

| BIOGRAPHICAL SKETCH | | | |
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| NAME Francis Jackim Mulaa, Ph.D. | | POSITION TITLE Associate Professor of Biochemistry Department of Biochemistry | |
| EDUCATION/TRAINING | | | |
| INSTITUTION AND LOCATION | DEGREE (if applicable) | YEAR(s) | FIELD OF STUDY |
| Donetsk State University, USSR | M.Sc. | 1983 | Neuroendocrinology and Metabolism |
| University of Nairobi | M.Sc. | 1986 | Neuroendocrinology and Metabolism |
| Obafemi Awolowo University Ile-Ife, Nigeria | Ph.D. | 1990 | Downstream processing and protein chemistry |

A. Positions and Honors

Professional Appointments

- 2006-present Associate Professor, Department of Biochemistry, University of Nairobi, Kenya
 2002 – 2006 Senior Lecturer, Department of Biochemistry, University of Nairobi, Kenya.
 1990 – 2002 Lecturer, Department of Biochemistry, University of Nairobi, Kenya.
 1986 – 1990 Tutorial Fellow, Department of Biochemistry, University of Nairobi, Kenya.
 1983 – 1984 Teacher Kenyatta High School, Mwatate
 1986 Aga Khan Academy, Nairobi

Selected Honors

- 1977 Kenya Government – USSR Cultural exchange scholarship to pursue M.Sc Degree in USSR
 1998 UNESCO scholarship to undertake a six month training course and research in Environmental Biotechnology at the German Centre for Biotechnology (GBF), Braunschweig Germany
 2000 German Ministry of Education and Research scholarship to pursue Research in Molecular and Environmental Biotechnology German Centre for Biotechnology (GBF), Braunschweig Germany
 2000 Awarded certificate for most resourceful Scientist, College of Agriculture and Veterinary Sciences
 2001 International Institute for Insect Physiology and Ecology (ICIPE). Conduct research on bioactive compounds from extremophiles from the Rift Valley soda lakes. A bionet Africa project in collaboration with ICIPE and World Laboratory. Use of HTS, 16s DNA and bioinformatics for microbial identification and drug discovery
 2002 Faculty Training Fellowship to International Centre Insect Physiology and Ecology by Biotechnology African Research Network Faculty in Biotechnology
 2005 European Union Grant to African- European joint Bioinformatics Conference in Agadir, Morocco, and to present paper of development of optical biosensors for pesticide diagnosis
 2005 French Government Fellowship to attend a Bioinformatics conference of the Association of French Bioinformatics society in Lyon France
 2006 Honored at the University of Nairobi, 37th Graduation Ceremony as the researcher with the highest grant awards between 2002 -2006

B. Educational and Institutional Experience

Selected Teaching & Mentoring

- 1990-present *Department of Biochemistry*--Lecturer in: Combined MB.ChB I, BDS I and B.Pharm I, including Metabolism, Lipids, Nucleic Acids, Carbohydrate and Enzyme Assays
Agriculture and Veterinary Medicine
BSC II, III and BSC IV—including Forensic Science, Metabolism, Protein Biochemistry, Molecular Immunology, Biochemical techniques and Instrumentation, Biotechnology and Genetic Engineering
Master of Science in Biotechnology and Bioinformatics—including Applied Microbiology, Molecular Biology and Genetic Engineering, Applied Bioinformatics, Genomics and Proteomics

- 2006-present Steering Committee Member European Malaria Postgraduate School (PhD Capacity Program in Malaria Pathology, Antimalarial drug development, and Malaria parasitology)
- 2006-present Steering Committee Member for the Establishment and of University of Nairobi, Postgraduate Training School in Biotechnology and Bioinformatics (CEBIB).
- 2006-present Board Member of the African Biosciences Centre
- 2003-present Steering Committee Member of the East African Programme and Research Network for Biotechnology, Biosafety and Biotechnology Policy Development.
- 2002-present Member to Kenya National Council for Science and Technology, Research Committee
- 2002-present Executive Officer Clinical and Industrial Biochemistry Consultancy Unit.

Selected International Activities

- 1993 Invited by management Pharmacia Biotech, USA to discuss development of molecular biology enzymes from extremophilic microorganisms from Kenyan Soda Lakes and Hot Springs
- 2001 Invited by management "Proteus" <http://www.proteus.fr> (France), to jointly develop extremophilic microorganisms from Kenyan Soda Lakes and Hot Springs
- 2005-present Steering Committee, European Commission Project Development of New drugs for the Treatment of Malaria
- 2006 Independent expert, WHO Special Program on Tropical Diseases Research Program
- 2006 Independent expert, European Commission FP6 Program on Poverty Diseases Research

C. Selected Relevant Publications (from > 29)

- Kevin Raymond Oluoch, Ulrika Wilander, Maria Margareta Andersson, Francis J. Mulaa, Bo Mattiasson, and Rajni Hatti-Kaul.(2006). Hydrogen peroxide degradation by immobilized cells of alkaliphilic *Bacillus halodurans*. *Biocatalysis and Biotransformation*, 24. 3., 215-222
- Laila U Abubakar L. U., Bulimo W. D., Mulaa. F.J, and Ellie O Osir (2006). Molecular characterization of a tsetse fly midgut proteolytic lectin that mediates differentiation of African trypanosomes. . *Insect Biochemistry and Molecular Biology*. 36 (4).
- Ochieng, Washington, Mulaa, Francis J, Ogoyi, Dorington, Ogola, Simon, Musoke, Rachel, Otsyula, Moses (2006). Viral load, CD4⁺ T-lymphocyte counts and antibody titres in HIV-1 infected untreated children in kenya; implication for immunodeficiency and aids progression. *African J. Health Sciences* 6, 3-12.
- Hashim SO, Delgado O, Martinez A, Hatti-Kaul R, Mulaa FJ and Mattiasson (2005). B. Alkaline active maltohexaose forming α -amylase from *Bacillus halodurans* LBK 34. *Enzyme and Microbial Technology* 36: 139-146.
- Hashim SO, Hatti-Kaul R, Andersson M, Mulaa FJ and Mattiasson B (2005). Differential scanning calorimetric studies of a *Bacillus halodurans* alpha-amylase. *Biochim Biophys Acta*. May 25;1723(1-3):184-91.
- Johnson K. Kinyua, Edward K. Nguu, Francis Mulaa and Joseph M. Ndung'u (2005.) Immunization of rabbits with *Glossina pallidipes* tsetse fly midgut proteins: Effects on the fly and trypanosome transmission. *Vaccine*, Volume 23, Issue 29, 31 May Pages 3824-3828.
- Suhaila O. Hashim, Osvaldo Delgado¹, Rajni Hatti-Kaul¹, Francis J. Mulaa & Bo Mattiasson (2004). Starch hydrolysing *Bacillus halodurans* isolates from a Kenyan soda lake. *Biotechnology Letters* 26: 823–828.
- Baliraine FN, Bonizzoni M, Osir EO, Lux SA, Mulaa F.J, Zheng L, Gomulski LM, Gasperi G, Malacrida AR (2003) Comparative analysis of microsatellite loci in four fruit fly species of the genus *Ceratitidis* (Diptera: Tephritidae). *Bulletin of Entomological Research* 93, 1–10
- Mulaa F (2003). Introduction to bioinformatics. Report of the first international course on strategic planning for parasite control. Eastern and South Africa Centre of International Parasite control (ESACIPAC). (2003).P 56- 58.
- Baliraine F.N, Osir.E.O, Obuya S.B, and Mulaa, F.J (2001). Protein polymorphism in two populations of the brown ear tick, *Rhipicephalus Appendiculatus* Neumann (Acari: Ixodidae). *Insect Sci.Applic*.Vol.20.(3), 227-231.
- Pina Sallicandro, Maria Grazia Paglia, Suhaila Omar Hashim, Francesco Silvestrini, Leonardo Picci, Marco Gentile, Francis Mulaa and Pietro Alano (2000). Repetitive sequences upstream the pfg27/25 gene determine frequent polymorphism in this subtelomeric locus in laboratory and natural lines of *Plasmodium falciparum*. *Mol. Biochem. Parasitol.* Oct 110 (2): 247-257.
- Khan B., Omar S., Kanyara J.N., Warren-Perry M., Nyalwidhe J., Peterson D.S., Wellems. T.,Kaniaru S., Gitonga J., Mulaa F.J., and Koech D.K (1997).Antifolate drug resistance and point mutations in *Plasmodium falciparum* in Kenya. *Trans Trop Med and Hyg* 91: 456-460.