Lifumo Symekher

On going

Molecular Epidemiology and Evolution of Human Influenza B Viruses from Patients With Acute Respiratory Infections in Nairobi, Kenya, 2005 – 2016.

Master of Science Students

1. Romano K. Mwirichia **graduated**

Isolation and Characterization of Enterobacteriaceae from Well water in Juja town and its

2. Ogot O. Hellen **graduated**

Isolation, characterization and identification of pesticide degrading bacteria isolated from the soil and intestinal

3. Eddy Okoth Odari **graduated.**

Evaluation of a “combination” Elisa Kit and genotyping performance of restriction fragment length polymorphism among Hepatitis C virus infected patients’ sera.

4. Moses Mucugi Njire **graduated**

Antimicrobial effects of selected herbal extracts on clinical multi-drug resistant Gram-negative bacteria.

5. Doris Wangari Ndegwa **graduated**

Characterisation of aminoglycoside resistant bacterial strains implicated in invasive infections in Kenya.

6. Regina Ronoh **graduated**

Genetic diversity of actinobacteria in Lake Magadi.

7. Christabel Muhonja **graduated**

Characterisation of antibiotic resistance among environmental enteric pathogens in Gatwekera village of Kibera slum-Kenya.

8. Simeon Kwange Owour **graduated**

Distribution of Hepatitis B virus genotypes and frequency of its mutants among Blood Donors in selected regional blood transfusion centres in Kenya

9. Edith Mnyazi Muwawa **graduated**

Assessment of dynamics of nitrogen species and microsymbionts in soils, guts and nest materials of termites.

10. Agnes Omire **graduated**

Genetic variability of the Human Papillomavirus among HIV positive and HIV negative women attending reproductive health clinic at Kenyatta National Hospital.

11. Ruth Gechemba Onchwari **graduated**

Isolation and characterization of Rhizosphere bacteria from banana plants within juja with potential to improve plant growth.

12. Kerosi Danvas Ongwacho **graduated**

Genetic variability of Human immunodeficiency virus and Hepatitis B among HIV/Hepatitis BC coinfecting intravenous drug users in Malindi.

13. Paulyne Akoth **graduated**

Genetic Diversity and Distribution of Termites in Taita Taveta County.

14. Joshua Kiilu Muli **graduated**

Transgenic maize overexpressing PARP hairpin construct for drought stress tolerance.

15. Mary Claire Imbo **graduated**

Competence to agrobacterium mediated transformation and expression analysis of NUDX gene in eight selected farmer preferred sweet potato genotypes.

16. Mirriam Nzivo **Research in Progress**

Characterization of Human Herpes Virus Type 8 among Female Commercial Sex Workers in Malindi, Kenya.

Kenya.

18. Caroline Koech **Research in Progress**

Characterization of human T-cell lymphotropic virus among intravenous drug users in Malindi, Kenya.

19. Grace Mutua **Research in Progress**

Relationship between genital Human Papillomavirus infections and prostate cancer in patients attending the urology clinic at Kenyatta National Hospital.

iii) Twenty five (32) Bachelor of Science research projects –details available on request.

Postgraduate examiner of more than 80 postgraduate thesis. **details available on request**

Undergraduate external examiner for one of the old public universities in Kenya. **details available on request**