

CURRICULUM VITAE

Name; Peter Waweru Mwangi

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Languages spoken; English, French, Kiswahili.

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Education

1. **PhD in Medical Physiology**, University of Nairobi; December 2007 to Dec 2011.

Thesis title; “The neuropharmacological evaluation of 3 *Ocimum spp*s found in Kenya”

2. **Master of Science in Medical Physiology**, University of Nairobi; September 2003- December 2006.

Thesis title; “The evaluation of the cognitive effects of *Rhamnus prinoides*- a single blind randomized controlled trial”

3. **Bachelor of Pharmacy degree**, University of Nairobi; September 1990- December 1995.

Working Experience

1. Lecturer, Department of Medical Physiology, University of Nairobi. (September 2012- Present day)
2. Tutorial fellow, Department of Medical Physiology, University of Nairobi. (August 2010- September 2012).
3. Tutorial fellow, Department of Medical Physiology, Kenyatta University (April 2010- July 2010)
4. Lecturer, Department of Clinical medicine Mt. Kenya University. (Jan 2009 – March 2010).
5. Company Pharmacist Tricity Pharmaceuticals Ltd. (December 1997 – to December 2008).
6. Staff Pharmacist Nairobi Hospital (October 1996- December 1997.)
7. Pharmacist Intern Ministry of Health (October 1995- September 1996)

Publications since last Promotion.

1. Matheka C.W., Jamal I, Mwangi P.W (2012). Biomarkers in cardiovascular disease: Yesterday, today and tomorrow. *Universal Journal of Medicine and Dentistry* Vol. 1(3) pp. xxx-xxv
2. Matheka, D. M., Kilonzo, J. M., Munguti, C. M., & Mwangi, P. W. (2013). Pattern, knowledge and practices of HbA1C testing among diabetic patients in a Kenyan tertiary referral hospital. *BMC Globalization and Health*, 9(1), 1-4.
3. Kinuthia, D. G., Muriithi, A. W., & Mwangi, P. W. (2016). Freeze dried extracts of *Bidens biternata* (Lour.) Merr. and Sheriff. show significant antidiarrheal activity in in-vivo models of diarrhea. *Journal of ethnopharmacology*, 193, 416-422.
4. Irungu, E. M., Mwangi, P. W., & Bukachi, F. O. (2016). Pre-treatment with the methanol extract of *Withania somnifera* prevents Diazinon-induced cardiotoxic effects of organophosphate poisoning. *bioRxiv*, 042523.
5. Birech, Z., Mwangi, P. W., Bukachi, F., & Mandela, K. M. (2017). Application of Raman spectroscopy in type 2 diabetes screening in blood using leucine and isoleucine amino-acids as biomarkers and in comparative anti-diabetic drug efficacy studies. *PloS one*, 12(9), e0185130.
6. "Utility of Raman spectroscopy in diabetes detection based on biomarker Raman bands and in antidiabetic efficacy studies of herbal extract *Rotheca myricoides* Hochst" *Journal of Raman Spectroscopy* (in Press). DOI:10.1002/jrs.5619.
7. Freeze-dried extracts of *Rotheca myricoides* (Hochst.) Steane & Mabb possessed significant anti-hyperglycaemic, anti-dyslipidemic and anti-hyperinsulinemic effects in a type 2 Diabetes animal model. *Journal: Journal of Ethnopharmacology* (submitted)
8. Dr Festus Kamau, Miss Emiliana Imperial, Dr Ruduwaan Salie, Dr Dee Blackhurst, Dr Peter Mwangi, Dr Hans Strijdom. Antiretroviral drug-induced endothelial dysfunction is improved by dual PPAR α/γ stimulation in obesity. *Vascular Pharmacology* (submitted).
9. Peter Mwangi and Nelly Nyaga. Patent application for the use of Tarchonanthin A as an adaptogenic substance in exercise endurance. Submitted to ARIPO (under review)

Conference abstracts submitted since last Promotion

1. Makamu B., Mwangi P., Bukachi F (2014). Rimonabant has paradoxical effects on cART associated metabolic disease. Presented at the World Congress of Pharmacology, Cape Town 2014.
2. Onjula, R., G. Ogweno, M. Muturi, P. Waweru, J. Nyagol, and E. Omonge (2016). "Increased platelet expression in HIV positive treatment naive patients does not correlate with CD4 count." In *Journal of Thrombosis and Haemostasis*, vol. 14, pp. 106-106. Presented at the ISTH Conference Montpellier, 2016.

3. Kamau F., Strijdom H., Blackhurst D., Mwangi P.W., Salie R. (2017). Peroxisome proliferator-activated receptors α/γ stimulation is beneficial in combined Antiretroviral Therapy
4. Nyaga N., Mwangi P.W., Bukachi F. The Freeze-Dried Extracts of *Salvia coccinea* Juss. Ex Murray Attenuate Myocardial Ischemia Reperfusion Injury in a Global Ischemia Rat Model. CobNest 2018
5. Prabjot Sehmi and Peter Waweru The Freeze-Dried Extracts of *Uvarioidendron Anisatum* Verdec. Possess Significant Effects on Feeding and Metabolic Indices in a Diet-Induced Obesity Model in Sprague Dawley Rats. CobNest 2018.
6. Boniface Mwangi Chege, Fredrick Bukachi, Peter Waweru Mwangi The freeze dried extracts of *Rothea myricoides* (Hochst) possessed significant antihyperglycemic and antidiabetic effects in animal model of type 2 Diabetes. CobNest 2018

Postgraduate Student Supervision since last promotion

A. PhD Supervision

1. Festus Kamau.

Thesis title: Contribution of Highly Active Anti-Retroviral Therapy to the Development of Non-alcoholic Fatty Liver Disease with Concomitant Cardiovascular Dysfunction in an Obese Rat Model: Graduated with PhD at Stellenbosch University in March 2017.

B. MSc Supervision

I. Completed projects

1. Brian Lishenga Makamu

MSc Thesis title: “effects of rimonabant on combined antiretroviral therapy induced lipodystrophy in Sprague Dawley Rats “. Completed in December 2013

2. Jesse Kevin Thuo

Msc Thesis title: “a study of the role of oxotremorine, epibatidine, morphine, atropine, mecamylamine and naloxone in pain regulation in the East african root rat (*Tachyoryctes splendens*). Completed in December 2014

3. Eliphias Gitonga

Msc Thesis title: “investigation of the Hemostatic effects of selected Kenyan Herb species”. Completed in December 2015

4. Douglas Mwaniki

MSc Thesis title: “Investigation of the freeze-dried extracts of *Aloe secundiflora* leaves and roots on blood pressure as well as cardiac contractility”. Completed in December 2016

5. Dennis Rono

Msc Thesis title. “Effect of Variable High Fat Diets on Heart Rate Variability and Selected Modifiable Cardiovascular Risk Factors”

II. MSc Projects in Progress

1. Boniface Chege

MSc Project title: “Investigation of the antidiabetogenic effects of the freeze dried extracts of *Rotheca myricoides* in a diet and low dose streptozocin animal model of type 2 diabetes”

2. James Njenga Mwangi

MSc Project title: “Investigation of the effects of selected Kenyan herbal species on isolated rabbit penile smooth muscle”

3. David Wafula

MSc Project title: “The effects of re-used cooking fat and transformer oil on metabolic syndrome in rats”

C. BSc (Intercalated) Physiology Project supervision

I have also supervised to completion numerous BSc (intercalated Hons) Physiology projects (>10).

1. Festus Kamau

BSc Project title: Kamau F. Electrocardiographic changes in exercising rats on anabolic androgenic steroid administration. Completed in 2008. First Class Honors.

2. Ryan Nyotu Gitau

BSc Project title: Effect of Rosmarinic Acid On Blood Pressures In Normotensive Rabbits. Completed in 2011. Second Class Honors (upper division)

3. Edgar Gulavi Imbwaga

BSc Project title: Effects Of Acute Aflatoxin Poisoning On The Rat Ecg. Completed in 2011. Second Class Honor (Upper division)

4. Cecilia Munguti

BSc Project title: Effects of Freeze-Dried Extracts of *Urtica Massaiica Mildbr.* on Blood Pressure, Heart Rate and Contractility. Completed in 2012. Second Class Honors (upper division).

5. Eric Mwangi Irungu

BSc Project Title: Effects of The Methanolic Extract of *Withania Somnifera* on the ECG Changes in Organophosphate Poisoned Rats. Completed in 2012. Second Class Honors (upper division)

6. Peris Wanjiru Njenga

BSc Project Title: Effects of *Clerodendrum myricoides* (Hochst) On an Alloxan and Diet Induced Type 2 Diabetes Rat Model. Completed in 2012. Second Class Honors (lower division)

7. Mohammed Omar

BSc Project Title: An evaluation of the cardiotropic effects of the Organic and freeze-dried extracts of *Acacia nilotica (L.) Willd. Ex.* Completed in 2013. Second Class Honors (Upper Division)

8. Timothy Riungu

BSc Project Title: Evaluation of Lopinavir/Ritonavir's Effect On Serum Uric-Acid And hepatic Aldose Reductase Activity In Sprague-Dawley Rats.

9. Karima Chiuri

BSc Project Title: An Investigation of The Arrhythmogenic Effects of the Chronic Administration of Freeze-Dried Green Coffee Bean Extract. Completed in 2014. First Class Honors.

10. Dennis Gachigi Kinuthia

BSc Project Title: Antidiarrheal Effects of Freeze-Dried Extract of *Bidens biternata* (Lour.) Merr. And Sheriff. Completed in 2014. Second Class Honors (upper division).

11. Nelly Murugi Nyaga

BSc Project Title: Investigation of The Cardioprotective Effects of The Freeze - Dried Extracts of *Salvia coccinea* Juss. Ex Murray On the Isolated Heart In Sprague Dawley Rats - A Global Ischaemia Model. Completed in 2016. Second Class Honors (upper division)

12. Prabjot Kaur Sehmi

BSc Project Title: Effect of Dietary Monosodium Glutamate on The Development of Metabolic Syndrome in Sprague Dawley Rats. Completed in 2016. Second Class Honors (upper division)

13. Ahmed Said Ali

BSc Project Title: Effects of Freeze-Dried Extract of *Euphorbia matabelensis* Pax on Penile Erection and Heart Rate in Male New Zealand Rabbits (*Oryctolagus cuniculus*). Completed in 2016. First Class Honors.

14. Keith Mandela Makori

BSc Project Title: Investigation of The Effects of Freeze-Dried Extract of *Momordica spinosa* (Gilg.) Chiov. on Alloxan and Diet-Induced Type 2 Diabetes in Rats. Completed in 2016. First Class Honors.

15. Felix Kanyi Macharia

BSc Project Title: Investigation of The Inhibitory Effects of Freeze-Dried Extracts of *Erythrina abyssinica* LAM ex DC On Development Of Non-Alcoholic Fatty Liver Disease (NAFLD) In Sprague-Dawley Rats. Completed in 2016. First Class Honors.

16. Koki Mutungi

BSc Project Title: Investigation of The Protective Effects of the Freeze-Dried Extracts of *Commiphora africana* Against Diet Induced Obesity In Sprague Dawley Rats. Completed in 2017. First Class Honors

17. Ndegwa Muriithi

BSc Project Title: Investigation of Anti-Hyperglycemic Effects and Antilipidemic Activity of Freeze-Dried Extracts of *Salvia Leucantha* Cav. Completed in 2017. Second Class Honors (upper division)

18. Cyrus Mwanzia

BSc Project Title: Investigation of The Cardioprotective Effects of The Freeze-Dried Extracts of *Albizia Amara* (Roxb.) B. Boivin Against Isoprenaline-Induced Myocardial Infarction In Sprague Dawley Rats. Completed in 2018. First Class Honors

19. Sylvester Nyauke

BSc Project Title: investigation of the effect of targeting hypoxia inducible factor 1 (HIF- 1) in a rat model of type 1 diabetes mellitus. Completed in 2018. Second Class Honors (upper division)

International Conferences Attended since last promotion

1. 2nd East Africa Neuroscience Conference held at Pride Inn Hotel Westlands road, 18-19 June 2012.
2. World Congress of Basic and Clinical Pharmacology (WCP2014) held at the Cape Town International Convention Centre (CTICC) in Cape Town, South Africa from 13-18 July 2014.
3. First Conference of Biomedical and Natural Sciences and Therapeutics (CoBNest) held at Spier Conference center Stellenbosch, Cape Town South Africa from 6-11 October 2018.

Training courses in Pedagogy attended since last promotion

1. PhD Supervision Training for supervisors held on 6th-8th June 2016.
2. AAPS/AD instruments training workshop “using technology to innovate teaching” held in Kigali, Rwanda in December 2018.

Research Grants Awarded.

1. Co-Investigator. Project title: Rheumatic Heart Disease: Regulatory T-Cell Levels Complementing Echocardiographic Case Identification. Funder: NRF. Grant Amount: 12000000
2. Co-Investigator. Project title: Mapping and Profiling of Venoms from Snakes, Arthropods and Poisoning Management Practice by Communities in Kenya. Funder: NRF. Grant Amount: 3500000
3. Co-Investigator. Project title: Investigation of platelet activation in relation to procoagulant biomarkers in HIV associated ischaemic stroke patients in Kenya. Funder: NRF. Grant Amount: 14000000

Community Service Activities.

1. Founding and current treasurer Kenya Society of Thrombosis and Hemostasis the local affiliate of the International Society of Thrombosis and Hemostasis (ISTH).
2. Member, Technical working group, Snake bite control under the Directorate of Neglected tropical diseases, Ministry of Health.
3. Member of Kenyan affiliate of Global Snakebite Initiative (GSI) of World Health Organization
4. Member of committee that revised curriculum of the e-learning BSc Nursing program jointly run by the University of Nairobi and AMREF. Revised the physiology textbook for the program
5. Member of examinations committee school of Medicine University of Nairobi

Teaching awards

Winner of dean's award for excellence in Scholarship and student supervision in 2014 and 2018.

Referees.

1. Dr. Frederick Bukachi, Department of Medical Physiology, University of Nairobi,
P.O. Box 30197-00100, Nairobi, Kenya.
2. Dr. P. M. Mbugua,
Department of Medical Physiology, University of Nairobi,
P.O. Box 30197-00100, Nairobi, Kenya.
3. Prof T.I. Kanui,
Department of Veterinary Anatomy and Physiology University of Nairobi,
P.O. Box 30197-00100, Nairobi, Kenya.