

## CURRICULUM VITAE

### **NAME: PROF. JACQUES MUTURI KABARU**

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**Nationality:** Kenyan, ID No:6745036, Passport No: A950940, PIN No:A001122063Y  
**Marital Status:** Married  
**Date of Birth:** 21/10/59

### **1. EDUCATIONAL BACKGROUND**

**1<sup>st</sup> December, 1997:** Awarded Ph.D. (Zoology) (Nairobi).  
**21<sup>st</sup> November, 1988:** Awarded M.Sc. (Biochemistry) (Nairobi).  
**7<sup>th</sup> December, 1983:** Awarded B.Sc. (Hons) (Biochem/Zoo/Bot) (Nairobi).

### **2. AREAS OF EXPERTISE**

I have considerable expertise with regard to teaching and research in the areas of Zoology, Animal Physiology, Laboratory techniques, Toxicology, Biochemistry, Botanicals, Herbal Medicines and Insecticides. I conduct OECD standard scientific studies on the Toxicity and Eco-toxicity of pest control products for the registration of these products in Kenya by the Pest Control Products Board of Kenya (PCPB). I am a versatile team player with experience chairing academic, administrative boards and committees.

### **3. WORKING EXPERIENCE**

Twenty Six years teaching Biology and Biochemistry at the School of Biological Sciences, University of Nairobi.

- **28<sup>th</sup> September, 2018 to date:** HEAD, PHYSIOLOGY AND BIOCHEMISTRY THEMATIC AREA.
- **20<sup>th</sup> June, 2014 to date:** ASSOCIATE PROFESSOR, SCHOOL OF BIOLOGICAL SCIENCES.
- **23<sup>rd</sup> Dec., 2013 to 3<sup>rd</sup> Jan., 2014:** Acting Director, School of Biological Sciences.
- **3<sup>0th</sup> July. 2002 to date:** SENIOR LECTURER, SCHOOL OF BIOLOGICAL SCIENCES.
- **5<sup>th</sup> April, 2006 to date:** HEAD, BIOLOGICAL NATURAL PRODUCTS THEMATIC AREA.
- **1<sup>st</sup> April 2012 to 12<sup>th</sup> June 2013:** External Examiner, Mount Kenya University.
- **2008 to date:** Principal Investigator, Toxicological and Eco-toxicological Studies.
- **19<sup>th</sup> June, 2006 to 20<sup>th</sup> June. 2006:** Acting Director, School of Biological Sciences.
- **6<sup>th</sup> Dec. 2002 to 14<sup>th</sup> Jan. 2003:** Acting Chairman Department of Zoology.
- **19<sup>th</sup> Aug. 2002 to 4<sup>th</sup> Oct. 2002:** Acting Chairman Department of Zoology.
- **Aug, 1992 to 29<sup>th</sup> July, 2002:** LECTURER, DEPARTMENT OF ZOOLOGY.
- **1988-1992:** Tutorial Fellow, Department of Zoology, University of Nairobi.
- **1983-1984:**Technologist at the International Laboratory for Research on Animal Diseases (ILRAD), Nairobi, Kenya.

### **4. OTHER RESPONSIBILITIES IN THE UNIVERSITY OF NAIROBI**

- **19<sup>th</sup> Feb, 2015 To date:** Member, UoN Nairobi Innovation week committee.
- **11<sup>th</sup> July, 2014 to date:** Chairman, School of Biological Sciences, Procurement Inspection and Acceptance Committee.

- **Aug. 2001 to date:** Coordinator, Animal House and Insectary.
- **2012 to date:** Member, SBS Strategic Plan committee.
- **2012 to date:** Member CB&PS Fish pond committee.
- **22<sup>nd</sup> March 2006 to 12<sup>th</sup> June 2007:** Chairman, SBS Postgraduate Studies Committee.
- **Aug. 2001 to 22<sup>nd</sup> March 2006:** Coordinator, Physiology and Cell Biology.
- Coordinator, Zoology Department Postgraduate Studies Committee
- Departmental Representative, Faculty Postgraduate Studies Committee.

## **5. SUPERVISION OF POSTGRADUATE RESEARCH PROJECTS/THESES**

### **(A) COMPLETED- Ph.D. (4)**

1. **Wilkinson Thuku Mutahi- Ph.D** Thesis entitled: "Drug resistance in *Schistosoma mansoni* in Kenya" (**Degree awarded, UoN, 2004**).
2. **Addis Teshome Kebede- (Ph.D)**. Thesis entitled: "Diversity in structure, composition and properties of silk from Africanwild silkmoths". (**Degree awarded, UoN, 2012**).
3. **Egonyu James Peter- (Ph.D)** Thesis entitled: "Morphology, Biology and Semiochemical Mediated Behaviour of the Coreid Bug *Pseudothrips Wayi* Brown 1955, a Major Pest of Cashew in East Africa" (**Degree awarded, UoN, 2013**).
4. **Bancy N. Muruga. Ph.D** Thesis entitled: "A study of the effects of cyanophages on the growth patterns of cyanobacteria in Lake Magadi Kenya". (**Degree awarded, UoN, 2015**).

### **(B) COMPLETED- M.Sc. (8)**

1. **Amos Mbugua- MSc** Thesis entitled: "Isolation and characterization of a *Trypanosoma congolense* gene encoding an antigen recognized by infection serum from cape buffalo" (**Degree awarded, UoN , 2001**).
2. **Kenneth Ogila- MSc** Thesis entitled:"Studies on the pharmacological potential and toxicological evaluation of the crude extracts of *Asparagus africanus* and *Caesalpinia volkensii*" (**Degree awarded UoN 2001**).
3. **John Tuwei Kiplagat- MSc** Thesis entitled: "*Derris* and *Lonchocarpus* extracts as insecticides" Characterization of active principles" (**Degree awarded, UoN, 2006**).
4. **Koech Peter Kiplagat- MSc** Thesis entitled: "Mosquito repellent activity of neem and ocimum extracts" (**Degree awarded, UoN, 2008**).
5. **Bosire C. Moraa- MSc** Thesis entitled: "A toxicological study of *Milletia usaramensis* stem bark extract on *Aedes aegypti* (Mosquito), *Schistocerca gregaria* (Desert locust) and *Mus musculus* (Mouse)" (**Degree awarded, UoN, 2010**).
6. **Kariuki Samwel Muiruri- MSc** Thesis entitled:" A molecular species authentication tool and the respective variability in Dioscin levels: A case of *Discorea* spp." (**Degree awarded, UoN, 2011**).

7. **Kamau Njeri Loice- MSc** Thesis entitled: "A comparative study of the anti-hypertensive effect of *Aloe secundiflora* (aloe), *Azadirachta indica* (neem) and *Urtica dioica* (stinging nettle) leaf extract syrup on new zealand white male rabbits." (**Degree awarded, UoN, 2012**).
8. **Njoroge Jane Wanjiku - MSc** Thesis entitled: "Comparative study of antihyperglycaemic activity of *Urtica dioica* (stinging nettle), *Azadirachta indica* (neem) and *Aloe secundiflora* (aloe) extracts on rabbits and streptozotocin induced diabetic rats". (**Degree awarded, UoN, 2012**).
9. **Kirugara Evelyn Kagendo - MSc** Thesis entitled: 'Metabolic effects of *Pleurotus ostreatus* (Oyster) and *Agaricus bisporis* (White button) mushroom preparations in alloxan induced diabetic rats". (**Degree awarded, UoN, 2015**).

### **(C) CURRENT SUPERVISION**

#### **(i) Ph.D. PROJECTS (2)**

1. Dorothy Ogony **Ph.D** Proposal entitled: "Investigations in to the biology of *Labeo cylindricus* Peters (Pisces: cyprinidae) and the potential for commercial culture".
2. Murithi Caroline Kathambi **Ph.D** Proposal entitled: "Behavioural, cognitive function and neurobiological changes associated with the use of *Catha Edulis* FORSK (CELASTERACEAE) in swiss albino mice"

#### **(ii) M.Sc. PROJECTS (3)**

1. Mr. Joseph Oduor Ochieng (I56/7907/2005) MSc Proposal entitled: " *Diagnostic Utility Of The ExaVir Drug. An Enzyme Phenotypic Assay For Monitoring Of Phenotypic Resistance Of HIV To Nevirapine*".
2. Githinji Mary Gathigia **MSc** Proposal entitled: " Isolation of Lytic Bacteriophage from Lake Mbogoria".
3. Muthike Kiburi: **MSc** Proposal entitled: "Investigation of the optimum conditions for rearing mealworms; *Tenebrio molitor* (coleopteran *Tenebrionidae*) for protein rich animal feed".

### **6. PUBLICATIONS (26)**

1. Carren M. Bosire, Tsegaye Deyou, **Jacques M. Kabaru**, Dennis M. Kimata, Abiy Yenesew, (**2014**). Larvicidal activities of extracts and rotenoids from *Millettia usaramensis* subspecies on *Aedes aegypti* (Diptera: Culicidae). Journal of Asia pacific Entomology. 17, 531-535.
2. Addis T. Kebede, Suresh K. Raina, **Jacques M. Kabaru**, (**2014**). Structure, Composition and Properties of silk from the African Wild Silkmoth, *Anaphe panda* (Boisduva) (Lepidoptera: Thaumetopoeidae). International Journal of Insect Science 2014:6 9-14 doi:10.4137/IJIS.S13338.
3. James Peter Egonyu, Sunday Ekesi, **Jacques Kabaru**, Lucy Irungu, Baldwyn Torto (**2013**). Cashew Volatiles Mediate Short-Range Location Responses in, *Pseudothraupis wayi* (Heteroptera:Coreidae). Environmental Entomology 42(6): 1400-1407;DOI: <http://dx.doi.org/10.1603/EN13233>..

4. James Peter Egonyu, **Jacques Kabaru**, Lucy Irungu, Fabian Hass (2013). Description of pre-adult stages of the coconut bug, *Pseudotheraptus wayi*. Journal of Insect Science, Vol 13/Article 82. (<http://www.insectscience.org/13.82>).
5. Addis Teshome, John M. Onyari Suresh K. Raina, **Jacques M. Kabaru**, Fritz. Vollrath, (2012). Mechanical and thermal degradation properties of silks from African wild silkworms. Journal of Applied Polymer Science.DO:1.0.1002/APP.37873. 1-9.
6. Addis Teshome, Fritz. Vollrath, Suresh K. Raina, **J. M. Kabaru**, J. Onyari (2012). Study on the microstructures of African wild silk cocoon shells and fibers. International Journal of Biological Biomolecules, Vol. 50 (1), 63-68.
7. Lobo, N, K.D. Moulton, C. Lobo, L.J. Rothschild, F. Mwaura, **J.M. Kabaru** & S.M. Duboise (2012). Ultrastructure and biochemical analysis of in vitro and in vivo capsid assembly of alkaliphilic Phage  $\Phi$ 1N2-2 for application in nanomedicine. Microscopy and Microanalysis Vol. 18, S2, 110.
8. J. Ogonyu, S. Ekesi, **J. Kabaru**, L. Irungu, B. Torto (2011). Host odour responses and experience-induced learning in the coconut bug, *Pseudotheraptus wayi* Brown (Heteroptera: Coreidae). Symposium on Insect-Plant Interactions, 13<sup>th</sup> to 16<sup>th</sup> August 2011. Wageningen, Netherlands, 122pp.
9. Addis Teshome, S.K. Raina, F. Vollrath, **J.M. Kabaru**, J. Onyari, E.K. Nguku (2011). Study on weight loss and moisture regain of silk cocoon shells and degummed fibers from African wild silks. Journal of Entomology, Vol. 8 (5), 450-458.
10. Ogila, O. Kenneth, **Kabaru, J.M.**, Otieno, o. Samson (2010). Elevation of white blood cell counts in Swiss mice, by extracts of *Asparagus africanus* and *Caesalpinia volkensii*. International Journal of Biological Science. Vol 2, 45-49.
11. A. Yenesew, H. Twinomuhwezi, **J.M. Kabaru**, H.M. Akala, B. Kirimire, M. Heydenreich, M.G. Peter, F.L. Eyase, N.C. Waters, D.S. Walsh (2009). Antiplasmodial and larvicidal flavonoids from *Derris trifoliata*. Bull. Chem. Soc. Ethiop, Vol. 23(3), 001-006.\
12. Yenesew, A. Kiplagat, J. Derese, S. Midiwo, J.O. **Kabaru, J.M.** Heydemreich, M. Peter, M.G. (2006). Two unusual rotenoid derivatives 7a-o-methyl-12a-hydroxydeguelol and spiro-13-homo-13-oxaelliptone, from the seeds of *Derris trifoliata*. Phytochemistry, Vol. 67, 988-991.
13. Yenesew, A. Mushibe, E.K. Induli, M. Derese, S. Midiwo, J.O. **Kabaru, J.M.** Heydemreich, M. Kock, A. Peter, M.G. (2005). 7a-O-methyldeguelol, a modified rotenoid with an open ring--C, from the roots of *Derris trifoliata*. Phytochemistry, Vol 66, 653-657.
14. **Kabaru, J.M.** and Mwangi, R.W. (2002). Effect of post-treatment temperature on the insecticidal activity of *Melia volkensii* fruit extracts against the African migratory locusta *Locusta migratoria migratorioides* (R&F). African Journal of Science and Technology Vol. 3No 2, 20-23.

15. **Kabaru, J.M.** and Gichia, L. (2001) Insecticidal activity of extracts derived from different parts of the mangrove tree *Rhizophora mucronata* (Rhizophoraceae) Lam. against three arthropods. African Journal of Science and Technology Vol. 2 No 2, 44-49.
16. **Kabaru, J.M.** (2001). "Are you using the right neem?" (Feature Article) Daily Nation, 1<sup>st</sup> March, 2001, Page 22.
17. **Kabaru, J.M.** and Mwangi, R.W. (2000). Effect of post-treatment temperature on the insecticidal activity of Neem (*Azadirachta indica*) seed extracts. Insect Science and its Application. Vol. 20, No.1 77-79.
18. **Kabaru, J.M.** (1998). General toxicity tests on indigenous vegetables. Publ. Centre for Indigenous knowledge Systems and by-Products (CIKSAP), Nairobi, Kenya. 4pp.
19. Mwangi, R.W., and **Kabaru, J.M.** (1997). Phytochemical study of Neem oil and Khat (*Cartha edulis*). Publ. Institute of Primate Research, Nairobi Kenya. 43pp.
20. Mwangi, R.W., **Kabaru, J.M.**, and Rembold, H. (1997). Potential for *Melia volkensii* (Gurke) extracts in the control of locusts. In: New Strategies in Locust Control. Eds. Krall, S. *et al.*, Verlag Basel, Switzerland. 193-200.
21. **Kabaru, J.M.** (1996). A toxicological study of *Melia volkensii* (Gurke) extracts on *Locusta migratoria migratorioides* (R&F). Ph.D. Thesis, University of Nairobi.
22. Mwikali, M., Mwangi, R.W., Young, A.S. and **Kabaru, J.M.** (1994). Acaricidal activity of *Melia volkensii*, *Azadirachta indica*, and *Chrysanthemum cinerariaefolium* on *Rhipicephalus appendiculatus* and *Boophilus decoloratus*. In: The 3rd International Conference on Tropical Entomology, Nairobi, Kenya. S41.
23. **Kabaru, J.M.** and Mwangi, R.W.(1994). Acute toxicity of *Melia volkensii* fruit extracts on *Locusta migratoria migratorioides*. In: The 3rd International Conference on Tropical Entomology, Nairobi, Kenya. C43.
24. Mwangi, R.W. and **Kabaru, J.M.**(1991). Insect antifeedant and growth regulating compounds in different parts of *Melia volkensii*. In 4th NAPRECA Symposium on Natural Products, Addis Ababa, 13-14.
25. **Kabaru, J.M.** (1988). Amino acid metabolism in bloodstream *Trypanosoma brucei brucei*. Msc. Thesis, University of Nairobi.
26. **Kabaru, J.M.** and Njogu, R.M. (1988). A survey of amino acid activities in bloodstream *Trypanosoma brucei brucei*. Acta Tropica, 189-190.

## 7. **INNOVATIONS**

**Kabaru, J.M** (2016). "Combined feeder and water bottle holder for small animals"  
KIPI Application No KE/UM/2016/00723

## **8. THESES EXAMINED**

Sixty Theses examined.

## **9. CURRENT RESEARCH**

- (i) CULTURE OF DAPHNIA AND UNICELLULAR ALGAE.
- (ii) INHALATION TOXICOLOGY TECHNIQUES.

## **10. COMMUNITY SOCIAL RESPONSIBILITIES**

- Providing casual jobs for needy students in CBPS, UoN.
- Promotion of indigenous plants and environmental conservation.
- **29<sup>th</sup> April, 2005 to 30<sup>th</sup> July, 2010:** Secretary, Chuna Housing Cooperative Society Development Committee.

## **11. MEMBERSHIP IN PROFESSIONAL SOCIETIES**

Member, University of Nairobi Alumni Association, Member, Biochemical Society of Kenya, Member, Kenya Physiological Society.

## **12. REFEREES**

Prof. Lucy W. Irungu,  
Vice- Chancellor,  
Machakos University,  
P.O.Box 136-90100, Machakos.

Prof. Richard K. Mibey,  
School of Biological Sciences, University of Nairobi,  
P.O.Box 30197-00100, Nairobi.

Prof. Abiy Yenesew,  
Department of Chemistry, University of Nairobi,  
P.O.Box 30197-00100, Nairobi.

The above information is true and accurate to the best of my knowledge.



Signed:

Date: 21<sup>st</sup> June, 2019.

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