



**DR. PAUL MUNGAI
MBUGUA**

CURRICULUM VITAE

AUGUST 2016

PERSONAL DETAILS

FULL NAME: Paul Mungai Mbugua
DATE OF BIRTH: November 15, 1952
PLACE OF BIRTH: Kiambu County
NATIONALITY: Kenyan
GENDER: Male
MARITAL STATUS: Married
RELIGION: Christian
LANGUAGES: Kikuyu, Kiswahili, English
CONTACTS
Office: Department of Medical Physiology, School of Medicine
College of Health Sciences, University of Nairobi
P.O. Box 30197, 00100
Nairobi, Kenya
Tel: +254 20 4442309
Mobile: +254 727 900 639
E-mail: pmungai@uonbi.ac.ke
Private: P.O Box 38805 Parklands, 00623
Nairobi, Kenya
E-mails: mungai020711@gmail.com;
mungaigit607@yahoo.co.uk

PRESENT POSITION

DESIGNATION: Senior Lecturer (Medical Physiology)
Department of Medical Physiology, School of Medicine,
College of Health Sciences, University of Nairobi

QUALIFICATIONS AND SPECIALIZATION

POSTDOCTORAL FELLOWSHIP: Fulbright Scholar
Department of Pharmacology and Toxicology
University of Texas
United States of America
POSTGRADUATE: Ph.D. (Medical Physiology)
Department of Medical Physiology
College of Health Sciences
University of Nairobi
UNDERGRADUATE: B.Pharm (Pharmacy)
School of Pharmacy

College of Health Sciences
University of Nairobi
REGISTERED PHARMACIST: Pharmacy and Poisons Board
Ministry of Health
Registration Number (1979)

EDUCATION BACKGROUND

FROM 1986 TO 1987: Postdoctoral Fellowship, Department of Pharmacology and Toxicology, University of Texas (USA).

FROM 1980 TO 1985: Postgraduate Studies and Research Activities at the University of Nairobi (Kenya), the University of Uppsala (Sweden), and the University of Strathclyde (Scotland).

GRADUATION 1985: Doctor of Philosophy (**Ph.D. Medical Physiology**)
University of Nairobi

FROM 1974 TO 1978: Undergraduate Studies, Faculty of Pharmacy, University of Nairobi

GRADUATION 1978: Bachelor of Pharmacy (**B.Pharm**), University of Nairobi

FROM 1972 TO 1973: Nakuru High School, Nakuru

QUALIFICATION 1973: East African Advanced Certificate of Education (**EAACE**)

FROM 1970 TO 1971: Menengai High School, Nakuru

QUALIFICATION 1971: East African Certificate of Education (**EACE**)

FROM 1968 TO 1969: Afraha Secondary School, Nakuru (Form two)

QUALIFICATION 1969: Junior East African Certificate of Education (**JEACE**)

1968: President Kennedy High School, Nakuru (Form one)

1967: Riara Catholic Primary School, Kiambu

QUALIFICATION 1967: Kenya African Primary Education (**KAPE**)

FROM 1961 TO 1966: ACK Ndumberi Primary School, Ndumberi, Kiambu

KEY SKILLS AND COMPETENCIES

- Management and administration of university education
- University teaching, supervision, and mentorship of undergraduate and

postgraduate students for over 35 years

- Design and development of undergraduate and postgraduate curricula
- Design and development of research projects
- Health in-service and pre-service training and capacity building
- Good laboratory practice and research methodology
- Effective communication and interpersonal skills
- Business negotiation skills to secure financing of university education
- Management and administration of private business
- Strategic planning, implementation, monitoring and evaluation of institutional management
- Registration of pharmaceutical products by the Pharmacy and Poisons Board
- Advocacy, mentoring students, adults, and professionals

EMPLOYMENT BY THE MINISTRY OF HEALTH, REPUBLIC OF KENYA

In 1978, I was employed as a pharmacist at **Kenyatta National Hospital**. During this period I worked in several pharmacies within the hospital, the manufacturing unit, and in the wards.

During the first half of 1979, I was posted to **Nakuru Provincial Hospital** where I was among the leaders providing primarily pharmaceutical services to inpatients and outpatients.

During the second half of 1979, I was employed as the first pharmacist in charge delivery of pharmaceutical services at **Kakamega Provincial Hospital**.

EMPLOYMENT BY THE PHARMACEUTICAL INDUSTRY

Between January to March 1980, I was employed as the Production Manager by **Sterling Winthrop International**, Nairobi, Kenya. I was responsible for the coordination of all the operations of the pharmaceutical manufacturing factory and the quality control unit.

UNIVERSITY OF NAIROBI APPOINTMENTS

In March 1980, I was employed as a **TUTORIAL FELLOW** in the Department of

Medical Physiology, Faculty of Medicine. I immediately registered as a research postgraduate student and at the same time I was actively involved in teaching, conducting basic and applied practicals, facilitating continuous assessment tests (CATs), and university examinations. I started my postgraduate research activities using the mamba snake venoms. My research was supervised by **Prof. Kihumbu Thairu**, Department of Medical Physiology, Faculty of Medicine, **Prof. B. V. Telang**, Department of Pharmacology, and **Prof. Mawuli W Kofi-Tsekpo**, Traditional Medicines and Drug Research Center, Kenya Medical Research Institute (KEMRI).

In 1986, I was promoted to a **LECTURER** in the Department of Medical Physiology.

In 1989, I was promoted to a **SENIOR LECTURER** in the Department of Medical Physiology.

In 2009, I was granted leaves of absence that enable me to work at The Presbyterian University of East Africa.

In June 2014, I resumed my employment as a **SENIOR LECTURER** in the Department of Medical Physiology, School of Medicine, College of Health Sciences, University of Nairobi.

THE PRESBYTERIAN UNIVERSITY OF EAST AFRICA APPOINTMENTS

In February 2009, I was employed as an **ASSOCIATE PROFESSOR** by the The Presbyterian University of East Africa (PUEA). I immediately started to work very closely with the Clinical Officers Council (COC), the Nursing Council of Kenya (NCK), Ministry of Health, Health Professionals working at PCEA Kikuyu Hospital, PCEA Tumutumu Hospital, PCEA Chogoria Hospital, ACK Kijabe Hospital, Christian Association of Kenya (CHAK), Outspan Medical Training College, and Outspan Hospital. The outcome of these multiple efforts was the design and development of curricula for training Registered Clinical Officers (RCO) and Kenya Registered Nurses (KRN). With the approval of the Clinical Officers Council and the Nursing Council of Kenya, PUEA commenced training of Clinical Officers and the Kenya Registered Nurses in May and September 2009 respectively.

In September 2009, I was appointed as the **DIRECTOR** of the School of Health Sciences after the commencement of training Registered Clinical Officers (RCO) in May 2009,

and the Kenya Registered Nurse (KRN) in September 2009. I managed to mobilize staff in the Department of Nursing, Department of Clinical Medicine, Clinical and Nursing Teaching Hospitals, Public and Private Hospitals and Public Health Centers.

Between 2009 and 2010, I was a member of The Presbyterian University of East Africa team that was lead by the Vice Chancellor, that managed to negotiate and secure **Kenya Shillings Two Hundred and Fifty million (KShs 250 million)** from The National Bank of Kenya, to finance the growth and development of the University by.

DIRECTOR OF ACADEMIC AFFAIRS AT THE PRESBYTERIAN UNIVERSITY OF EAST AFRICA

In 2010, I was appointed as the **DIRECTOR OF ACADEMIC AFFAIRS**. In my capacity as the Director of Academic Affairs at The Presbyterian University of East Africa, I:-

- ✓ Provided leadership in the establishment of academic departments
- ✓ Provided leadership in the design and development of curriculum for degree courses offered by the University
- ✓ Monitored and evaluated teaching programs of all the academic departments
- ✓ Monitored and evaluated examinations procedures and marking efficiency
- ✓ Coordinated duties and responsibilities of academic heads of departments
- ✓ Chaired Senate meetings
- ✓ Chaired Senate Committees meetings
- ✓ Chaired and served in other Committees of the University
- ✓ Facilitated collaboration and linkages with local, regional, and international institutions of higher learning.
- ✓ Performed multiple duties and responsibilities as assigned by the Vice Chancellor from time to time.

ACTING VICE CHANCELLOR: THE PRESBYTERIAN UNIVERSITY OF EAST AFRICA

From August 2011 to May 2012, I was appointed as the **ACTING VICE CHANCELLOR**. During this period I provided academic and administrative leadership of the university. I was a member of the Board of Trustees (BOT), member of the University Council (UC), and the chairman of the University Senate and the University Management Board (UMB).

VICE CHANCELLOR: THE PRESBYTERIAN UNIVERSITY OF EAST

AFRICA

From June 2012 to May 2014, I was appointed as the **VICE CHANCELLOR**. As the accounting officer of The Presbyterian University of East Africa, I provided overall administrative and academic leadership. I was a member of the University Council and the Board of Trustees. I was responsible for promoting the growth and development of the university. I was the Chairman of the University Senate and the University Management Board. I was responsible for coordination of policy planning matters, fund raising, and the general development of the university. I actively participated in the first, second, third, and the fourth graduation ceremonies of the University. I presided over the **second, third, and the fourth** graduation ceremonies. During this period, the number of graduating students with diplomas and degrees increased to more than 1000 grandaunts.

In 2012, as the Vice Chancellor of The Presbyterian University of East Africa I lead a university team that managed to negotiate and secure **Kenya Shillings Twenty Million (KShs 20 million)** from Equity Bank, to finance the growth and development of the University

In 2013, as the Vice Chancellor of The Presbyterian University of East Africa I lead a University team that managed to negotiate and secure **Kenya Shillings Five Hundred Million (KShs500 million)** from Cooperative Bank of Kenya, to finance the growth and development of the University.

As the acting Vice Chancellor and later as the substantive Vice Chancellor of The Presbyterian University of East Africa, I:-

- ❖ Carried out day to day business of managing the University
- ❖ Developed and established proper internal monitoring and control systems and procedures of the University
- ❖ Ensured that there was effective communication between the university management, the Council, the Board, the sponsor as well as between different levels of management
- ❖ Provided leadership to the teaching and non-teaching employees of the University
- ❖ Attended personnel matters including organizational structures, appointments, welfare, training, industrial relations, separation and effective management succession plans
- ❖ Directed the implementation of corporate policy and programs
- ❖ Maintained a conducive work environment for attracting, retaining and motivating employees

- ❖ Fostered a corporate culture that promoted ethical practice and good corporate citizenship
- ❖ Played the role of the principal spokesperson of the university
- ❖ Ensured compliance with the laws of the country
- ❖ Directed the development of the university strategic plan
- ❖ Played the role of the principal resource mobilizer for the university
- ❖ Implemented directives assigned by the Board and the Council, which were necessary to achieve the university's objectives.

PROFESSIONAL AND ACADEMIC ACHIEVEMENTS AND SCIENTIFIC DISCOVERIES

In July 2016, I was awarded an opportunity to participate in "**The Change Agent**" program offered at **Strathmore Business School, Strathmore University**. The program was lead by **Prof Alexandre Harvard**, the founder of **The Virtuous Leadership Institute (www.hvli.org)**. Prof Harvard offers seminars in Virtuous Leadership to Senior Business Executives and university students.

From 2012 to 2014, I participated in the Theological Education by Extension that is offered by the **Presbyterian Church of East Africa (PCEA)** in collaboration with **The Presbyterian University of East Africa (PUEA)**. The first program offered a **Diploma Certificate**, while the second program offered an **Advanced Diploma Certificate** in Theological Education by Extension. The major outcome of the programs was to make me believe that I am able to make a positive impact in peoples' lives since "Leadership is influence."

In 2012, I was trained on how to positively transform and have efficient and effective In-service and Pre-service professional health training which achieve a high impact on patient health care delivery. The program was conducted on several occasions by USAID, IntraHealth and FunzoKenya in Nairobi. The program utilized the processes of Optimizing Performance and Quality (OPQ).

In 2013, I was awarded an opportunity to participate in an **Executive Certificate in Management of Universities and Tertiary Institutions** at **The Management University of Africa**, Nairobi. The program was extremely useful in highlighting the best management approach when dealing with critical multiple challenges facing university and tertiary education in Kenya.

In 2011, I was awarded an opportunity to participate in an **Executive Education Certificate in Leading High-Performing Healthcare Organizations (LeHHO)** offered at **Strathmore Business School, Strathmore University**, Nairobi. The LeHHO program is geared towards developing leaders who will deliver on their mandate. The

program target people who poses latent qualities of good leadership, and only need some guided mentorship to realize their full potential.

Between 1986 and 1987, I was awarded a **Fulbright Scholarship** that enabled me to undertake my postdoctoral research activities at the **University of Texas, Austin**, United States of America. My host scientist was **Prof. Daniel Acosta, Department of Pharmacology and Toxicology**. I acquired scientific skill of using *in vitro* cultured cells to study cellular mechanisms of manifestation of toxic effects of components isolated from the mamba venoms.

In 1985, I graduated with Doctor of Philosophy (**PhD, Medical Physiology**) **University of Nairobi**, Nairobi, KENYA

Between 1983 and 1984, I was awarded sponsorship that enabled me to undertake research at the **University of Strathclyde**, Glasgow, Scotland, United Kingdom. My host scientist was Prof. **Allan Harvey, Department of Physiology and Pharmacology**. The research team led by Prof Harvey, discovered mamba snake toxin **DENDROTOXIN**. Dendrotoxins block the presynaptic K⁺ channels leading to inhibition of repolarization of the presynaptic membranes.

In 1982, I was awarded a scholarship that enabled me to undertake my postgraduate research activities at the **University of Uppsala**, Uppsala, Sweden. My host scientist was **Prof. Evert Karlson, Centre for Biomedical Research**. The team led by Prof. Evert Karlson and Prof. Alan Harvey lead to the discovery of mamba snake toxins **FACICULINS** that are potent inhibitors of acetylcholinesterase enzymes and mamba snake toxins, **MAMBA TOXINS** that bind to muscarinic cholinoreceptors with high affinity.

UNIVERSITY OF NAIROBI TEACHING AND RESEARCH EXPERIENCE

Since I was employed by the University of Nairobi as a **TUTORIAL FELLOW**, **LECTURER**, and **SENIOR LECTURER**, I have over 35 years of experience in teaching and examining both undergraduate and postgraduate students, coordination of research, supervision of Master's and Ph.D students.

PARTICIPATION IN TEACHING UNDERGRADUATE PROGRAMS

I participate in teaching the following undergraduate programs:

- ✚ Bachelor of Medicine and Bachelor of Surgery (MBChB) Level I and II
- ✚ Bachelor of Pharmacy (BPharm) Level I and II

- ✚ Bachelor of Dental Surgery (BDS) Level I and II
- ✚ Bachelor of Science in Nursing (BScN)
- ✚ Bachelor of Science in Medical Physiology (BSc Intercalated)
- ✚ Bachelor of Science in Food Nutrition and Dietetics (BSc)

PARTICIPATION IN TEACHING POSTGRADUATE PROGRAMS

I participate in teaching the following postgraduate programs:

- ✚ Master of Medicine (Anaesthesia - MMED)
- ✚ Master of Medicine (Surgery - MMED)
- ✚ Master of Medicine (Neurosurgery - MMED)
- ✚ Master of Science (Medical Physiology - MSc)
- ✚ Master of Science (Nursing - MScN)
- ✚ Doctor of Philosophy in Medical Physiology (PhD)

MASTER OF SCIENCE POSTGRADUATE RESEARCH SUPERVISION

I have supervised the following Masters Students:-

STUDENT NAME: Dr Anne Wangechi Muriithi, BDS
DEGREE: M.Sc. in Medical Physiology, University of Nairobi
TITLE: Gastric Motility following Duodenal stimulation of in vitro Rabbit Stomach-Duodenum Preparations
CO-SUPERVISOR: Prof N.B. Patel, Department of Medical Physiology, University of Nairobi
PROJECT STATUS – Completed in 1999

STUDENT NAME: Kihara Mary Wangari
DEGREE: M.Sc. in Medical Physiology, Kenyatta University
TITLE: Evaluation of Antibacterial Activity of Crude Aqueous Extracts of *Azadirachta Indica* (Neem) Leaves
PROJECT STATUS – Completed in 2008

STUDENT NAME: Kamaku Mercy Wanjiku
DEGREE: M.Sc. in Medical Physiology, University of Nairobi
TITLE: Autonomic Effects of Organic Solvent Extract of *Enzoy* on Isolated Rabbit Heart and Jejunum

PROJECT STATUS – Completed in 2008

STUDENT NAME: Dr. Githinji, Charles Githua

DEGREE: M.Sc. in Medical Physiology, University of Nairobi

TITLE: Effects of *Mondia Whytei* Aqueous Root on Isolated Rabbit Heart and Jejunum Preparations

PROJECT STATUS – Completed in 2006

STUDENT NAME: Dr. Mwangi Peter Waweru

DEGREE: M.Sc. in Medical Physiology, University of Nairobi

TITLE: The Evaluation of the Cognitive Effects of *Rhamnus prinoides*- a Single Blind Randomized Controlled Trial.

PROJECT STATUS – Completed in 2006

STUDENT NAME: Dr. Walter Abila Akello

DEGREE: M.Sc. in Medical Physiology, University of Nairobi

TITLE: The Effects of Freeze-Dried *Khat* Extract (*Catha Edulis*) on Platelet Activation in Laboratory Mice

PROJECT STATUS – Research work ongoing

STUDENT NAME: Kinyungu Charles Gitonga

DEGREE: M.Sc, Kenyatta University

TITLE: Pharmacological and Toxicological Study of selected Kenya plants with traditionally perceived hypoglycemic activity in experimental hyperglycemia.

CO-SUPERVISOR: Prof. Eliud N. M. Njagi, Department of Biochemistry and Biotechnology

Dr. George Orind, Department of Biochemistry and Biotechnology

DOCTOR OF PHILOSOPHY POSTGRADUATE RESEARCH SUPERVISOR

STUDENT NAME: Dr. Githinji, Charles Githua

DEGREE: Ph.D. in Medical Physiology, University of Nairobi

TITLE: Bioguided Preclinical Evaluation of the Antinociceptive Effects of
Mondia Whytei Plant Extracts

CO-SUPERVISORS: Prof. Titus I. Kanui, Ph.D. Department of Veterinary
Physiology and Anatomy, University of Nairobi
Dr. David K. Kariuki, Ph.D. Department of Chemistry,
University of Nairobi

PROJECT STATUS: Completed in 2010

STUDENT NAME: Dr. Mwangi Peter Waweru

DEGREE: Ph.D. in Medical Physiology, University of Nairobi

TITLE: The Neuropharmacological Evaluation of 3 *Ocimum* Spps found
in Kenya

CO-SUPERVISORS: Prof. Titus I. Kanui, Ph.D. Department of Veterinary
Physiology and Anatomy, University of Nairobi
University of Nairobi

Dr. David K. Kariuki, Ph.D. Department of Chemistry,
University of Nairobi

PROJECT STATUS: Completed 2011

STUDENT NAME: Kiama Teresa Nungari

DEGREE: Ph.D. in Medical Physiology, University of Nairobi

TITLE: Characterisation of the vaginal microflora during the menstrual
cycle of HIV positive and negative women in a sub-urban
population of Kenya

CO-SUPERVISORS: Prof. Benson Estambale, PhD, Institute of Tropical and
Infectious Diseases, University of Nairobi
Prof. Mario Vaneechoutte, PhD, Laboratory for Bacteriology
Research, Ghent University, Belgium
Prof. Marleen Temmerman, MD, PhD, Department of Obstetrics
and Gynaecology, Ghent University, Belgium

PROJECT STATUS: Completed 2011

STUDENT NAME: Dr. Kariuki Hellen Nyambura

DEGREE: Ph.D. in Medical Physiology University of Nairobi

TITLE: Antinociceptive Activities of Extracts from Selected Medicinal
Plants using Animal Models

CO-SUPERVISORS: Prof. Titus I. Kanui, PhD, Department of Veterinary
Physiology and Anatomy, University of Nairobi
Prof. Abiy Yenesew, PhD, Department of Chemistry,
University of Nairobi

Prof. Nilesh B. Patel, PhD, Department of Medical
Physiology, College of Health Sciences, University of
Nairobi

PROJECT STATUS: Completed in 2013

ADMINISTRATION DUTIES IN THE DEPARTMENT OF MEDICAL PHYSIOLOGY

During a period of more than three decades that I have been an academic member of staff of the Department of Medical Physiology, I have served in several capacities as indicated below:

- ✚ Acting Chairman of the Department of Medical Physiology on several occasions
- ✚ Examinations Officer for many years
- ✚ Chairman of Medical Physiology Curriculum Committee
- ✚ Chairman of Department of Medical Physiology Postgraduate Studies Committee
- ✚ Member of Department Examinations Committee
- ✚ Coordinator, Facilitator, Mentor and Tutor of undergraduate and postgraduate students
- ✚ Member of Interview Panel for Departmental Employment and Admission
- ✚ Supervisor and Internal Examiner for Graduate and Postgraduate Degrees
- ✚ Trainer and Facilitator of Good Laboratory Practice Workshops
- ✚ Trainer and Facilitator of International Physiology Workshop
- ✚ Departmental Representative, School of Medicine Board of Examiners
- ✚ Departmental Representative, School of Pharmacy Board of Examiners
- ✚ Departmental Representative, School of Dental Sciences Board of Examiners
- ✚ Departmental Representative, School of Nursing Board of Examiners
- ✚ Coordinator and Facilitator of Departmental Preclinical Research Group
- ✚ Vice Chairman of Local organizing Committee (LOC), 5th International Association of African Physiological Sciences Congress
- ✚ Member of "African Initiative for Pharmacology"

ACADEMIC COLLABORATION WITH LOCAL AND FOREIGN UNIVERSITIES

I have participated in academic collaboration with local and foreign universities. My role involved delivery of lectures, external examiner, and evaluation continuous improvement of the curricula in the following institutions of higher learning:

Between 2004 and 2006, I participated in Master of Science in pharmacological basis of therapeutics under **Jomo Kenyatta University of Agriculture and Technology and Kenya Medical Research Institute within the Institute of Tropical Medicine and Infectious Diseases (INTROMID)**

Between 2006 and 2008, I participated in both bachelor and Master of Science programmes in counseling focusing on trends and issues in chemical dependence at the **United States International University, offered in the School of Arts and Sciences.**

Between 2004 and 2008, I participated in Post Registered Nurse (RN), Bachelor of Science in Nursing (BScN) programme focusing on pathophysiology at the **Aga Khan University Hospital Nairobi (AKUHN).**

I was appointed as an external examiner by the Faculty of Pharmacy, **SRI RAMACHANDRA UNIVERSITY** (India) to evaluate the following Ph.D Thesis:-

STUDENT NAME: Mrs. S. Latha, M.Pharm

DEGREE: Ph.D. in Pharmacology, SRI RAMACHANDRA UNIVERSITY

TITLE: Comparative Pharmacognostical, Phytochemical and Pharmacological
Evaluation of *Stereospermum colais* (Buch-Ham. ex Dillw.) Mabberley
and *Stereospermum suaveolens* (Roxb.) DC.

SUPERVISORS: Dr. S. Seethalakshmi, M.D., Professor and Head, Department of
Pharmacology

Dr. D. Chamundeeswari, Ph.D. Principal, Faculty of Pharmacy

PROJECT STATUS: Completed 2015

DEVELOPMENT OF MEDICAL PROGRAMMES FOR THE TRAINING OF HEALTH PROFESSIONALS

I have participated in the University of Nairobi and also at The Presbyterian University of East Africa, in mobilization of highly experienced health professionals and provided

stewardship and facilitation in the design and development of following programs for training of health professionals:-

- ✚ DIPLOMA IN CLINICAL MEDICINE, SURGERY AND COMMUNITY HEALTH Implemented after Approval by the Clinical Officers Council, Ministry of Medical Services in May, 2009
- ✚ KENYA REGISTERED NURSE (KRN DIPLOMA) - Implemented after Approval by Nursing Council of Kenya (NCK), Ministry of Medical Services in September 2009
- ✚ BACHELOR OF MEDICINE AND BACHELOR OF SURGERY (MBCHB)
- ✚ BACHELOR OF PHARMACY (BPHARM)
- ✚ BACHELOR OF SCIENCE IN NURSING (BSC-N)
- ✚ BACHELOR OF SCIENCE IN OCCUPATIONAL THERAPY (CONVERSION)
- ✚ BACHELOR OF SCIENCE IN OCCUPATIONAL THERAPY (GENERIC)
- ✚ MASTER OF SCIENCE IN OCCUPATIONAL THERAPY
- ✚ MASTER OF MEDICINE IN ORTHOPAEDIC SURGERY
- ✚ MASTER OF MEDICINE IN OPHTHALMOLOGY

RESEARCH GRANTS, AWARDS, AND SCHOLARSHIPS

In 1980, I was awarded a research grant by the National Council for Science and Technology (NCST) of two hundred and fifty thousand (**Kshs250,000**)

In 1982, I was awarded an International Fellowship under the sponsorship of the Swedish Agency for Research Co-operation in Developing Countries (SAREC), University of Uppsala, Biomedical Centre, Uppsala, Sweden. The grant supported my postgraduate research activities and my family maintenance in Sweden.

In 1983, I was awarded a scholarship that enabled me to undertake postgraduate research as a visiting scientist at the University of Strathclyde, Department of Physiology and Pharmacology, Glasgow, Scotland, United Kingdom

In 1986, I was awarded a Fulbright Scholarship that enabled me to undertake postdoctoral research activities at the University of Texas, Department of Pharmacology and Toxicology, Austin, Texas, United States of America.

In 2004 and 2005, I was sponsored by the World Health Organization to undergo training in Good Laboratory Practice in Nairobi. After qualifying as a trainer of trainers, I participated in Good Laboratory Practice training workshops in

Ghana, South Africa, and Brazil.

In 2006, I was awarded a travelling grant that enabled me to attend and participate in the 5th International Congress of Pathophysiology, Beijing, China

In 2006, I was awarded a travelling grant that enabled me to attend and participate in the 25th International Union of Basic and Clinical Pharmacology, Beijing, China.

In 2006, I was awarded a travelling grant that enabled me to attend and participate in the 15th World Congress on Animal, Plant and Microbial Toxins, Glasgow, Scotland, United Kingdom.

In 2006, I successfully participated in a consortium of scientists that was awarded Kshs eight million (**8 million**) by the Kenya Agricultural Productivity Project (KAPP) Grant to undertake Research on Herbal Medicines.

2008 - 2012 Awarded Research Grant under EDULINK-ACP-EU Cooperative Program in Higher Education Europe Aid/125565/D/ACT/Multi-Improving Capacity of Health Sector Researchers in CP HEIs by sharing Worldwide Recognized IT Tools and Experiences. This European grant was awarded to Institutions of Higher learning in Kenya, Uganda, and Tanzania. The grant allocated to Kenya and administered by the University of Nairobi was approximately Kenya shillings seven million (**KShs7 million**).

Between April and May 2015, I secured funding to visit **SRI RAMACHANDRA UNIVERSITY** to establish linkage in Training, Research, Staff and Student exchange in collaboration with **Prof. D. Chamundeeswari**, Principal, Faculty of Pharmacy, Chennai, INDIA.

COMMUNITY SERVICES TARGETING THE YOUTH

Between 1990 and 2008, I decided to assist young boys and girls from different parts of the country while they were waiting for a period of two years before joining the universities. The program was targeting students from poor families that had qualified to join local universities. I made contact with the Directors of Sterehe Boys Centre and many students from the centre joined the program. The students were provided with all their daily necessities, accommodation and a monthly income. The students were trained and they acquired skills and knowledge that enabled them to offer primary health related services to

communities in Nairobi.

The students were trained on how to avoid risky behavior and resist temptations that can destroy their future. They were exposed to health related multiple issues that are faced by poverty stricken families and how they are exploited by unscrupulous people driven by greed to become rich. They were trained how to identify fake medicines that was extremely dangerous when consumed by patients. The program managed to assist and transform many young Kenyans and many of them are today successful in various professions.

COMMUNITY PROFESSIONAL PHARMACEUTICAL SERVICES

Between 1989 and 2008, I provided communities in Nairobi (Westlands, Central Business District, and Eastlands) with community professional pharmaceutical services. The services provided included proper use of medication, how to minimize drug interactions, how to identify fake medications, and identification of undesirable effects of medication among many other issues.

I also worked with the Pharmacy and Poisons Board (PPB) to register high quality human and veterinary pharmaceutical products that were manufactured in Denmark. Many Danish pharmaceutical products were registered and introduced into the Kenyan market through the processes of promotion and marketing. Examples of Danish pharmaceutical products that were registered by PPB, promoted and introduced into the Kenyan market are Novagesic-Flu capsules, Pregnatal tablets and Viminova tablets.

PROFESSIONAL AFFILIATION AND MEMBERSHIP TO SCIENTIFIC ASSOCIATIONS

Chairman, Kenya Physiological Society

Founder Member, Kenya Society of Basic and Applied Pharmacology (KeSoBAP)

Council Member, Association of African Physiological Sciences (AAPS)

Member, International Union of Physiological Sciences (IUPS)

Member, International Society for Pathophysiology

Member, Natural Products Research Network for Eastern and Central Africa (NAPRECA)

Member, International Society of Toxicology

Registered Pharmacist, Pharmacy and Poison Board (PPB)

Member of the Pharmaceutical Society of Kenya (MPSK)

RESEARCH PEER REVIEWED SCIENTIFIC PUBLICATIONS/SEMINARS/SYMPOSIUM PRESENTATIONS

1. **Mbugua P. M.**, Thairu K and Telang B. V (1982): Identification and estimation of a cholinomimetic substance in the venom of *Dendroaspis polylepis* Res. Commun. Chem. Pathol. Pharmacol. 36: 187
2. **Mbugua P. M.**, Thairu K and Telang B. V (1982): Neuropharmacological studies of certain snake venoms. Indian J Pharmacol 14: 115
3. Thairu K., Wasunna A., Kofi-Tsekpo W. M and **Mbugua P. M** (1983): Chemical and Pharmacological examination of the herbal preparation “Miti” Proc. 3rd Ann. Med. Sci. Conf. KEMRI-KETRI, 245-248.
4. Karlsson E **Mbugua P. M** and Rodriguez-Ithurrealde D (1984): Fasciculins, anticholinesterase toxins from the venom of the green mamba, *Dendroaspis angusticeps*. J. Physiol., Paris 79 232
5. Harvey A. L., Anderson A. J **Mbugua P. M** and Karlsson E (1984): Toxins from mamba venoms that facilitate neuromuscular transmission. J. Toxicol-Toxins Review 3 (2 & 3) 91
6. Karlsson E and **Mbugua P. M** (1984): Isolation of anticholinesterase toxins in snake venoms. LKB Appl. Note 353.
7. Karlsson E and **Mbugua P. M** (1984): Further purification of some anticholinesterases in black mamba venom using HPLC. LKB Appl. Note 355.
8. Karlsson E and **Mbugua P. M** (1984): A comparison of gel filtration, ion-exchange, hydrophobic interaction and reverse phase chromatography in the fractionation of complex samples. LKB Appl. Note 354.
9. Anderson A. J., Harvey A. L and **Mbugua P. M** (1985): Effects of fasciculin 2, an anticholinesterase polypeptide from green mamba venom, on neuromuscular transmission in mouse diaphragm preparations. Neurosci. Lett. 54: 123.
10. Karlsson E., **Mbugua P. M** and Rodriguez-Ithurrealde D (1985): Anticholinesterase toxins. Pharm. Ther. 30: 259
11. **Mbugua P. M** (1985): Anticholinesterase Toxins in Mamba Venoms. PhD Thesis, University of Nairobi.
12. Ndungu T K Kofi-Tsekpo W M and **Mbugua P M** (1985): Irradiation sterilization of pharmaceuticals and other medicinal products: Methods and approach for Kenya. Proc. 6th Ann. Med. Sci. Conf., KEMRI/KETRI.
13. **Mbugua P. M** and Karlsson E (1985): Fasciculins from *Dendroaspis angusticeps* venom and their effects on cholinesterases. Toxicon 23: 595.
14. **Mbugua P M** Welder A A and Acosta D (1987): The toxic effects of mamba snake venoms in primary myocardial cell cultures. The Toxicologist 7: 92
15. **Mbugua P M** Welder A. A and Acosta D (1987): The toxic effects of mamba snake venoms in primary endothelial cell cultures. The Toxicologist 7: 92
16. Swann J **Mbugua P M** and Acosta D (1987): Nephrotoxicity induced by mamba

- venoms in cultured rat cortical epithelial cells. *Tissue Culture Ass. Manual* 38: 72
17. Davilla J **Mbugua P M** and Acosta D (1987): Cytotoxic actions of *Dendroaspis* venoms in primary cultures of rat hepatocytes. *Tissue Culture Ass. Manual* 38: 74
 18. **Mbugua P M** Welder A A and Acosta D (1988): Isolation and characterization of four subgroups of mamba (*Dendroaspis*) cardiotoxins using primary cultures of rat myocardial cells. *The Toxicologist* 8: 159
 19. Adem A Asblom A Johansson G **Mbugua P M** and Karlsson E (1988): Toxins from the venom of the green mamba *Dendroaspis angusticeps* that inhibit the binding of quinuclidinyl benzilate to muscarinic acetylcholine receptors (BBA 12211). *Biochim Biophys Acta* 968 (3): 340
 20. **Mbugua P M** Welder A A and Acosta D (1988): Cardiotoxicity of Jamesoni's mamba (*Dendroaspis jamesoni*) venom and its fractionated components in primary cultures of rat myocardial cells. *In vitro cell & Dev. Biol.* 24 (8): 743
 21. **Mbugua P M** Welder A A and Acosta D (1988): Cardiotoxicity of Kenyan green mamba (*Dendroaspis angusticeps*) venom and its fractionated components in primary cultures of rat myocardial cells. *Toxicology* 52: 187
 22. Mathiu P.M., **P.M. Mbugua** and J. Mugweru (2004). Biological activity screening of some Kenyan medicinal plants. UoN Faculty of Veterinary Medicine Biennial Conference, Kabete.
 23. Mathiu P.M., **P.M. Mbugua** and J. Mugweru (2005). Screening for Biological activity of *Solanum Incanum* and *Conyza Sumatrensis* using the isolated Rabbit intestine. *The Kenya Veterinarian* 2005.
 24. Mathiu P.M., **P.M. Mbugua** and J. Mugweru (2004). Biological activity screening of some Kenyan medicinal plants. 4th International Congress; African Association of Physiological Sciences (AAPS), 21-26th November, Tetouan – Tangier, Morocco.
 25. Mathiu P M **Mbugua P M** Mugweru S (2005): Screening of herbal medicines bioactivity using isolated organ/tissue preparations. *The Veterinarian* 2006.
 26. Kihara M. W, **Mbugua P. M**, Kioy, P. G, Makumi, J. N, Ngeranwa, J. M (2006): In vitro evaluation of antibacterial activity of crude aqueous extract of *Azadirachta indica* (Neem) leaves. 15th World Congress on animal, plant and microbial toxins. July, 2006.
 27. Githinji C. G, **Mbugua P. M** and Kioy P. G (2006) Effects of *Mondia whytei* aqueous root extract on isolated rabbit heart and jejunum preparation. *Journal of the Pharmaceutical Society of Kenya*. Vol18 (1) October 2007.
 28. Kamaku M. W, **Mbugua P. M** and Kioy P. G (2008) Autonomic effects of organic solvent extract of *enzoy* on isolated rabbit heart and jejunum. *Proceedings of the fifth International Congress of the Association of African Physiological Sciences*

- (AAPS).
29. Githinji C. G., **Mbugua P. M.**, Sakari L. F. (2008): Analgesic Effects of *Mondia Whytei* Aqueous Root Extract on Mouse Formalin Test. *Journal of the Pharmaceutical Society of Kenya*. Vol 18 (3).
 30. Mwangi P. W., **Mbugua P. M.**, Kariuki D. K. and Kanui T I (2008). The Analgesic Activity of Ethanol, Chloroform and Chloroform/Ethanol Extracts of *Ocimum Kilimandscharicum* Roots. *Proceedings of the fifth International Congress of the Association of African Physiological Sciences (AAPS)*.
 31. Githinji C. G., **Mbugua P. M.**, Kanui T. I and Kariuki D. K (2008): Antinociceptive Effects of *Mondia Whytei*. *Proceedings of the fifth International Congress of the Association of African Physiological Sciences (AAPS)*.
 32. Kihara M. W., **Mbugua P. M.**, Makumi J. and Ngeranwa J (2008): Evaluation of Antibacterial Activity of Crude Aqueous Extracts of *azadirachta Indica* (Neem) Leaves. *Proceedings of the fifth International Congress of the Association of African Physiological Sciences (AAPS)*.
 33. Hellen N Kariuki, Titus I. Kanui, Abiy Yenesew and Paul M. Mbugua (2008) Antinociceptive Effects of *Toddalia Asiatica* in Writhing and Formalin Tests Using Mice. 12th World Congress on Pain, Glasgow, Scotland
 34. **Mbugua P. M.** and Rotich D (2008): New Approach to Snake Bites Management. *Proceedings of the sixth Biennial Scientific Conference, College of Agriculture and Veterinary Sciences, Faculty of Veterinary Medicine. University of Nairobi*
 35. **Mbugua P. M.** and Rotich D (2008): Teaching Clinical Toxinology Course in Kenya. *Proceedings of the sixth Biennial Scientific Conference, College of Agriculture and Veterinary Sciences, Faculty of Veterinary Medicine. University of Nairobi*
 36. **Mbugua P. M.** and Rotich D (2008): First Aid and Clinical Management of Envenomation Victims. *Proceedings of the sixth Biennial Scientific Conference, College of Agriculture and Veterinary Sciences, Faculty of Veterinary Medicine. University of Nairobi*
 37. **Mbugua P. M.** and Rotich D (2008): Management of Snake Bites in Africa. *Proceedings of the sixth Biennial Scientific Conference, College of Agriculture and Veterinary Sciences, Faculty of Veterinary Medicine.*
 38. G.N. Thoithi and **P.M. Mbugua**. Medishare Activities in Africa 2008-2010. Oral presentation at Medishare conference. Bologna, Italy. 4th- 10th July 2010.
 39. G. N. Thoithi, **P. M. Mbugua**, J. M. Machoki, B. A. Amugune and T. N. Kiama. ICT for Capacity Building in Health Research: Kenyan Experience. Oral presentation at MEDISHARE conference. Nairobi. 26-27th October 2010.

40. Grace N. Thoithi, **P. M. Mbugua**, M. De Rosa, E. Rinaldi, F. Fonju , O. Ngassapa, E. Kaale, R. Adome, P. Kutyabami. ICT for Health, Clinical Research and Education in Africa. Oral presentation at ‘2012 Africa-EU Cooperation Forum on ICT’ . November 28-29, 2012, Lisbon, Portugal.
41. Githinji, C. G, **Mbugua, P.M**, Kanui T.I. and Kariuki D. K. Antinociceptive effects of stigmasterol and 9-hexacosene isolated from *Mondia Whytei* (Hook.f.) Root. International Journal of Phytopharmacology 2011, 2(2), 70 – 75.
42. Githinji, C. G, **Mbugua, P.M**, Kanui T.I. and Kariuki D. K. Phytochemical and analgesic evaluation of *Mondia Whytei* (Hook.f) root. Journal of Pharmacognosy and Phytotherapy (Accepted manuscript under review, October 2011).
43. Mwangi P.W., Wambugu S.N., Kariuki D.K., **Mbugua P.M.**, Kanui T.I. Antinociceptive activities of the ethanolic extracts of *Ocimum kilimandscharicum* Baker ex Gürke and *Ocimum kenyense* ayob. ex A.J. Paton leaves. International Journal of Phytopharmacology. 3(1), 2012, 1-4.
44. Peter Waweru Mwangi, Stanley Nderitu Wambugu, David Kinuthia Kariuki, **Paul Mungai Mbugua**, Titus Ikusya Kanui. Suppression of nociception by *Ocimum masaiense* root extract involves both central and peripheral mechanisms. Phytopharmacology. 2011; 1(5): 148-159.
45. Hellen N. Kariuki, Titus I. Kanui, Abiy Yenesew, Nelish B. Patel, **Paul M. Mbugua**. Antinociceptive activity of *Toddalia asiatica* (L) Lam. in models of central and peripheral pain. Phytopharmacology, 2012; 3(1): 122-129.
46. Hellen Nyambura Kariuki, Titus Ikusya Kanui, Abiy Yenesew, **Paul Mungai Mbugua**, Nelish Bhailalbhair Patel. Antinociceptive activity of root extracts of *Rhus natalensis* Kraus and *Senna singueana*. Phytopharmacology, 2012; 2(2): 312-317.
47. Hellen N. Kariuki, Titus I. Kanui, Abiy Yenesew, Nelish B. Patel, **Paul M. Mbugua**,. Antinociceptive and anti-inflammatory effects of *Toddalia asiatica* (L) Lam. (Rutaceae) root extract in Swiss Albino mice. Pan African Medical Journal 14, 133, 06-Apr-2013
48. Benson Muriuki, Jacob Ogweni Midiwo, **Paul Mungai Mbugua**, Joseph Mungai Keriko. The Antimycobacterial MICs, SARs, and QSARs of some ethnobotanically selected phytochemicals. (2013) Medicinal Chemistry. Research DOI 10.1007/s00044-013-0485-8
49. Hellen N. Kariuki, Titus I. Kanui, Abiy Yenesew and Paul M. Mbugua (2014) Central Antinociceptive Effects of the Coumarins Isolated from Root Extracts of *Toddalia Asiatica* using the Tail Flick Test. 15th World Congress on Pain. Buenos Aires, Argentina
50. Teresa N. Kiama, Rita Verhelst, **Paul M. Mbugua**, Mario Vaneechoutte, Hans Verstraelen, Estambale B, and Temmerman M. "Characterisation of the vaginal microflora of human immunodeficiency virus (HIV) positive and negative

women in a sub-urban population of Kenya." *African Journal of Biotechnology*. 2014;13(9):1075-1085.

51. Muriuki B, Midiwo J. O, **Mbugua P.M**, Gikunju J. K. Review of the Status of Alternative Medicine Practice in Kenya. (2015). *The Pharmaceutical Journal of Kenya*, 2015 22 (3) 77-86.

NAMES AND CONTACT DETAILS OF REFEREES

1. Prof. Isaac O. Kibwage
Tel: 0202725698 /Cell: +254 722728392
Email: okibwage@uonbi.ac.ke
2. Prof. Julius Ogeng'o
Tel: 0202731861/2/ Cell: +254 720837592
Email: jogengo@uonbi.ac.ke
3. Prof. Abiy Yenesew
Tel: 0204442793/4449004 ext 2170
Cell: +254 733832576
Email: ayenesew@uonbi.ac.ke
abiyenesew@yahoo.com