

PROFESSOR DAVID M. ONYANGO

Department
Maseno University, Kisumu-Busia Road
P.O. Box 333-40105,
Maseno, Kenya

Phone: +254 -722 660 647
Email: dvdonyango7@gmail.com;
donyango@maseno.ac.ke

EDUCATION

Jan 2014 – Jan 2015	Post Doc Research Fellow- School of Health Sciences, Department of Molecular Pharmacology, University of Kwazulu-Natal Westville Campus, Durban South Africa
2004 – 2007	PhD - Cell and Molecular Biology, Maseno University
1999 – 2004	MSc. - Cell and Molecular Biology, Maseno University
1993 – 1998	BSc. - Zoology and Botany (Second class Hon. Upper Div), Moi University

RESEARCH EXPERIENCE

Research Interest

1. Molecular epidemiology and antimicrobial drug resistance in gastroenteritis microbes in human and animals.
2. Molecular mechanisms and regulation of genes.

Current Projects:

1. Molecular application of protein phosphatase 2A in Cyanobacteria microcystin quantification and degradation in water purification systems
2. Molecular epidemiology of microcystin like primary liver cancer among liver cancer patients attending, Jaramogi Oginga Odinga teaching and referral hospital, Kisumu Kenya
3. Association between RAS genes polymorphism and primary liver cancer clinical presentation in liver cancer patients, western Kenya

Dissertations

1. **Onyango, D.,** (2007): Drug susceptibilities and mechanisms of drug resistance among *Salmonella typhimurium* isolates from persons in Western Kenya. PhD thesis (2007) Maseno University.
2. **Onyango, D.,** (2003): Prevalence of Enteric pathogens amongst HIV- positive children in Western Kenya with diarrhoea as a presenting sign. M.Sc thesis (2003). Maseno University.
3. **Onyango, D.,** (1998): Determination of Mosquito species from Malaria regions of Maseno in Western Kenya. 4th year research project. Maseno University.

TEACHING EXPERIENCE

Work Experience

- Jan 2016 – to- May 2018 **Acting. Coordinator** Science Technology and Innovation Park
- Jan 2014- Jan, 2015 **Sabbatical Leave** - School of Health Sciences, Department of Molecular Pharmacology, University of Kwazulu-Natal Westville Campus, Durban South Africa
- Dec 2013 – to date: **Associate Professor** –Cell, Molecular Microbiology and Biotechnology, Department of Zoology, Maseno University
- April 2009 – Dec 2013: **Senior Lecturer**, Department of Zoology, Maseno University
Courses taught: Cell Biology, Molecular Biology (under graduates and postgraduates), Medical Microbiology, Advances and Techniques in Cell and Molecular Biology I& II, Molecular Microbiology of Microbes, Research Issues in Molecular Microbiology, Microbial Genetics among others
- April 2007- March 2009: **Lecturer**, Department of Zoology, Maseno University
Courses taught: Cell Biology, Molecular Biology (under graduates and postgraduates), Medical Microbiology, Advances and Techniques in Cell and Molecular Biology I & II.
- April 2004 – April 2006: **Tutorial Fellow**, Department of Zoology, Maseno University
Courses taught: Cell Biology, Molecular Biology (under graduates and postgraduates), Medical Microbiology, Advances and Techniques in Cell and Molecular Biology I & II.
- Mar 2001 - Apr 2004: **Graduate Assistant**, Department of Zoology & Biomedical Sciences, Maseno University
Courses taught: Developmental Biology, General Parasitology, Biochemistry techniques I,
- July 1998 – Sept 1999: **Field Scientist**, KEMRI/JICA HIV/AIDS Research Project, Kenya Medical Research Institute (KEMRI), Kisumu, K.

Additional Responsibilities

- June 2015- Developed an Undergraduate (B.Sc) Degree program in Biological Laboratory Technology with IT (under review)
- June 2011- To date Developed a MSc Programme in Molecular Microbiology and Biotechnology for Maseno University (taught course: Molecular Microbiology of Microbes, Research Issues in Molecular Microbiology, Microbial Genetics among others)
- Feb 2008 - Apr 2008 Adjunct Lecturer of Genetics (BIOL 446) – Department of Biological Sciences, the University of Eastern Africa, Baraton – Eldoret, Kenya

Consultancy

- 24-30th June 2018 Evaluation of Postgraduate Research Project Proposals for National Research Funds- Kenya (Chairman- Health Section)
- 11-16th June 2018 Evaluation of Multidisciplinary Research Project Proposals for National Research Funds- Kenya (Chairman- Health Section)
- 3rd- 4th March 2017 Chief Judge: 4th Annual Conference on Science Technology & Innovation. The Kisumu National Polytechnic, Kenya
- Feb 2017 – 2020 External Examiner, School of Health Sciences, JaramogiOgingaOdinga University of Science and Technology- Department of Biomedical Sciences

June 2015- 2022	External Examiner, School of Biological and Physical Sciences, Moi University, Eldoret, Kenya- Department of Zoology and Botany
Sept 2015- 2019	External Examiner, School of Biological and Physical Sciences, MasindeMuliro University of Science and Technology, Kenya – Department of Biological Science and Biotechnology
2014	National Commission for Science technology and Innovation- Reviewer – Microbiology and Molecular Biology category
2013	National Commission for Science and Technology – Reviewer- Biological, Molecular Biology and Microbiology category

Reviewer for the following journals

1. Journal of Pharmacology and Toxicology (Editor)
2. International Journal of Virology and Molecular Biology (2012-2014)
3. International Journal of Microbiology Research (2012-2014)
4. International Journal of Cell Biology (2012-2014)
5. International Journal of Advances in Life Sciences (2012-2014)
6. Scientific & Academic Publishing (2012 -2013)
7. Journal of Medicinal Plants Research (2010- 2013)
8. African Journal of Pharmacy and Pharmacology (2010-2013)
9. African Journal of Microbiology Research (2011-2013)
10. African Journal of Agriculture (2011-2013)

HONORS AND AWARDS

Research

1. (2019-2022) Affordable Green Energy from Agricultural Wastes for Improved Community Livelihood (Co-PI) - NRF- \$ 193,000
2. Development and testing of staple-vegetables blends based on neglected and underutilized species for human nutritional sufficiency and functional ecosystem services among households in Western Kenya (Co-PI)- NRF- \$ 198,385
3. (2016/2019)- Molecular application of protein phosphatase 2A in Cyanobacteria microcystin quantification and degradation in water purification systems – PI – NRF- \$ 187,340
4. (2016/2018) - Antimicrobial profile and genetic diversity of *Pseudomonas aeruginosa* isolates among patients at JaramogiOgingaOdinga teaching and referral hospital in western Kenya – Co- PI- NACOSTI - \$ 2,000

5. (2016/2018) - Profiling and pathogenicity of *Ralstoniasolanacearum* of tomato and its control using *Sennadidymobotrya* AND *MoringaOliefera* plant extracts.- Co- PI – NACOSTI - \$2,000
6. (2013/2016 - 2013/2016) Analysis of ER α and ER β haplotypes syndromes in HIV patients treated with protease inhibitors (South African RANDS) NRF- \$ 72,000
7. (2010/2012) An interactive effects of high stocking density and amarantus-enriched feed on growth performance and fatty acids tissue profile in Nile Tilapia (NCST/2012/2013 FY) Co-funding- \$2,500
8. (2012/2014) *Vibrio cholera* diversification and clonal analyses along Lake Victoria Kenya – NCST , Co-funding- \$ 25,000

Academic

- **2014-2016** – Post Doctoral Fellowship – University of Kwazulu Ntala, Durban South Africa
- **Nov 2010**- Marquis Who's Who in the World (VIP No: 35482440)
- **Feb 2006** - 6 month DAAD PhD Research Fellowship award at Otto Von Guericke Universitat Faculty of Medicine Department of Medical Microbiology and Molecular Diagnostic laboratory – Magdeburg Germany.
- **2004** –Maseno University / DAAD Research Scholarship Award – P.hD program.
- **2001**–Maseno University Research Scholarship Award – M.Sc programme.
- **1998** –Maseno University Research Grant Award for Undergraduate research project.

PROFESSIONAL MEMBERSHIP

1. Task Force Member of Novatris Non –Typhoid Vaccine Development. (2009 to date)
2. European Society of Clinical Microbiology and Infectious Diseases (2007 to date)
3. International Brain Research Organization (IBRO) member (2004 –to date)
4. Kenya Society of Microbiology (KSM) member (2003 – to date)
5. DAAD- Africa – beneficiary and alumni (2004 to date).
6. Kenya Society for Cell and Molecular Biology (KESCAMB) founding member

SKILLS AND TRAINING

LEADERSHIP EXPERIENCE

Jan 2016 – to- May 2018 **Acting. Coordinator** Science Technology and Innovation Park
Dec 2013 – to date: **Associate Professor** –Cell, Molecular Microbiology and Biotechnology,
Department of Zoology, Maseno University
April 2006 – 2008 Examination Co-ordinator Department of Zoology

April 2004 – To date Assistant coordinator Cell, Molecular & Biotechnology laboratory, Maseno University
Sept 2011- To date Co-ordinator Molecular Microbiology and Biotechnology Programms and Laboratory

CONFERENCES AND WORKSHOPS

- 2011- Stakeholders workshop on - Arresting lipid oxidation and browning of Sun dried products marketed in western Kenya using low cost fish processing and preservation technologies (29th, March 2011) Maseno Kenya (Sponsored by the National Council for Science and Technology)
- 2011- Stakeholders workshop on - Arresting lipid oxidation and browning of Sun dried products marketed in western Kenya using low cost fish processing and preservation technologies (29th, March 2011) Maseno Kenya (Sponsored by the National Council for Science and Technology)
- 2012 – Ministry of Fisheries – Tilapia Monosex workshop (11th- 12th Oct, 2012) Kisumu, Kenya
- 2012- International conference on UNESCO/DAAD/Alumni conference “water in Africa” in collaboration with Maseno University (1-3 Oct, 2012) (Sponsored by UNESCO/DAAD- EXCEED/ NCST/Maseno University).
- 2013 – Workshop on Scientific paper writing at Kenyatta University. Organized by KDSA/DAAD. (25-26th July, 2013- Kenyatta University) Sponsored by DAAD
- 2013 HIV and AIDS mainstreaming workshop for Maseno University staff (31 May, 2013). Sponsored by Maseno University and Ministry of Health
- 2016 – International Network on Sustainable Water Management :Experts Workshop on Sustainable Use of Water Resources in Kisumu, Kenya. (3rd – 7th July, 2016) (Sponsored by Exceed- Swindon/Technische Universitat Braunschweig/ Maseno University).
- 2017 – National Biosecurity workshop for Kenyan Universities held at Kisumu Hotel, Kenya (21st Sep, 2017). Sponsored by Maseno University/ NACOSTI/ Center for Biosecurity and Bio- Preparedness (CBB), Denmark.
- 2017 – Advances in Sustainable Energy Materials for Africa workshop in Kisumu, Kenya. (14- 15th Nov, 2017) Sponsored by The Royal Society/ The University of Nottingham/University of Yaoundé I/CSIR/UKaid/Maseno University.
- 2018- Holistic Approach to water resources management in Africa 3-8th June 2018 in the University of Yaounde 1,Cameroon (Sponsored by Exceed- Swindon/Technische Universitat Braunschweig/ University of Yaounde 1, Cameroon.

Symposium

1. 5th Annual symposium of the Neglected Tropical Disease Branch (20th Dec, 2011). Organized by the Center for Global Health Research- Kenya Medical Research Institute – Jumuia Hotel- Kisumu Kenya (sponsored by the organizers)

Workshop and Conference attended and presentations

1. **2018** (26-27 April 2018) – DAAD Workshop on "Strengthening Systems and Capacity Graduates Supervision, Examination and Research Publications in the Universities"(Kisumu- Hotel, Sponsored by DAAD and Maseno University)
2. **2018** (3rd – 8th June). Regional Workshop on Holistic Approach to Water Resources Management in Africa, June 3-8, 2016 in Yaounde, Cameroon.
3. **2017** (15-20 May, 2017) Proceedings of the Expert Workshop – Water Security. (Sponsored by DAAD, Exceed, and Federal Ministry for Economic Cooperation and Development)
4. **2011**- 1st Global Forum for Bacterial Infections (3rd -5th October, 2011). New Delhi, India (sponsored by the organizers) (2 poster presentations)
5. **2011**- American Society of Tropical Medicine and hygiene conference (4th -8th Dec, 2011) - Philadelphia USA (sponsored by the organizers/KEMRI-WRP).
6. **2011** – Research proposal writing training workshop organized by Kenya DAAD scholars Association in collaboration with the German Academic Exchange Service (DAAD) and National Council for Science and Technology (NCST), (Sept 16-17), Maseno University, Kenya
7. **2011**- Infection Prevention Network, Kenya (IPNET-Kenya) conference (27-29th Nov, 2011) in Whitesand Hotel, Mombasa – (sponsored by the organizers)
8. **2009**- 2nd International DAAD Alumni Conference on Establishment of the DAAD Alumni Association and Network in Africa (26th – 29th Nov, 2009). Lagos Nigeria (Sponsored by Otto Von Guericke Universitat Magdeburg- Germany- Oral Presentation)
9. **2009** - The Seventh International Symposium on Invasive Salmonellosis Kilifi (25th -28th Jan, 2009) Kenya (Received financial support from WHO, and KEMRI-Welcome Trust) (Poster presentation).
10. **2007** – 25th International Congress of Chemotherapy and 17th European Congress of Clinical Microbiology and Infectious Diseases. Munich/Germany, 31st March-3rd April 2007 (Received financial support partly from Maseno University & European Society of Clinical Microbiology and Infectious Diseases) (Poster presentation).
11. **2005** –IBRO – NIHM African Neuroscience School on “ Hormones and Brain” Training in Rabat Morocco (19th-27th March 2005) (Received financial support from IBRO-NIHM) (Oral presentation)
12. **2004** – International Brain Research Organization (IBRO) School on Molecular Neuropharmacology Training, (31st-Oct -8th Nov, 2004) Nairobi – Kenya. (Received financial support from ISN/IBRO/gsk) (Oral Presentation).
13. **2004** –International Cell Research Organization (ICRO- UNESCO) Training on Molecular and Cell Biology of Marine Invertebrates, (8th Nov, - 22nd, Nov, 2004) Palermo - Italy. (Received financial support partially from Maseno University and ICRO-UNESCO) (Oral Presentation).
14. **2004** - The prevalence of *Cryptosporium parvum* and its relationship to nutrition among HIV- positive children in Western Kenya with diarrhea as a presenting sign. 2nd National Zoological postgraduate student conference. (Self sponsored) (Oral Presentation).

PUBLICATIONS

Publications in peer Reviewed Journals

1. **Onyango, D.**, Aduma, P., (2005). Prevalence of *Cryptosporidium parvum* and its effect on nutrition among HIV positive children in Western Kenya with diarrhoea as a presenting sign. *Journal of Tropical Microbiology and Biotechnology*. 5:15-21.
2. **Onyango, D.**, Machoni, F., Kakai, R., Waindi, E.N., (2008). Multi-drug resistance of *Salmonella enterica* serovars Typhi and Typhimurium isolates from clinical samples at two rural hospitals in western Kenya. *J. Infect Developing Countries* 2008; 2 (2): 106-111
3. **Onyango, D.**, Wandili, S., Kakai, R., Waindi, E.N., (2009). Isolation of *Salmonella* and *Shigella* from fish harvested from Winam Gulf of Lake Victoria, Kenya. *Journal of Infection in Developing Countries*. 3 (2):99-104
4. **Miruka David Onyango**, Beniam Ghebremedhin, Eliud Nyandago Waindi, Rose Kakai, Wolfgang Rabsch, Erhard Tietze, Wolfgang König, and Brigitte König (2009). Phenotypic and genotypic analysis of clinical isolates *Salmonella* serovar *Typhimurium* in western Kenya. *Journal of Infection in Developing Countries*. 3 (9) : 685 – 694
5. Angienda P.O., **Onyango D. M.**, David Jack Hill (2010). Potential application of plant essential oils at sub-lethal concentrations under extrinsic conditions that enhance their antimicrobial effectiveness against pathogenic bacteria. *Africa Journal of Microbiological Research*- 4 (16): 1678-1684 (Publishers: Academic Journals. ISSN 1996-0808)
6. **Onyango Miruka David** and Angienda P.O. (2010) Epidemiology of waterborne and diarrheal diseases among children aged 6-36 months in Busia –western Kenya. *International Journal of Biology and Biomedical Science*- 6: (2): 92-99 (Publisher: World Academy of Science, Engineering and Technology)
7. **Onyango Miruka David**, Kakai Rose, Eliud Nyandago Waindi, Ghebremedhin B, König Wolfgang and König Brigitte (2010). Integron-plasmid mediated antibiotic resistance and virulence factors in clinical *Salmonella enteric* serovars in rural western Kenya. *African Journal of Pharmacy and pharmacology*. 4 (7): 490-497 (Publisher; Academic Journals ISSN 1996-0816)
8. Jackson H.O. Onyuka, Rose Kakai, **David M. Onyango**, Peter F. Arama, John Gichuki, and Ayub V. O. Ofula (2011). Prevalence and antimicrobial susceptibility patterns of Enteric bacteria isolated from water and fish in Lake Victoria basin of western Kenya. *International Journal of Microbiological Research- World Academy of Science, Engineering and Technology*. 75: 762-769
9. **Onyango, D.**, Kakai R, and Waindi E.N (2011). Tetracycline Efflux pump in *Salmonella enterica* serovar isolated from diarrhea patients in Western Kenya. *Iranian Journal of Clinical Infectious Diseases*- 6 (1) 24-30.
10. Wandili S. Awuor, **Onyango D. Miruka** and Waindi N. Eliud (2011). Characterization of *Salmonella* isolated from Nile Tilapia (*Oreochromis niloticus*) along Lake Victoria beaches in Western Kenya. *International Journal of Microbiology – World Academy of Science, Engineering and Technology* 80: 1394-1399

11. Onduso Calvin Omar, Okoth Patrick Kirsteen, **Onyango David M.**, Sifuna Anthony and Wakaanya Annette O (2013). Molecular clustering of microbial flora and Bacterial degradation of textile dyes by isolates from contaminated soils. *Elixir Bio Tech.* 54 (2013) 12452-12459
12. Wandili S.A, **Onyango D.M** and Waindi E.N (2013). Characterization and antimicrobial susceptibility patterns of clinical salmonella isolates from Nandi County of rift valley, Kenya. *Elixir Appl. Zoology* 59 (2013) 15816-15821
13. Violet M. Ndeda, Ben O. Aketch & **David M. Onyango** (2013). Effect of Diplostomum species on Length – Weight relationship of farmed Nile tilapia in Kibos area, Kisumu City, Kenya. *Fisheries and aquaculture journal*, Vol. 2013: 11 pages, Artical ID: FAJ-60
14. Violet M. Ndeda, Dickson O. Owiti, Ben O. Aketch, **David M. Onyango** (2013). Genetic Relatedness of Diplostomum species (Digenea: Diplostomidae) Infesting Nile Tilapia (*Oreochromis niloticus* L.) in western Kenya. *Open Journal of Applied Science*, 2013. doi: 104236/ojapps2013.
15. Sifuna Anthony Wawire, **Onyango David Miruka**, Namuyenga Nelson, Ayub Ofulla (2013). Using phenotypic based approaches to compare *Escherichia coli* isolates from human, livestock, fish and environmental sources within the Lake Victoria basin of Kenya. *African Journal of Microbiology Research* Vol. 7(42) , pp. 4961-4967, October 2013. DOI: 10.5897/AJMR2013.5840 ISSN 1996-0808
16. Violet Ndeda , Dickson Owiti, Millicent Ndong'a, **David Onyango** (2013). Occurrence and effect of Diplostomum parasites in cultured *Oreochromis niloticus* (L.) and distribution in vector snails within Kisumu City, western Kenya. *Ecohydrology & Hydrobiology* 13 (2013) 253–260
17. **David Onyango Miruka**, James Ochieng Ochieng, Jeremiah Wafula Were, Eliud Nyandago Waindi (2013). Microbial assessment of selected earthen fish ponds in western Kenya. *Ecohydrology & Hydrobiology* 13 (2013) 261–266
18. Sifuna Anthony Wawire, **Onyango David Miruka**, Namuyenga Nelson, Ayub Ofulla (2013). Antimicrobial susceptibility patterns of Enterobacteriaceae isolated from domesticated animals and the environment in Lake Victoria, Kenya. *Ecohydrology & Hydrobiology* 13 (2013)
19. Chrispin B. O. Kowenje and **David M. Onyango** (2014). Natural Zeolites as Catalysts for Biofuel Production. Book Chapter. *Energy Vol. 7: Bioenergy*. 728.
20. **Onyango M. David**, Violet M. Ndeda, Sarah A. Wandili, Sifuna A. Wabwire, Philip Ochieng (2014). Antimicrobial profile analysis of *Salmonella choleraesuis* from free-range swine within Kakamega fish market in Western Kenya. *J Infect Dev Ctries*; 8(11):1381-1390. doi:10.3855/jidc.3861
21. **David M. Onyango**, Job Nyirima, Tonny Busisa Sote, Anthony Wawire Sifuna, Nelson Namuyenga, Petronila Otuya, Rosemary Owigar, Chrispin Kowenje, Andrew Oduor and Henry Lung'aya (2015). Evaluation of the effectiveness of traditional *Rastrineobola argentea* sundrying process practiced along the shores of Lake Victoria, Kenya. *Food and Public Health*. 5 (3): 61-69. DOI:10.5923/j.fph.20150503.01
22. Antony Otengo Otinga, **David Miruka Onyango**, Dickson Otieno Owiti, Lawrence Onyango Arot Manguro (2015). Efficacy of synergized and non-synergized *Tagetes minuta* methanol extract in controlling *Periplaneta americana* within households. *Journal of Entomological Research*; 39(3):203. DOI:10.5958/0974-4576.2015.00020.1
23. Aswani Susan Ayitso, **David Miruka Onyango**, Samuel Otieno Wagai (2015). Antimicrobial activities of microorganisms obtained from the gut of *Macrotermes michaelseni* in Maseno, Kenya. *Journal of Applied Biology and Biotechnology*. 3 (06): 048-052.

24. Roselida Achieng Owuor, **David M. Onyango**, Eliud, N. Waindi (2016). Pathogenic vibrio strains isolated from human stool and water samples from Migori, Nyando, Sondu-Miriu, Bondo and Yala in Western Kenya. *Journal of Microbiology and Infectious Diseases*. 6; (1); 1-7
25. Aswani Susan Aytso and **David Miruka Onyango** (2016). Isolation and Identification by morphological and biochemical methods of antibiotics producing microorganisms from the gut of *Macrotermes michaelseni* in Maseno Kenya. *Journal of Applied Biology and Biotechnology*. 4; (1): 027-033
26. Collins Kibenei Kipkorir, Philip Bett, Patrick O. Onyango, **David Miruka Onyango**, Cyrus Ayieko, Paul Oyieng Ang'ienda (2016). Antimicrobial resistance patterns, genetic basis and prevalence of pathogenic *Escherichia coli* circulating within Trans-Nzoia County, Kenya. *JMID*: 6 (3): 107-112JMID doi: 10.5799/ahinjs.02.2016.03.0227
28. Alfred N. Murunga, **David O. Miruka**, Christine Driver, Fezile S. Nkomo, Snazo Z. Z. Cobongela, Peter M. O. Owira (2016). Grapefruit derived flavonoid Naringin improves ketoacidosis and Lipid Peroxidation in Type 1 Diabetetes rat model. *PLOS ONE* 11(4):e013241.doi:10.1371/journal.pone.0153241. 1-16.
29. Stephen Otieno, Chrispin O. Kowenje, Audry Okoyo, **David M. Onyango**, Kelvin O. Amisi and Kelvin M. Nzioka (2017). Optimizing production of biodiesel catalyzed by chemically tuned natural Zeolites. Elsevier. *Materials Today: Proceeding*.
30. **David M. Onyango**, Chrispin Kowenje, Cyrus Ayieko, Patrick Onyango (2017). Phytoremediation of polluted water using water hyacinth (*Eichnornia crassipes*) as a purifier and energy source: A molecular perspective. (Accepted in the workshop book proceedings Published by Cuvilliere Publisher in Göttingen ISBN 978-3-7369-9588-8)
31. Antimicrobial profile and genetic diversity of *Pseudomonas aeruginosa* isolates among patients at JaramogiOgingaOdinga teaching and referral hospital in western Kenya **Published Books**
 1. **David Onyango** . Drug susceptibilities and mechanisms in *Salmonella typhimurium*. By, Lambert Academic Publishers (LAP- ISBN 978-3-8383-9243-9); 2010
 2. **David Onyango**. Basic Laboratory methods in Microbiology. Lambert Academic Publishers (LAP- 978-3-8383-9810-5); 2010

Book Chapter (s)

1. **David M. Onyango** and Chrispin Kowenje (2015). Water hyacinth (*Eichnornia crassipes*) as alternative energy source: A molecular perspective Review. *Energy Technology and Utilization in Africa: Challenges and Successes*. (ICSU- Sustainable Energy Book)
2. Chrispin B. O. Kowenje and **David M. Onyango** (2014). Natural Zeolites as Catalysis for biofuel production. Book Chapter. *Energy Vol 7: Bioenergy* 728

Policy Briefs

1. **Onyango DM**, Orina PS, Ramkat RC., Kowenje C., Githukia CM., Lusweti D., Miruka JB and Lungayia HBO (2018). Microcystin in fish in Lake Victoria, Kenya Policy Brief : Status, Trends, Challenges and Future Outlook 001/2019. Sponsored by NRF.

Published Reports

1. Wandi EN., **Onyango DM** and Angienda PO (2011). Adaptation and adoption of monosex fish technology for fish farming of tilapia for poverty alleviation and food security in rural communities in Kenya (Ref NCST/5/003/293)
2. **Onyango DM.**, Kowenje BO., Oduor AO., Otuya PA., Owigar RA., Lung'ayia HBO., and Wawire SA (2012). Review of existing fish processing and preservation technologies in western Kenya (NCST/5/003/374)
3. **Onyango M.D.**, Lusweti D, Orina P ., Ramkat R., Kowenje C., Muthoni C., Babu, M.J., Lungayia H (2019). Molecular application of protein phosphatase 2A in Cyanobacteria microcystin quantification and degradation in water purification systems (NRF Field Technical Report)

Manuscripts submitted/ in process

REVIEW OF THE CURRENT STATE OF KNOWLEDGE AND THE

1. **David M. Onyango**, Paul S. Orina, Rose C. Ramkat, Chrispine Kowenje, Cecilia M. Githukia, Dorcas Lusweti, Henry B.O. Lungaiya (2019). Review of the current state of Knowledge and the impact of Microcystin in Fish in Lake Victoria (Submitted to Journal of Lakes and Reservoirs)
2. Kowenje C., **Onyango D.M.**, Sifuna A. W., Otuya P., Owigar R., Lungayi H and Oduor A. O (2019) Effects of Temperature and Humidity and Effectiveness of some selected Antioxidants on Lipid Oxidation of Fresh Nile tilapia (*Oreochromis niloticus* L.) of Lake Victoria, Kenya (S. Africa Journal of Chemistry)
3. **Onyango DM**, Ayieko C., Kipkorir CK., Kakai R (2019). Safety and hygiene of street vended foods sold in Kisumu country, western Kenya. A public Health concern. Journal of Pharmacology and Toxicology (Under Review).
4. Lungayia H, **Onyango D**, Sifuna A. W., Otuya P., Owigar R., Kowenje C., Oduor A. (2018). Water quality assessment and its impact within fish landing beaches of Lake Victoria, Kenya (In Submission Process)
5. **David Miruka Onyango.**, Henry, Lungayia., Anthony W. Sifuna., Petronila, Otuya., Rosemary A. Owigar., Chrispin B. Kowenje and Andrew Oduor (2018). Water quality of selected fishing beaches of Lake Victoria in Kenya (Submitted to Exceed workshop book proceedings Published by Cuvilliere Publisher in Göttingen) D
6. **David M. Onyango**, Paul O. Angienda, Patrick O. Onyango, **David M. Onyango** (2018). Antimicrobial resistance profiles of Escheria coli isolates from human and black Rhinoceros in Lambwe Valley, Kenya (Under Review) K

Abstracts in conference proceedings (Oral Presentation) and Manuscripts

1. **David Miruka Onyango**, Jeremiah Wafula Were, James Ochieng Ochieng, Eliud N. Waindi (2012) Microbial Assessment of Selected Earthen Fish Ponds in Maseno and it's Environs, Western Kenya (Moi University, 8th Annual International Conference)

2. Ndeda M. Violet, Owiti O. Dickson, Ndong'a F. Millicent and **Onyango M. David** (2012) *Diplostomum* spp. Incidence in cultured *Oreochromis niloticus* L. in Kibos area, Kisumu County (UNESCO/DAAD-Alumni Conference "Water in Africa" on "Sustainable Water Management in African Countries)
3. Wandili S.A., **Onyango D.M.**, Waindi E.N (2012) Prevalence and antimicrobial resistance profile of *Salmonella* isolates from Nandi central of Rift Valley, Kenya (UNESCO/DAAD-Alumni Conference "Water in Africa" on "Sustainable Water Management in African Countries)
4. Sifuna A.W, **Onyango D. M.**, Namuyenga N, Ofulla A (2012) Antimicrobial susceptibility patterns of Enterobacteriaceae isolated from domesticated animals and the environment along Lake Victoria : Kenya (UNESCO/DAAD-Alumni Conference "Water in Africa" on "Sustainable Water Management in African Countries)
5. **Onyango D.M.** (2012) Multidrug resistance gene mechanisms in *Salmonella enterica* serovar isolated from porcine fish market in Kakamega municipality Western Kenya: Kenya (UNESCO/DAAD-Alumni Conference "Water in Africa" on "Sustainable Water Management in African Countries) Lake Victoria
6. **David M. Onyango**, Chrispin Kowenje, Cyrus Ayieko, Patrick Onyango (2017). Phytoremediation of polluted water using water hyacinth (*Eichhornia crassipes*) as a purifier and energy source: A molecular perspective. (Accepted in the workshop book proceedings Published by Cuvilliere Publisher in Göttingen ISBN 978-3-7369-9588-8)