

Prof. Dr. Romano Mwirichia

Department of Biological Sciences

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Education

- PhD (Biotechnology), Jomo Kenyatta University of Agriculture and Technology, 2009.
- M.Sc. (Microbiology), Jomo Kenyatta University of Agriculture and Technology, 2005.
- Bachelor of Science (Upper 2nd) Hons Botany and Zoology, University of Nairobi, Kenya, 1998.
- Kenya Certificate of Secondary Education (KCSE), Thitha High school, 1992
- Kenya Certificate of Primary Education (KCPE), Karama Primary school, 1986

Postdoctoral Research Fellowships

1. Postdoctoral Fellow (Microbiology) at The Red Sea Research Center, King Abdullah University of Science and Technology, Kingdom of Saudi Arabia (KAUST).
2. Postdoctoral Fellow of the Alexander von Humboldt Foundation at the Institute for Microbiology und Genetics, Georg-August University Göttingen, Germany.
3. Postdoctoral Fellow of the American Society for Microbiology at the Department of Cell, Molecular and Developmental Biology, Yale University, USA

Work Experience

July 2020 to Date	Associate Professor of Microbiology, University of Embu
2015 to Date	Senior Lecturer of Microbiology, University of Embu.
2009 - 2012	Research Fellow, Institute for Biotechnology Research, JKUAT.
2007 - 2009	Assistant Research Fellow, Institute for Biotechnology Research, JKUAT

Administrative Responsibilities

2016 - 2020	Director, Research and Extension, University of Embu
2015 - 2016	School Examination coordinator, SPAS & SESS, Embu University college.
2015 - 2016	Examination coordinator, Biological sciences, Embu University College.
2009 - 2010	Head and founder of the molecular biology laboratory, Institute for Biotechnology Research, JKUAT
2008 - 2010	Timetabling coordinator, Institute for Biotechnology Research, JKUAT.
2015 - 2019	Member of various University committees

List of Publications

Year 2020

1. Karanja Edward Nderitu, Fliessbach Andreas, Adamtey Noah, Kambura AnneKelly, Musyoka Martha, Fiaboe Komi and **Mwirichia R** (2020) Diversity and structure of prokaryotic communities within organic and conventional farming systems in central highlands of Kenya. [PLoS ONE 15\(8\)](#)
2. **Mwirichia Romano** and Boga Hamadi Iddi (2020). Description of *Nitrincola elmenteitensis* sp. nov.; a haloalkaliphilic bacterium isolated from Lake Elmenteita in Kenya. [African Journal of Biological Sciences 2 \(3\), 81-87](#)
3. Karanja, Edward Nderitu, Andreas Fliessbach, Noah Adamtey, Anne Kelly Kambura, Martha Musyoka, Komi Fiaboe, and **Romano Mwirichia** (2020). "Fungal diversity within organic and conventional farming systems in Central Highlands of Kenya." [African Journal of Microbiology Research 14, no. 6: 242-258](#)
4. Eunice Mulango, Remmy Kasili, **Romano Mwirichia**, Anne-Kelly Kambura, Christabel Muhonja (2019). Isolation and Characterization of Haloalkaliphilic Bacteria from the Hot Springs of Lake Magadi. [African journal of Microbiology Research 14 \(7\), 294-302.](#)
5. Mutitu, Daniel Karanja, Jackson Muthengia Wachira, **Romano Mwirichia**, Joseph Karanja Thiong'o, Onesmus Mulwa Munyao, and Muriithi Genson (2020). "Biocementation Influence on Flexural Strength and Chloride Ingress by Lysinibacillus sphaericus and Bacillus megaterium in Mortar Structures." [Journal of Chemistry 2020](#)
6. Munyao, Onesmus Mulwa, Joseph Karanja Thiong'o, Jackson Muthengia Wachira, Daniel Karanja Mutitu, and **Romano Mwirichia** (2020). Influence of Starkeya novella on Mechanical and Microstructural Properties of Cement Mortars. [Journal of Chemistry May 18:2020](#)
7. Munyao, Onesmus Mulwa, Joseph Karanja Thiong'o, Jackson Wachira Muthengia, Daniel Karanja Mutitu, Romano Mwirichia, Genson Muriithi, and Joseph Mwiti Marangu. "Study on the effect of *Thiobacillus intermedius* bacteria on the physico-mechanical properties of mortars of ordinary portland cement." [Heliyon 6, no. 1 \(2020\): e03232.](#)
8. Orwa Philemon, Vitalis Wekesa, George Mugambi and **Romano Mwirichia** (2020) Isolation of haloalkaliphilic fungi from Lake Magadi in Kenya. [Heliyon. 2020 Jan; 6\(1\): e02823.](#)

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Year 2019 – 2009

1. Kiplimo, Denis, Julius Mugweru, Sarah Kituyi, Alex Kipnyargis, and **Romano Mwirichia** (2019). "Diversity of esterase and lipase producing haloalkaliphilic bacteria from Lake Magadi in Kenya." [Journal of Basic Microbiology 59, no. 12 \(2019\): 1173-1184.](#)

2. Mutitu, Daniel Karanja, Jackson Muthengia Wachira, **Romano Mwirichia**, Joseph Karanja Thiong'o, Onesmus Mulwa Munyao, and Genson Muriithi (2019). Influence of *Lysinibacillus sphaericus* on compressive strength and water sorptivity in microbial cement mortar. *Heliyon* 5, no. 11 (2019): e02881.
3. Edwin, Ngetha, Julia Khayeli Akhwale, and Romano Mwirichia (2019). "Phylogenetic and morphological diversity of culturable cyanobacteria from Lake Magadi in Kenya." *African Journal of Biological Sciences* 1, no. 4: 24-31.
4. Munyao, Onesmus Mulwa, Joseph Karanja Thiong'o, Jackson Muthengia Wachira, Daniel Karanja Mutitu, **Mwirichia Romano**, and Genson Murithi. "Use of Bacillus Species Bacteria in Protecting the Concrete Structures from Sulphate Attack-A Review." *Journal of Chemical Reviews* 1, no. 4, pp. 252-299 (2019): 287-299.
5. Mutitu, Karanja D., Mulwa O. Munyao, Muthengia J. Wachira, **Romano Mwirichia**, Karanja J. Thiong'o, and Mwititi J. Marangu (2019). Effects of biocementation on some properties of cement-based materials incorporating Bacillus Species bacteria—a review. *Journal of Sustainable Cement-Based Materials* 8, no. 5 (2019): 309-325.
6. Munyao, Onesmus Mulwa, Joseph Karanja Thiong'o, Jackson Wachira Muthengia, Daniel Karanja Mutitu, **Romano Mwirichia**, Genson Muriithi, and Joseph Mwititi Marangu. "Study on the effect of *Thiobacillus intermedius* bacteria on the physico-mechanical properties of mortars of ordinary portland cement." *Heliyon* 6, no. 1 (2020): e03232
7. Evans Nyakeri Manyara, **Romano Mwirichia**, Hamadi Boga. (2018). Isolation and characterization of enzyme producing bacteria from Lake Magadi, an extreme soda lake in Kenya. *J Microbiol Exp.* 6(2):57–68. DOI: 10.15406/jmen.2018.06.00189
8. Makonde, Huxley Mae, Romano Mwirichia, Edith Mnyazi Muwawa, Hans-Peter Klenk, and Hamadi Iddi Boga (2017). Fungal diversity and community structure in gut, mound and surrounding soil of fungus-cultivating termites. *African Journal of Microbiology Research*, 11(12), 504-515.
9. Kambura, Anne Kelly, Romano Mwirichia, Remmy Wekesa Kasili, Edward Nderitu Karanja, Huxley Mae Makonde, and Hamadi Iddi Boga. "Bacteria and Archaea diversity within the hot springs of Lake Magadi and Little Magadi in Kenya." *BMC microbiology* 16, no. 1 (2016): 1-12.
10. Kambura, Anne Kelly, Romano Kachiuru Mwirichia, Remmy Wekesa Kasili, Edward Nderitu Karanja, Huxley Mae Makonde, and Hamadi Iddi Boga. "Diversity of fungi in sediments and water sampled from the hot springs of Lake Magadi and Little Magadi in Kenya." *African Journal of Microbiology Research* 10, no. 10 (2016): 330-338.
11. Mwirichia, Romano, Intikhab Alam, Mamoon Rashid, Manikandan Vinu, Wail Ba-Alawi, Allan Anthony Kamau, David Kamanda Ngugi et al. "Metabolic traits of an uncultured archaeal lineage-MSBL1-from brine pools of the Red Sea." *Scientific reports* 6, no. 1 (2016): 1-14.

12. Ndwigah FI., Boga IH., Wanyoike, W and Romano K. 2016. An *Aspergillus* isolate and its secondary metabolites from Lake Elmenteita in Kenya. *Journal of Agriculture, Science and Technology*, 17(1) 2016.
13. Makonde H., **Mwirichia R.**, Osiemo Z., Boga H., Klenk H-P. (2015). 454 Pyrosequencing-based assessments of bacterial diversity and community structure in termite guts, mounds and surrounding soils. *SpringerPlus*.2015, 4:471. DOI: 10.1186/s40064-015-1262-6.
14. Wafula, E.N., Kinyua, J., Kariuki, D., Muigai, A., **Mwirichia, R.**, Kosgei, T.K. Morphological characterization of soil bacteria in Ngere tea catchment area of Murang'a County, Kenya. *International Journal of Life Sciences Research* 3 (1), 121-134
15. Ndwigah FI., Boga IH., Wanyoike, W and Romano K. 2015. Characterization, Enzymatic Activity, and Secondary Metabolites of Fungal Isolates from Lake Sonachi in Kenya. *IOSR Journal of Pharmacy and Biological Sciences (IOSR-JPBS)e* -ISSN: 2278-3008, p-ISSN:2319-7676. Volume 10, Issue 2 Ver.1 (Mar -Apr. 2015).
16. Wafula, E.N., Kinyua, J., Kariuki, D., Muigai, A., **Mwirichia, R.**, Kosgei, T.K. Molecular and culture-based analyses of soil bacteria in Ngere tea catchment area of Murang'a county, *Science Journal of Biotechnology*, Volume 2014, Article ID sjbt-105, 10.7237/sjbt/105
17. Wafula, E.N., Kinyua, J., Kariuki, D., Muigai, A., **Mwirichia, R.** Isolation and characterization of bacillus species from soil in Ngere tea catchment area of Murang'a County, Kenya. *International Journal of Life Sciences Research* ISSN 2348-3148 (online) Vol. 2, Issue 3, pp: (27-35)
18. Scheuner C, B J. Tindall, Megan Lu, Matt Nolan, AllaLapidus, Jan-Feng Cheng, Lynne Goodwin, Sam Pitluck, Marcel Huntemann, KonstantinosLiolios, IoannaPagani, KonstantinosMavromatis, Natalia Ivanova, Amrita Pati, Amy Chen, Krishna Palaniappan, Cynthia D. Jeffries, Loren Hauser, Miriam Land, **Romano Mwirichia**, Manfred Rohde, BirteAbt, John C. Detter, TanjaWoyke, Jonathan A. Eisen, Victor Markowitz, Philip Hugenholtz, Markus Göker, Nikos C. Kyrpides and Hans-Peter Klenk (2014). Complete genome sequence of *Planctomycesbrasiliensis* type strain (DSM 5305T), phylogenomic analysis and reclassification of *Planctomyces* including the descriptions of *Gimesia* gen. nov., *Planctopirus* gen. nov. and *Rubinisphaera* gen. nov. and emended descriptions of the order *Planctomycetales* and the family *Planctomycetaceae*. *Stand. Genomic Sci.* 2014 Dec 8: 9-10.
19. Huxley M. Makonde, Hamadi I. Boga, **Romano Mwirichia**, Lucy M. Mackenzie, Markus Göker, Hans-Peter Klenk (2013). 16S-rRNA-based analysis of bacterial diversity in the gut of fungus-cultivating termites (*Microtermes* and *Odontotermes* species)", *Antonie van Leeuwenhoek* volume 104: 869–883

20. Huxley M. Makonde, Hamadi I. Boga, Zipporah Osiemo, **Romano Mwirichia**, J. Benjamin Stielow, Markus Göker, Hans-Peter Klenk (2013). Diversity of *Termitomyces* Associated with Fungus-Farming Termites Assessed by Cultural and Culture-Independent Methods. *PLOS ONE* 10.1371/journal.pone.0056464
21. Daniel Anyika, Hamadi Boga and **Romano Mwirichia** (2013). Development of cost-effective media for the culture of *Chilopartellus* larvicide in Kenya. *International Journal for Biotechnology and Molecular Biology Research* Vol. 4(1), pp. 1-8, March 2013 DOI: 10.5897/IJBMBR12.011
22. Kambura AK, **Mwirichia RK**, Ngaira J, Boga HI. 2013. Isolation and characterization of bacterial isolates from Lake Magadi. *J. Trop. Microbiol. Biotechnol.* 8:17-25 17
23. Regina C. Ronoh, Nancy L. M. Budambula, **Romano K. Mwirichia** and Hamadi I. Boga (2013). Isolation and characterization of Actinobacteria from Lake Magadi, Kenya. *African Journal of Microbiology Research.* Vol. 7(32), pp. 4200-4206.
24. Atuncha, H., Amata, E. A. R., Mwirichia, R., Kasina, M., Mbevi, B., & Wakoli, E. (2013). Evaluation of predation potential of coccinellids on cassava whiteflies. *Journal of Entomology and Nematology*, 5(7), 84-87
25. Mathu Samuel, Herrmann Laetitia, Pypers Pieter, Matiru Vivienne, **Mwirichia Romano**, Lesueur Didier (2012). Potential of indigenous *Bradyrhizobia* versus commercial inoculants to improve cowpea (*Vigna unguiculata* L. walp.) and green gram (*Vigna radiata* L. wilczek.) yields in Kenya. *Soil Science and Plant Nutrition.* 58(6). p.750.
26. Beatrice N. Irungu, Murungi J. Mbabu, Daniel M. Kiboi, Enock Moindi, Johnson Kinyua, and **Mwirichia Romano** (2012). In vivo antimalarial and acute toxicity properties of hexane and chloroform extracts from *Clausenianisata* (Willd.) Benth. *Afr. J. Pharmacol. Ther.* 1 (1): 24-29.
27. Amrita Pati, Xiaojing Zhang, Alla Lapidus, Matt Nolan, Susan Lucas, Tijana Glavina Del Rio, Hope Tice, Jan-Fang Cheng, Roxane Tapia, Cliff Han, Lynne Goodwin, Sam Pitluck, Konstantinos Liolios, Ioanna Pagani, Natalia Ivanova, Konstantinos Mavromatis, Amy Chen, Krishna Palaniappan, Loren Hauser, Cynthia D. Jeffries, Evelyne-Marie Brambilla, Alina Röhl, **Romano Mwirichia**, Manfred Rohde, Brian J. Tindall, Johannes Sikorski, Reinhard Wirth, Markus Göker, Tanja Woyke, John C. Detter, James Bristow, Jonathan A. Eisen, Victor Markowitz, Philip Hugenholtz, Nikos C. Kyrpides, Hans-Peter Klenk, Miriam Land. Complete genome sequence of *Oceanithermus profundus* type strain (506^T) *Stand. Genomic Sci.* 4 (2) 210-220

28. Cliff Han, **Romano Mwirichia**, Olga Chertkov, Brittany Held, AllaLapidus, Matt Nolan, Susan Lucas, Nancy Hammon, Shweta Deshpande, Jan-Fang Cheng, Roxanne Tapia, Lynne Goodwin, Sam Pitluck, Marcel Huntemann, KonstantinosLiolios, Natalia Ivanova, IoannaPagani, KonstantinosMavromatis, Galina Ovchinnikova, Amrita Pati, Amy Chen, Krishna Palaniappan, Miriam Land, Loren Hauser, EvelyneBrambilla, Manfred Rohde, Stefan Spring, Johannes Sikorski, Markus Göker, TanjaWoyke, James Bristow, Jonathan A. Eisen, Victor Markowitz, Philip Hugenholtz, Nikos C. Kyrpides, Hans-Peter Klenk, John C. Detter. 2011. Complete genome sequence of *Syntrophobotulusglycolicus* type strain (FIGlyR^T) *Stand. Genomic Sci.* 4 (3):371-380 Doi:10.4056/sigs.2004648
29. TanjaWoyke, Olga Chertkov, AllaLapidus, Matt Nolan, Susan Lucas, TijanaGlavina Del Rio, Hope Tice, Jan-Fang Cheng, Roxanne Tapia, Cliff Han, Lynne Goodwin, Sam Pitluck, KonstantinosLiolios, IoannaPagani, Natalia Ivanova, Marcel Huntemann, KonstantinosMavromatis, Natalia Mikhailova, Amrita Pati, Amy Chen, Krishna Palaniappan, Miriam Land, Loren Hauser, Evelyne-Marie Brambilla, Manfred Rohde, **Romano Mwirichia**, Johannes Sikorski, Brian J. Tindall, Markus Göker, James Bristow, Jonathan A. Eisen, Victor Markowitz, Philip Hugenholtz, Hans-Peter Klenk, Nikos C. Kyrpides. Complete genome sequence of the gliding freshwater bacterium *Fluviicolataffensis* type strain (RW262^T) *Stand. Genomic Sci.* 2011 5:1
30. Markus Göker, HajnalkaDaligault, **Romano Mwirichia**, AllaLapidus, Susan Lucas, Shweta Deshpande, IoannaPagani, Roxanne Tapia, Jan-Fang Cheng, Lynne Goodwin, Sam Pitluck, KonstantinosLiolios, Natalia Ivanova, KonstantinosMavromatis, Natalia Mikhailova, Amrita Pati, Amy Chen, Krishna Palaniappan, Cliff Han, Miriam Land, Loren Hauser, Chongle Pan, Evelyne-Marie Brambilla, Manfred Rohde, Stefan Spring, Johannes Sikorski, Reinhard Wirth, John C. Detter, TanjaWoyke, James Bristow, Jonathan A. Eisen, Victor Markowitz, Philip Hugenholtz, Nikos C. Kyrpides, Hans-Peter Klenk. Complete genome sequence of the thermophilic sulfur-reducer *Desulfurobacteriumthermolithotrophum* type strain (BSA^T) from a deep-sea hydrothermal vent. *Stand. Genomic Sci.* 2011 5:3
31. H Atuncha, K Monjero, L Ateya, I Mbogo, **R Mwirichia**, R Amata, E M Ateka (2011). Mitochondrial DNA variation of *Bemisiatabaci* (Gennadius) (*Hemiptera: aleyrodidae*) infesting cassava in Kenya. *Proceedings of 2011 JKUAT scientific technological and industrialization conference.*
32. D Anyika, H Boga, **R Mwirichia** (2011). Characterisation of various *Bacillus thuringiensis* strains having larvicidal activity on *Chilopartellus* first-instar larvae, after culture on cost-effective medium, in Kenya. *Proceedings of 2011 JKUAT scientific technological and industrialization conference.*

33. Mwirichia, R., Muigai, A.W., Cousin, S., Boga H.I. and Stackebrandt, E. (2011): Bacterial Diversity in the Haloalkaline Lake Elmenteita in Kenya *Current Microbiology* (2010) 62:209–221 DOI:10.1007/s00284-010-9692-4).
34. Mwirichia, R., Muigai, A.W., Cousin, S., Boga H.I. and Stackebrandt, E. (2010): Archaeal diversity in the haloalkaline Lake Elmenteita in Kenya *Current Microbiology* 60: 47-52.
35. Mwirichia, R., Muigai, A.W., Tindall, B., Boga H.I. and Stackebrandt, E. (2010): Isolation and characterization of bacteria from the haloalkaline Lake Elmenteita, Kenya. *Extremophiles* 14, Number 4, 339-348 DOI 10.1007/s00792-010-0311-x
36. Ntabo, R., Boga H.I., Muigai AW and Mwirichia, R. (2010): Isolation and Characterization of Bacteria Isolates from soil feeding termites and soil from Juja and Kakamega forest in Kenya: In: *Proceeding of the 2010 JKUAT scientific conference* 177-191.
37. Mwirichia, R., Nancy, M.B and Hamadi, I. B. (2009): Isolation, Characterization and Identification of *Enterobacteriaceae* from well water in Juja Town in Kenya. *Journal of Tropical Microbiology and Biotechnology* 5:31-36
38. Microbial Diversity of Lake Elmenteita, Kenya, PhD Thesis

Workshops, Trainings, Seminars and Conferences

1. September 27th - 28th, 2018: Trainer in the soda lake "techniques and skills in bio prospecting" workshop Held at SAJOREC, JKUAT, Kenya
2. September 19th - 20th, 2018: *Cooperation with foreign scientists under new ABS regulations*. International Workshop on Access to Genetic Resources, Traditional Knowledge and Benefit Sharing: New legislation and practice on ABS, and their compliance with the Nagoya Protocol, Bremen Germany
3. June 19th to 21st, 2018: Amplicon-based assessment of the Prokaryotic microbial community composition across four Kenyan soda lakes; 5th Humboldt Kolleg, Nanyuki – Kenya.
4. April 5th to 8th, 2016: Microbial dark Matter: opportunities and challenges; 4th Humboldt Kolleg, Naivasha - Kenya
5. March 7th to 11th 2016: ProGrant training on grant proposal writing organized by DAAD, Karatina University and University of Cologne
6. July 17th to 20th, 2012: Microbial Ecology of the Kenyan Soda lakes: 3rd Humboldt Kolleg, Voi-Kenya
7. December 9th to 11th, 2015: CIRCLE Institutional Strengthening Programme workshop, African Academy of Sciences, Kenya
8. May 16th to 17th 2015: CIRCLE training of trainers' workshop, Johannesburg, South Africa.
9. January 20th to 21st, 2012: Genetic Resources and Traditional Knowledge: Research Cooperation and Facilitated Access, Göttingen, Germany.
10. May 31st - June 1st. 2011: GBRCN meeting: Partnerships for Sustainable Solutions Workshop Exploratory and Preparatory Measures- Bonn/Germany
11. February 21st - 25th, 2011: Isolation and characterisation of local biodiversity GBRCN Seminar in Kenya, Nairobi
12. December 20th - Nov 4th, 2010: Meeting and Training towards the Establishment of a BRC in Kenya, DSMZ Germany.
13. November 29th -30th, 2010: The Kenyan Biological Resource Centre- A long Journey: Capacity building in Africa – a Kenyan experience, Joint human & microbial domain GBRCN pilot phase meeting. Federal Ministry of Science and Research Freyung 3, 2nd Floor, A-1010 Vienna
14. October 3rd to 8th, 2010: Third Bio-prospecting strategy developing workshop, Sai Rock hotel, Mombasa Kenya.

15. April 21st to 25th, 2010: Second Bioprospecting Policy and Strategy meeting, Voi safari Lodge, Voi Kenya
16. September 8th -11th, 2009: Microbial Diversity in Kenya -Current status and the potential
Mukonyi, K. W, & Lusweti, A. M., 2009. *Proceedings of Bioprospecting Experts Brainstorming Workshop* at Lake Bogoria Spa Resort, Baringo, Kenya.
17. April 24th, 2009: Trainer, PhD Proposal Writing workshop. ICIPE Conference Center, Nairobi.
18. January 13th - 15th, 2009. Facilitator for the HINARI/AGORA/OARE (HINAGOA) Training-Of-Trainer National Workshop (AICAD), Nairobi, Kenya

Completed Research Projects (PhD and MSc Students)

S. No.	Student's Name, Research Title and Year of Graduation	Degree
1.	Francis Ireri Ndwiga (HD413-0010/2008) - Characterization and identification of fungi from soda lakes in Kenya (Graduated, 2017).	PhD
2.	Anne Kelly Kambura (BR411-2949/2013) - Metagenomic and Metatranscriptomic analysis of the Microbial communities in Lake Magadi, Kenya (Graduated, 2016).	PhD
3.	Huxley Mae Makonde (BR411-1549/2009)- Isolation and screening of termite microbiome for novel biocatalysts using culture-based and functional metagenomic techniques (Graduated, 2013).	PhD
4.	Wesonga Christopher Opuko (BR311-0322/2009) - Natural products from extremophiles: isolation, cloning and characterization of phytoene desaturase gene (<i>crt1</i>) from <i>Paracoccus sp. Bog</i> (Graduated, 2016).	MSc
5.	Eunice Mulango (BR311-5259/2014) Isolation and characterization of extremophilic bacteria from the hot springs of lake Magadi, Kenya (Graduated, 2019)	MSc
6.	Regina Ronoh Chemutai (SC321-0847/2009) - Assessment of the Actinobacteria and polyketide synthase genes diversity in lake Magadi (Graduated, 2013)	MSc
7.	Francis Machabe Mwatuni (BR311-0020/2005) - Identification and Molecular Characterization of Viruses of Cassava Viral Diseases in Kenya (Graduated, 2013)	MSc
8.	Hellen Kemuma Atuncha (BR311-0012/2008) - Molecular characterization of whiteflies, biological control and mode of transmission of cassava brown streak virus disease (Graduated, 2013).	MSc
9.	Evans Manyara Nyakheri (BR311-0134/2009) - Isolation and characterization of archaea from Lake Magadi, Kenya (Graduated, 2013).	MSc
10.	Daniel Anyika Khwalimwa (BR311-0023/2008) - Growth, sporulation, crystal formulation and toxicity control during culture of <i>Bacillus Thuringiensis</i> in Kenya (Graduated, 2012).	MSc
11.	Samuel Mathu Ndungu (BR311-0951/2009) - Assessment of the potential to improve yields and nitrogen fixation of four legume species in Kenya by using commercial inoculums or native Rhizobial strains (Graduated, 2012).	MSc
12.	Eliud Nalianya Wafula (SC351-0846/2009) - Molecular and culture-based analyses of soil bacteria in small scale tea growing areas of Kenya (Graduated, 2012)	MSc
13.	Japhael Murungi Mbaabu (BR311-0004/2008)- Investigation of antiplasmodial, safety properties and parasite resistance of <i>Clausenianisata</i> and <i>Clutiarobusta</i> in a mouse model (Graduated, 2011).	MSc
14.	Anne Kelly Kambura (BR311)- Isolation, characterization and screening of bacterial isolates from Lake Magadi for bioactive metabolites (Graduated, 2011).	MSc
15.	Odilia Solano Atamba (BR311-0132/2009) - Isolation and characterization of fungi from lake Magadi of the Kenyan rift valley (Graduated, 2011)	MSc
16.	Lily W Simasi (BR311-0009/2007)- Isolation, Characterization and Identification of Alkalithermophiles from the Hot Springs of Lake Bogoria of the Kenyan Rift Valley (Graduated, 2009).	MSc
17.	Denis Kiplimo Diversity of esterase and lipase producing haloalkaliphilic bacteria from lake Magadi, Kenya (Completed, 2019).	MSc

18.	Philemon Orwa - Secondary metabolites and biological control potential of haloalkaliphilic fungi from lake Magadi, Kenya (Completed, 2019).	MSc
19.	Ngetha Edwin Kihagi - Bioprospecting for Cyanophages with biocontrol potential against Lesser Flamingo (<i>Phoenicoparrus minor</i>) intoxicating cyanobacteria in lake Magadi, Kenya (Completed, 2020).	MSc

Ongoing Research Project Supervision (PhD and MSc)

1.	Edward Karanja Nderitu - Microbial Community Diversity and structure within Organic and Conventional Farming systems in in Central Highlands of Kenya (Registered in 2016).	PhD
2.	Daniel Karanja Mutitu - Microbial Biocementation influence on mortar Physico-chemical and Mechanical Properties of Kenyan Made Portland and calcined clay blended cements (Registered 2018).	
3.	Chris Opuko (AGA431/2614/2019) - Molecular and biochemical characterization of fungal isolates from kenyan soda lakes having antagonistic effects to <i>Ralstonia solanacearum</i> and <i>Rhizoctonia solani</i> crop pathogens ((Registered 2019).	PhD
4.	David Njenga - Antimicrobial activity and identification of secondary metabolites from bacteria isolated from lake Magadi in Kenya (Registered 2019).	PhD
5.	Alex Cherutich Kipnyargis - Diversity and function of polysaccharide degrading bacteria in lake Magadi, Kenya (Registered in 2018).	PhD
6.	James Murimi Wachira (B526/1206/2018) - Assessment of different aerobic denitrifying Bacteria in bioremoval of nitrogen from Wastewaters in Lake victoria (Registered 2019).	MSc

Fellowships

- 2019: **Alexander von Humboldt Fellowship:** Research stay for a period of 3 Months accompanied by a Junior research fellow funded by the Alexander von Humboldt Foundation; My host was Prof. Dr. Rolf Daniel, Dept. of Genomic and Applied Microbiology, Georg-August University, Göttingen, Germany.
- 2011: **Georg Foster Postdoctoral Fellowship** from the Alexander von Humboldt Foundation; My host was Prof. Dr. Rolf Daniel, Dept. of Genomic and Applied Microbiology, Georg-August University, Göttingen, Germany.
- 2010: **American Society Microbiology Fellowship for Africa;** My host was Prof. Jo Handelsman, Yale University, USA.
- 2006: **DAAD Scholarship** for PhD studies (Sandwich Model); My host was Prof. Dr. Erko Stackebrandt, Leibniz Institute DSMZ, German Collection of Microorganisms and Cell Cultures, Inhoffenstraße 7B, 38124 Braunschweig, Germany.

Research Funding

- 2019: **Euros 19, 330** from the Alexander von Humboldt Foundation to procure Equipment for Molecular biology.
- 2019: An ASM Ambassador grant of **USD 2,000** from the American Society for Microbiology to co-ordinate activities of the local chapter for the year 2019.
- 2017: **KSh 11,382,774** (ca. Euros 100,825) from the National Research Fund Kenya, for the Project “Bioprospecting for Bioactive metabolites and biological control agents from soil and aquatic habitats in Kenya”.
- 2017: Euros EUR **3,105.55** from DAAD as part of the small equipment programme.
- 2017: An ASM Ambassador grant of USD 3,000 from the American Society for Microbiology to co-ordinate activities of the local chapter for the year 2016.
- 2016: Research Grant of **USD 12,000** from the Third World Academy of Sciences (TWAS) to work on a project titled” Tapping into the microbial dark matter from extreme environments for novel isolates and microbial metabolites with a biotechnological potential”.
- 2016: Research Grant worth **UK Pounds 10,000** from the British Ecological Society to work on a project titled “microbial community ecology and diversity within the hypersaline Lake Magadi)”.
- 2016: Equipment worth **USD 115,505** from Seeding Labs USA to equip our Microbiology laboratory.
- 2016: An ASM Ambassador grant of **USD 5,000** from the American Society for Microbiology to co-ordinate activities of the local chapter for the year 2016.
- 2015: Euros 20,000 from the Alexander von Humboldt Foundation to continue with the research started in Germany. The grant was in form of Equipment for Molecular biology.
- 2015: Euros 2000 from the Alexander von Humboldt Foundation in form of specialist subject-related Books and Literature.

Professional Affiliation

1. Member and the Country Ambassador for Kenya, American Society of Microbiology, 2006
2. Member, Global Lake Ecological Observatory Network (GLEON), 2009
3. Member, International Society for Microbial Ecology, 2013
4. Member, African-German Network of Excellence in Science (AGNES), 2015
5. Member, British Ecological Society, 2016
6. Member, International Federation of Biosafety Associations Certified Professional, 2017

Recognition

- External Examiner, Department of Microbiology, Biotechnology and Biochemistry, Kenyatta University since 2019
- Guest Speaker, OFAB Kenya luncheon during World Environment day on 5th June 2018 at the Laico Regency Hotel, Nairobi
- Reviewer - African-German Network of Excellence in Science (AGNES) proposal in 2018
- External Examiner, Department of Biological Sciences, Karatina University, 2016 to 2019.
- American Society for Microbiology Country Ambassador for Kenya, since January 2016.
- Reviewer for the National Research Fund Institutional strengthening proposals in the Life Sciences category, 17th – 18 May 2016
- Reviewer for the DAAD postgraduate proposals since 2009
- September 27th – 28th 2018: Trainer in the soda lake "techniques and skills in bio prospecting" workshop Held at SAJOREC, JKUAT, Kenya
- April 24th, 2009: Trainer, PhD Proposal Writing workshop. ICIPE Conference Center, Nairobi
- January 13th - 15th, 2009. Facilitator for the HINARI/AGORA/OARE (HINAGOA) Training-Of-Trainer National Workshop (AICAD), Nairobi, Kenya

Referees

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