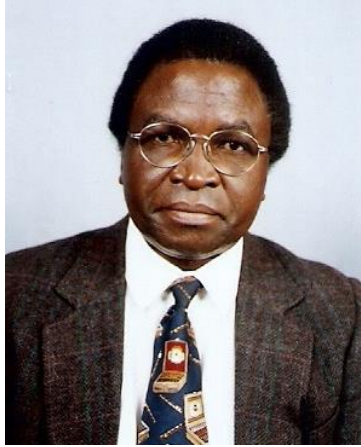


## CURRICULUM VITAE



### **KENYATTA UNIVERSITY**

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Kenya

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**NAME:** PROF. PAUL OKEMO OWUOR PhD.

**DATE OF BIRTH:** 10<sup>th</sup> APRIL 1952

**POST-DOC:** FULBRIGHT SCHOLAR (Colorado State University 2001-2002)

**QULIFICATIONS:** B.SC. (Biochemistry/Microbiology) M.SC. PhD. (Microbiology)

#### **HIGHER EDUCATION**

Kenyatta University- PhD. (Medical Microbiology)-1992-1996

Wyoming State University (U.S.A)-B.SC, (Biochemistry/Microbiology)- (1976) M.SC  
(Microbiology)-1976-1978

#### **EARLY EDUCATION**

Maseno National School,( H.S.C )- 1970-1971- Physics, Chemistry, Biology

Maseno National School,(C.S.C)-1966-1969 ó 15points

Ebusakami Primary School (K.P.E)- 1958-1965

#### **PROFESSIONAL PROGRESSION**

Acting Deputy Vice- Chancellor (academic)- Twice in 2015, and 2016

**Full Professor from 2010 to date**

**And**

**(Dean Graduate School (2011-2018)**

Associate Professor-August 2004 to 2010

Senior lecturer-July 1999- July 2004

Lecturer-June1992-June1999

Tutorial Fellow- September1989-June1992

Deputy Director (Q.A)- Sterling Winthrop- International pharmaceutical Company-1986  
July-Aug. 1989

Head of Microbiology Laboratories (Kenya Bureau of Standards) 1981 July-1986 June .

Production and Q.A Manager (Delmonte óInternational food processing company)

1978Nov.-1981 June

## **SENIOR ADMINISTRATIVE POSITIONS HELD**

- (i) Dean Graduate School at KU (6 years)**
- (ii) C.E.O, African Biological Safety/Security-8 years**
- (iii) Ag Director ACU (3months, then left for Fulbright Scholarship to USA)**
- (iv) Deputy Director (QA) Sterling Winthrop ( International Pharmaceutical Company)- 31/2 years**
- (v) Head of Microbiology Labs (KEBS)- 4years**
- (vi) Production and QC Manager (Delmonte, Kenya Cannery)-3years**

## **COLLABORATIVE RESEARCH IN THE AREA OF SPECIALISATION**

**Muhumbili University (Dar salaam-Tanzania ), Makerere University (Kampala-Uganda)- March 2007 to 2012**

- Lead Research Scientist for the VicRes project on medicinal plants Research on the search for plants used by the local people in the three countries for the treatment of Tuberculosis.

### **Earth watch Institute for climate change and species conservation**

- Lead scientist and Researcher on Samburu community Medicinal plants and worked with Earth watch volunteers from around the world (8 years)

### **Colorado State University USA- August 01-June 02.-(See publications)**

- Novel techniques for focused compound production by plants to provide needed therapeutic drugs

### **University of Essen Medical School, Germany- Sept 1994- April 1995 (See publications)**

- Extraction and efficacy testing of Plant compounds used for treatment of pathogens in man

### **Robert Koch Medical Institute (Berlin Tech. University-West Germany)-may 1984-July 1984.**

- Microbiological screening of urine, stool, body swabs and blood of patients with resistant infections to isolate the infective agent and to determine alternative antimicrobial chemotherapy.

### **At “Landesuntersuchungsinstrikt”(West Germany)-February 1984-April 1984.**

- Isolation and identification of various *mycotoxins* in foods using T.L.C, and Histamin and histidine screening in canned fish.

## **RESEARCH GRANT AWARDS**

- World Bank Grant for Conservation and management of medicinal plants in Kenya 2010-2013
- Eathwatch Research Grant Renewal for Samburu conservation of Medicinal plants 2010-2013
- Horticultural Crops Development Authority Research award ( HRE). Management of bean rust on French beans with selected plant extracts (2008-2009).
- Earth watch Research award for work among the Masai of Likipia and Samburu. (2004-2009)

- VicRes research award for Research in antimycobacterial compounds from medicinal plants used by indigenous people in Siaya, Kisii, Busia and Teso, Kenya.(2006-2009).
- Collaborative Research award with the University of Fort Hare South Africa on microbiological water pollution (2004-2005).
- VicRes Research awards for the Lake Victoria Research on heavy metal pollution and microbial gene transformation (2003-2004).
- Fulbright award for post-doc Research for one academic year at Colorado state university in USA (2001-2002).
- DAAD visiting scholar award to do research at the University of Essen Medical School in Germany (1994-1995).
- Carl Duisberg Centran (CDG) professional award to do research at Robert Koch Technical Institute in Berlin (1984-1985).

#### **HONOURS AND ACCOLADES**

- UN 1540 Consultative committee member
- Africa's representative on the IFBA Board
- Fulbright Scholar
- Recognized by Institute of American Bibliographic society in "WHO IS WHO" in the world , 2003
- DAAD Scholar.
- Member of the Phi, Gamma Honor role USA
- Member of Alpha, Epsilon honor role USA

#### **SHARING SCIENTIFIC RESEARCH WITH THE COMMUNITY (COMMUNITY OUTREACH)**

- Siaya District, (5<sup>th</sup>- 14<sup>th</sup> April 2004). Heavy metal pollution of the Lake Victoria region. Talking to the community about the importance of environmental conservation.; Seme, Alego, Ugenya and Gem.
- Laikipia District working with the community on medicinal plants ( 13<sup>th</sup> -18<sup>th</sup> March 2005), Ngare Ndare, Kisima and Subuiga.
- Laikipia District working with herbalists on medicinal plants (Sept. 6<sup>th</sup>-10<sup>th</sup> , 2006). Lewa conservancy on medicinal plants
- Samburu District (13<sup>th</sup>-27<sup>th</sup> May, 2007). Connecting Earthwatch volunteers to communities in Samburu for investigations on medicinal plants of the Samburu.
- Samburu District ( 3<sup>rd</sup>- 20<sup>th</sup> Sept. 2007). Collecting Indigenous knowledge of the Samburu on medicinal plants.
- Samburu District ( 15<sup>th</sup>- 18<sup>th</sup> April 2008). Talking to the communities; Namunyak, Nkaroni, Ludung- Okwe, Ngetuk-Ongeron, and Ngilai East on scientific findings of their medicinal plants.
- Machakos District Herbalists Association: Training District herbalists on Medicinal plant Conservation and field Management at the Tea Tot Hotel. Sept 27<sup>th</sup> to Oct 2<sup>nd</sup> 2010
- North Rift herbalist Association, at Serikwa Hotel in Eldoret, 14<sup>th</sup> to 18<sup>th</sup> Nov. 2010

- Nyanza Community Health attendants and Herbalists, at Kisumu Hotel, 3<sup>rd</sup> to 8<sup>th</sup> February, 2011
- Western Kenya Herbal practitioners Association, at Bishop Stam Hotel in Kakamega, March 10<sup>th</sup> to 14<sup>th</sup> 2011
- Meru herbal practitioners Association April, 20<sup>th</sup>-24<sup>th</sup> 2011
- Upper Eastern Herbal practitioners Association, at Embu Agricultural training centre, May 4<sup>th</sup> to 8<sup>th</sup> 2011
- Coast Regional herbal practitioners association, at Milele Hotel, June 10<sup>th</sup> to 18, 2011
- Kisii Herbal practitioners Association, June 26<sup>th</sup> -29<sup>th</sup> 2011
- Isiolo and Garisa Herbal practitioners, Moiben Hotel, Isiolo, July 2011
- Kilifi and Malindi Farmers, in Malindi, on Biosafety and impact of GMOS, sponsored by The Government of Kenya under the Biosafety/Biosecurity program 2016
- Kitale farmers on Biosafety and GMOs, at the Kitale Research centre 2016
- Embu farmers at the Embu Government training Centre 2016
- Nyeri farmers Association on GMOS at the Nyeri polytechnic, 2017
- Makueni farmers Association on GMOs, at the Voi Technical College, 2017
- Kwale County Agricultural professionals, at the Kwale polytechnic, 2017
- Kisumu Farmers and community, at Tom Mboya Centre, 2017

#### **SEMINARS ORGANIZED**

- Emerging and Re-emerging infectious Agents on the African Continent, **Casablanca, Morocco, March, 23<sup>rd</sup> to 25<sup>th</sup>, 2015**
- Laboratory Agents use and control, to effectively monitor Biosafety and Biosecurity in Africa, **September, 2014, Cape Town, South Africa**
- Utilization of Biosafety primary and secondary barriers, for prevention of occupational hazards, **Johannesburg South Africa, March, 2013**
- Biorisk management Seminar in **Accra, Ghana, October, 2012**
- Seminar for Franco-phone speaking countries of Western African Continent, sponsored by the US Department for Biosafety Engagement programme on Biosafety/Biosecurity at the Azalai Hotel, **Bamako, Mali. Oct. 15<sup>th</sup>-23<sup>rd</sup>, 2010**
- 1<sup>st</sup> annual International Biological Safety Conference on handling of infectious material in Biological Labs **March 8<sup>th</sup>, 2010 at the KEMRI Training Centre, Nairobi, Kenya**
- International Seminar on Biosafety and Biosecurity CDC/KEMRI sponsored at the KEMRI headquarters, **Nairobi, Kenya. March 16-18, 2009.**
- National seminar in applied microbiology-**April 1999-Methodist conference hall in Nairobi, Kenya.**
- Regional seminar (for the African Region ) **in microbiology- April 2001.**
- Proposal writing seminar for Kenyatta University **Faculty of science-Sept 1999.**
- International seminar in microbiology- **April 2004 at The Kenya school of Monetary studies, Nairobi, Kenya.**

## **SEMINARS AND WORKSHOPS ATTENDED**

- World Bank training workshop for herbalists in Kenya at Nakuru Kenya for the Kericho and Bomet Herbalists, July 6-July 15, 2012
- African Workshop for establishment of Laboratory maintenance Center for Africa at **Enugu, Nigeria, June 14-18, 2012**
- IFBA and AfBSA Conference held at the **Sundon Hotel Johannesburg, South Africa**, on Biosafety and Biosecurity **April 17- 22, 2012**
- World Bank Consultant ( Medicinal and aromatic Plants) ó Training Rural Herbalists at **Bishop Stam Hotel Kakamega, 19<sup>th</sup> March – 25<sup>th</sup> March 2011**
- Conference on Laboratory Medicine organized by The African Society for Laboratory Medicine (ASLA)- **Hilton Hotel Addis Ababa, Ethiopia 14<sup>th</sup> March – 16<sup>th</sup> March 2011**
- World Bank Consultant ( Medicinal and aromatic plants)- Workshop at **Polyview Hotel in Kisumu, 5<sup>th</sup> to 10<sup>th</sup> March 2011**
- Workshop ( World Bank Consultant ) Training herbalists on Conservation and field Management of Medicinal plants, **Pighy Hotel, Maua Meru 21<sup>st</sup>-25<sup>th</sup> Feb 2011.**
- International Conference on Global Biosafety and Bio-security,öTaking actionö **Power Hotel, Bangkok, Thailand, Feb 15<sup>th</sup>-17<sup>th</sup> 2011**
- Workshop ( World Bank Consultant). Training herbalists on Conservation and field Management of medicinal plants, **EAST college Embu, 5<sup>th</sup>-11<sup>th</sup> Jan 2011**
- UN Workshop on öThe beyond Bounderies Initiative: Development and Capacity Building in Kenya with International Security Assistance- The UN 1540, 1373 Initiativeö- **Serena Hotel Nairobi, Kenya. 6<sup>th</sup> Dec. 2010**
- Biosafety/Biosecurity workshop for dealing with zoonotic pathogens at the **Azalai Hotel, Bamako, Mali. 15<sup>th</sup> Oct.-23<sup>rd</sup> Oct 2010**
- Workshop (World Bank Consultant) to train herbalists in methods for conservation and sustainable management of medicinal plants, **Machakos Garden Hotel 21<sup>st</sup>-23<sup>rd</sup> July 2010.**
- The Asia- Pacific Biosafety Association meeting held in **Seoul, South Korea from 24<sup>th</sup> May to 1<sup>st</sup> June 2010**
- Consultative workshop organized by the American Civilian Research and Development Foundation (CRDF) in **Arlington Chicago and Washington DC from 5<sup>th</sup> to 15<sup>th</sup> May 2010**
- The 13<sup>th</sup> Annual Conference of the European Biosafety Association (EBSA) in **Ljubljana, Slovenia from 18<sup>th</sup>-26<sup>th</sup> April 2010**
- African Regional UNSCR 1540 workshop on Biosafety and Biosecurity at **UN offices in Gigiri, Nairobi- Kenya, 2<sup>nd</sup> to 4<sup>th</sup> Feb 2010 .**
- Lake Victoria Research Initiative ( VicRes ), annual forum at **Kenya school of monetary studies from, May 27-30, 2009 Nairobi, Kenya.**
- Biosafety and Biosecurity Awareness workshop, organized by CDC/KEMRI at the **KEMRI headquarters in Nairobi, Kenya, March 16-18, 2009.**

- VicRes donors workshop to present Research findings and to retool the proposals to be more focused on poverty alleviation and environmental restoration in the Lake Victoria Basin **Nile Resort Hotel, Jinja, Uganda 27<sup>th</sup> May-31<sup>st</sup> May 2008.**
- Lead Scientists workshop at Entebbe Uganda to discuss cluster position paper April 8<sup>th</sup>-11<sup>th</sup> 2008.
- Workshop on lead Scientists for the VicRes research project in the East African region held at the **Nile Resort in Jinja, Uganda. 9<sup>th</sup>- 13<sup>th</sup> March 2008.**
- Workshop on Medicinal plant search for indigenous knowledge and plant compound analysis, **Makerere University Uganda 11<sup>th</sup> – 14<sup>th</sup> Oct. 2007.**
- Workshop on Lead VicRes researchers at the **Nile Resort in Jinja , Uganda, 19<sup>th</sup> May- 25<sup>th</sup> May 2007**
- Workshop on the Scientists, partners and Community fellows to work out specific Research and educational mechanisms to carry out in Samburu using existing resources, held at **Bomen Hotel , Isiolo April 5<sup>th</sup> -7<sup>th</sup> 2006.**
- Conference of Stakeholders on Intellectual property Rights (IPR) held at **Hilton Hotel from 3<sup>rd</sup>-4<sup>th</sup> of March 2006.**
- Workshop on the review of papers on the Millenium Development Goals (MDGs), **at Utalii on 2<sup>nd</sup> March 2006.**
- African Programme for Health Innovation óAPHI KEMRI IP and Technology Transfer Management Workshop KEMRI Training Facility, **KEMRI HQ, Nairobi, Kenya. 30<sup>th</sup> January- 3<sup>rd</sup> Feb. 2006.**
- Intellectual property and Transfer of Technology ( IP and TT ) organized by ASARECA, at **Imperial Beach Hotel Resort in Entebbe Uganda, from 31<sup>st</sup> July-6<sup>th</sup> August 2005.**
- Kenya DAAD Scholars Association Conference on Re-Invigorating the University mandate in a globalizing environment: Challenges, obstacles and way **Forward May 26<sup>th</sup>-27<sup>th</sup> 2005.**
- Establishment of the Kenya Biological Resource Centre at the National Agricultural Research Laboratories (**KARI**) in **Nairobi Kenya, 25<sup>th</sup> \_26<sup>th</sup> January 2005.**
- Attended a workshop at the Monsanto gene transformation center in **St. Louis Missouri USA ,19<sup>th</sup>-20<sup>th</sup> July 2004.**
- Attended seminar on Intellectual property Rights at **Michigan State University USA 9<sup>th</sup> –15<sup>th</sup> July 2004.**
- Lake victoria Research Initiative workshop in **Jinja Ugand- 11-15<sup>Th</sup> May 2004**
- Samburu conservation Research initiative (CRI) at **Sportsman Arms Hotel, Nanyuki, August 1<sup>st</sup>-3<sup>rd</sup>- 2003.**
- Strategic planning for conservation of the Samburu ecological system-**Panafric Hotel Nairobi, April 14<sup>th</sup>-16<sup>th</sup>-2003.**
- Handling and disposal of hazardous waste for a friendly environment **Fort Collins Colorado, USA, Feb.10<sup>th</sup>-15<sup>th</sup> the year 2002.**
- Fulbright scholars conference- **Houston, Texas USA- Oct. 24<sup>th</sup> \_27<sup>th</sup>, 2001.**
- International conference in Biotechnology at **Fort Collins USA,-Feb. 2<sup>nd</sup>-7<sup>th</sup>, 2002.**
- Fulbright scholars conference, **Washington DC. 2<sup>nd</sup>-6<sup>th</sup> April 2002.**

- Regional seminar in microbiology-**April 2001.**
- National seminar in Applied microbiology- **April- 1999.**
- National conference on higher Education **April 17<sup>th</sup>-20<sup>th</sup> 2000.**
- African women conference on HIV/AIDS, **June 15<sup>th</sup>-20<sup>th</sup> 2001.**
- Seminar on successful product development and marketing, **Manchester Metropolitan University, UK,-June 10<sup>th</sup>-20<sup>th</sup> 1997.**
- Seminar on 2<sup>nd</sup> MSDN sponsored by Bioinformatics at the **National Museum of Kenya, Dec.14<sup>th</sup>-15<sup>th</sup> 1995.**
- Seminar on managing people organized by **Ashridge Management college, UK. August 5<sup>th</sup>-9<sup>th</sup>, 1988.**
- African Regional Organization for Standardization (RSO) **Oct .and Nov. 1985.**
- FAO/WHO Seminar on Food contamination. **Feb.1985.**
- Seminar on company Standardization, **Oct. and Nov 1982.**
- Standardization and quality control of industrial products, **July 10<sup>th</sup>- 14<sup>th</sup>, 1982, Mombasa, Kenya**

#### **NATIONAL APPOINTMENTS**

- Appointed to the **Task Force on alignment of Education to the Kenyan Constitution and Vision 2030, 2016**
- Appointed and Gazetted by the Cabinet secretary, Education on the **Appeals Board for the National Biosafety Board (NBA), 2014**
- Appointed **National Chairman** for Drafting the National Biosafety ACT 2013
- Head of Drafting the National Program on **Occupational Safety and Health (2012)** (Appointed by DOSH)
- Appointment as **National Coordinator** for training Herbalists in Kenya on Conservation and field management of Medicinal plants- **A Kenya Government and World Bank Project 2010-2013**
- **Chief Executive officer** of the African Biosafety Association (AfBSA) Feb. 2010 to date
- Appointment to serve on the **National advisory panel** to develop Mombasa polytechnic to University status (**Ministerial appointment-Oct. 2006**)
- **Chairman of BOG for Ebusakami secondary school in Vihiga, District 2006** to date
- **National chairman-Alliance for prudent use of antibiotics (APUA)-March 2004.**
- **Executive committee member** of the National Council of Science and technology (**Ministerial appointment**) Aug.14<sup>th</sup>1997
- **Executive committee member (BOG)- Milimani Boys High school ( State House-Ministerial appointment).**
- **National secretary** to the Kenya Society of Microbiology (KSM).
- Member of KU primary school PTA committee and chairman of the sub-committee on discipline.

#### **RESPONSIBILITY AT THE UNIVERSITY**

- **Acting DVC (Academic) January 2016**

- **Dean (Graduate School-2011-2016)**
- Chairman: Promotions and appraisal committee (PAC) Non-Teaching Staff
- **Chairman of the Faculty Board** of Undergraduate studies-1995-2002
- Member of the **University committee to Establish Pwani University** and write course curricula to be taught at the University
- Member of the Board for Centre of Research
- Member of the committee to establish the making of power alcohol by using sorghum produced in arid areas of Kenya
- Member of the committee for the establishment of a medical school at Kenyatta University
- Member of Curriculum development for the school of pharmacy
- Member and Chairman of the committee for the establishment of the Centre for Natural product Research
- Director of the AIDS CONTROL UNIT (ACU)-5 Months
- Member of students disciplinary committee
- Member of committee for the IPR establishment
- Member of the University Board for ICT establishment
- Member of the University committee for HIV/AIDS curriculum development

#### **FACULTY RESPONSIBILITIES**

- Secretary for the Faculty of Science biomedicine research proposal writing.
- Chairman , Board of Undergraduate studies( School of pure and applied sciences)
- Member of Faculty Board of Income Generation.
- Faculty of Science Students Advisor.
- Member of the school Board for the structuring of the science Workshop

#### **DEPARTMENTAL RESPONSIBILITIES**

- Departmental Head of microbiology section
- Departmental postgraduate students advisor
- Secretary Departmental Advisory committee
- Chairman conference publication committee
- Departmental advisor to 1<sup>st</sup> year students.
- Departmental advisor to 4<sup>th</sup> year students
- Chairman Botany Dept. Board of Undergraduate Studies.
- **Acting Departmental Chairman** (Four times, when Prof. Newton was on leave, Prof. Muthuri, Dr. Aloo-Obudho and Dr. Gitonga)
- Departmental seminar co-coordinator
- Chairman of Curriculum Review Committee
- Member of Departmental Board of Postgraduate Studies.
- Member of Departmental Board of Examination Co-coordinators.
- Departmental Librarian.
- Member of Departmental Board of Income Generation.
- Chairman committee for drafting proposal on extension of Tissue culture Laboratory.



- Member of the committee on assessing teaching constraints in the Department.
- Member of the committee for Nature reserve proposal writing.
- Chairman for Review of curriculum.
- Chairman of the conference proceedings preparation committee
- Member of the Departmental Exhibition/ Publicity committee.

#### **EXTERNAL EXAMINATION**

- External examiner for Jomo Kenyatta University of Agriculture and Technology- Botany Department, Department of Microbiology
- Makerere University- Department of Geology
- External Examiner for Maseno University- Department of Zoology
- External Examiner for the University of Nairobi Collage of Health sciences
- External Examiner for the University of Eldoret
- External Examiner for the University of Ghana at Legon

#### **UNDERGRADUATE PROJECT SUPERVISION**

- Have successfully supervised **17 project students** at Kenyatta University
- Have supervised another **11 projects at JKUAT** in medical Microbiology

#### **POSTGRADUATE STUDENT SUPERVISION**

##### **Completed supervision for Masters Degrees**

- **Joseph Matofali-Msc.(1999)**. Intramammary infection in the one humped Kenyan camel *Camelus dromedarius* with Streptococcus species and its influence on subclinical mastitis.
- **Daniel Mungai-Msc.(1999)**. Analysis of microbial hazards of lake Victoria Nile perch (*Lates niloticus*) processing at industrial level in Kenya.
- **Ochieng Mark Ongochi Msc.(2000)**. Heavy metals: cadmium ,copper, iron, lead, manganese and zinc in well water Resources in Kisumu municipality.
- **Andrew Nyerere-Msc.(2003)**. Characterization of antimicrobial resistance in salmonella enterica serovar Typhi isolates from recent out brakes in Kenya.
- **Davis Mukwabi- Msc (2003)**. Occurrence and population changes of pathogens, Salmonella and Vibrio spp.in the Nile perch and Nile tilapia at selected markets in Nairobi.

##### **Completed Supervision after becoming Associate professor in the year 2004**

- **Perpetual Wangui Ndungu Msc. ( 2005 )**. Bacterial and Rotaviral causes of diarrhea in children under 5 years and genetic basis of antibiotic resistance.
- **Benear Apollo Obanda, Msc. ( 2005 )**. Evolutionary relationship between Trypanosome evansi and Trypanosoma brucei with respect to specific mitochondrial antigen and phenotype knockout analysis.
- **Alice A. Odundo, Msc. ( 2006 )**. Hygienic practices of the street food vendors and microbiological quality of selected cooked street vented foods in Mombasa Island.

- **Lilly W. Gathu, Msc. ( 2006 ).** Antimicrobial activity of selected medicinal plants from central province
- **Josephine M. Ngari, Msc. ( 2006).** A study on the efficacy of Nakuru Town sewage treatment works..
- **Monica A. Wandolo, Msc. ( 2007 ).** Food safety and Hygienic practices in the informal food outlets: A case study of food Kiosks in Kibera slums, Nairobi.
- **Davis Asanga, Msc. (2007).** Evaluating plants used traditionally for the control of Fungal diseases for use as pesticides.
- **Margaret Githiri, Msc.(2007).** Food handling practices at Kenyatta National Hospital, Nairobi Kenya: A study of *Salmonella*, *Escherichia coli* and *Staphylococcus* food poisoning.
- **Raphael Mathaka, Msc. (2007).** Antibiotic resistance arising from stressed environments- A comparison of Githurai clinics and Nairobi Hospital
- **Wesonga Stephen, Msc. (2007).** Examination of antibiotic resistance arising from the use of prophylactic antibiotics in chicken feed.
- **Wenslaus Makhatsa Luvonga. Msc. (2008)**Evaluation of antimicrobial activity of some plants used by traditional healers in Kakamega District for treatment of microbial infections..
- **Enock Bichanga Amboga Msc.(2008)** Anti-mycobacterial efficacy of selected medicinal plants used by herbal Doctors in Kisii to treat respiratory infections.
- **Ernest Kiprono Ruttoh Msc (2008).** Anti-microbial efficacy of selected plants used by traditional medical practitioners in Keiyo District, Kenya.
- **Adelaide Ayoyi Ogutu Msc.( 2009).** Detection of antibiotic resistant and virulent factors in *Escherichia coli* from broiler chicken at Tigoni processing plant in Limuru, Kenya.
- **Sifuna Anthony Wawire Msc. (2009).** Microbiological quality and safety of *Rastrineobola argentea* (Omena) sold on Kisumu town markets, Kenya
- **Njue Lucy Gicuku Msc. (2009).** Efficacy of onion (*Allium cepa L.*) and garlic (*Allium sativum L.*) Juice as meat preservatives.
  
- **Kimando,J. Maina Msc. (2008).** Resistance to Antibiotics in Urinopathogenic Bacteria Isolated in patients attending Kenyatta University clinic
- **Theddeus Muange Kiswii (2009).** Incidence of *Aspergillus flavus* and aflatoxin levels in Maize in Eastern Kenya and efficacy of Plant extracts against the fungus.
- **Omori Eric Omwenga (2009).** The efficacy of selected medicinal plants used to treat diarrhoeal diseases by the Samburu community.
- **Mutuku Christopher Sikuku Msc (2010).** Association of metal tolerance with multiple antibiotic resistance in bacteria isolated from wetlands of Lake Victoria basin\_ Kenya.
- **Jeophita June Mwajuma Msc. (2010).** Bacteriological quality of water and antimicrobial susceptibility of pathogenic isolates from selected water sources in Samburu South community.

- **Jacinta Emacar Msc. (2010).** Antibiotic susceptibility and genotypes of *Escherichia coli* isolated from HIV sero-positive adults at Mbagathi District Hospital- Nairobi
- **Kirui Kibii Julius (Msc.) (2010).** Efficacy of common medicinal plants used by Samburu community to treat waterborne diarrheal diseases.
- **Judith Inoti (Msc.) (2010).** Assessment of Microbial and Chemical Safety of selected Urban-grown vegetables: A Case of Thika Municipality.
- **Richard Mariita Mongare Msc. (2010).** Efficacy of medicinal plants used for treatment of Tuberculosis by communities around the Lake Victoria Region and Samburu District against *Mycobacterium* and *Candida* spp.

### Completed supervision after becoming full professor

#### PhDs;

- **Silas Kiruki, Egerton University (2011);** Molecular characterization of Enteropathogenic Bacteria and Protozoa in River Njoro and Nakuru Municipal waters and their Drug Resistance Levels
- **Amuka Omari Reg. I84/7069/2003; (2012)** Efficacy of medicinal plants used by the Ogiek community against Microbial related conditions.
- **Ogao Alfred PhD- Biochemistry Dept. (2013)**
- **John Muriithi Mathenge, (2016)** Food Handlers perception on food safety, occurrence and characterization of Enterotoxigenic *Staphylococcus aureus* isolated from foods of animal origin in Nairobi, Kenya
- **Mwajuma June Jeophita, (2016)** Metagenomic analysis of bacterial communities in drinking water distribution systems in Mombasa County, Kenya

#### Masters:

- **Khayota Grace Tago Reg. I56/CE/15668/05; (2012)** Prevalence of HSV-2, syphilis and Hepatitis B in HIV-1 individuals in selected Health facilities in Nairobi, Kenya
- **Sila Onesmus Nzunga' Reg. I56/1472/2007 (2011)** Physico-chemical and Bacteriological Quality of selected water sources in Kithimani area, Yatta District, and efficacy of common water treatment methods
- **Henry Omondi Samson Reg. No N50/13388/2009; (2011)** Conservation of indigenous Medicinal plants among the Samburu Pastoral community in Kenya.
- **Mutsami Anne Naliaka Reg. No i56/CE/15622/2005 (2011).** A comparative study of antibiotic Resistance profile among enteric bacteria in broilers and traditional chicken from selected farms in Kericho, Kenya
- **Dominic Menge Shane Nyasetia. (2011)** Antifungal activity of selected crude plant extracts on bean rust (*Uromyces appendiculatus*) and their effects on physiological activities of French beans
- **Edson K. Kemoi (2012).** Isolation and characterization of Yeasts from *Gallus gallus* Droppings in Kabigeriet village, Olenguruone.
- **Elizabeth K. Kago (2012).** Effects of Cabbage plant residues and chemical soil fumigation on Bacterial wilt caused by soil-Borne *Ralstonia solanacearum*

- **Josephine Odhiambo Anyango (2012).** Isolation and identification of Pathogenic and spoilage Bacteria and Fungi found in preserved Crustaceans and Fish sold in Mombasa, Kenya.
- Shem Joab Ochieng-Msc.- Biochemistry Dept.
- **Josephine N. Wokabi (2012).** Establishment of *in-vitro* micropropagation protocol for farmers preferred cocoyam [*Colocasia esculenta* (L) schott] and *Xanthosoma saginifolium* (L) Schott. Cultivars grown in Kenya.
- **Caroline Nyawira Wahome (2013).** Contamination levels of underground water, antimicrobial resistance patterns, plasmid profiles and chlorination efficacy in Ongata Rongai, Kajiado North County, Kenya
- **Nyamboya Rosemary Atieno (2013).** Antibioqram, metal tolerance and plasmid profiles of pathogens isolated from wastewaters and sludge of Abattoirs in Nairobi, Kenya.
- **Maureen K. Luvanda (2014).** Validation of DI-Electric Heating as a potential food safety intervention
- **Shem Joabh Ochieng (2014).** Isolation and molecular characterization of composting Bacteria from Municipal solid waste disposal sites in two Kenyan Cities, Nairobi and Kisumu
- **Jacinta Emacar (2013).** Antibiotic susceptibility and genotypes of Escherichia coli isolated from HIV sero-positive adults at Mbagathi District Hospital, Nairobi
- **Abuga Samwe Onyambu (2014).** Antimicrobial activity of some medicinal plants used by the Samburu Community of Northern Kenya against selected Bacterial and fungal pathogens
- **India Jacqueline (2015).** Efficacy of some Medicinal Plants used in various parts of Kenya in treating selected Bacterial and Fungal Pathogens.
- **Dennis N. Mose (2015).** Isolation, Identification and characterization of Microbial contaminants in selected Biosafety Laboratories in Kenya
- **Kogo Kipchumba Kenneth (2015).** Culturing, characterization and identification of Candidate Micro-organisms in Cattle ear, Responsible for producing volatile constituents attractive to the Brown Ear Tick
- **Current supervision at various stages of completion.**
  - Fidensio K. Ndegwa- PhD-Pharmacy Dept
  - June Mwajuma PhD Botany Dept
  - Mutsami Anne Naliaka-Msc.- Botany Dept
  - Samwel Abuga Onyambu- Msc.-Botany Dept..
  - Dominic Menge-Msc. Botany Dept. JKUAT
  - Ndungu Duncan K. Msc. PMS Dept.
  - Jack Masinde Wasike Msc. PMS Dept
  - Elizabeth Kago Msc. PMS Dept.
  - Jacklyne India Msc. PMS Dept
  - Mulaa Mary Kanini Msc. PMS Dept.

## EXAMINATION OF THESES FROM OTHER UNIVERSITIES

Have examined most of the thesis for my students since I have been the first supervisor for most of them. In some cases I have been the only supervisor. In addition I have examined many from other Universities including the following:

#### **University of Nairobi College of Health Sciences**

- **Dr. Peter Ndirangu Karimi** (Msc. Medical microbiology)- Etiology and risk factors of bacterial wound infection.
- **Dr. Salinah Jeptoo Rono** (Msc. Medical microbiology)- Bacteriological quality of drinking water supplies: A comparative study of Eldoret and Kitale

#### **Makerere University, Uganda**

- **Musisi Lubowa Nathan** (Msc. Molecular Biology and Biotechnology)- Multiple drug resistance determinants in sediment-based *E. coli* of wetlands in Northern shores of Lake Victoria and their transferability in association with heavy metals
- **Nadunga Irene** (Msc. Environment and Natural Resource). The Ethnobotany and Conservation Status of Herbal Medicinal plants used to treat Zoonotic Diseases in Mabira Forest Reserve

#### **Jomo Kenyatta University of Agriculture and Biotechnology**

- **Andrew Nyerere Kimanga (PhD Microbiology)**- Prevalence of *Helicobacter pylori* infection, the virulence Genotypes and Host immunological Responses in Disease Outcomes among Kenyan Dyspeptic patients
- **Hellen Adhiambo Ogot** ( Msc. Microbiology )- Isolation characterization and identification of pesticide degrading Bacteria from soil and intestinal tract of termites from around Juja town in Thika District.
- **Romano Muturi** ( Msc. Microbial physiology )- Isolation of bacteria from the gut of termites and determination of their fermentation products
- **Andrew K. Nyerere** ( Msc. Medical microbiology )- Antimicrobial resistance patterns and transfer of resistance genes within and outside the spicis.
- **Akenga Jacqueline Ongachi** ( Msc. Medical Microbiology)- Screening of selected antidiarrhea medicinal plants for In-vitro antimicrobial activity against Enterobactriaceae from clinical and environmental sources.
- **Harriette E. Sande** (Msc. Institute of Tropical medicine)- Mapping *Trichomonas vaginalis* among women living in Kisumu, Kenya.
- **Lango Marcella Owuor** (Msc. Medical microbiology)- Molecular characterization of Antibiotic Resistance in non-typhi Salmonella from Adults with bacteraemia admitted at the Aga Khan University Hospital
- **Julius Kinuthia Mwangi** (Msc.- Biotechnology)- Enrichment and isolation of dichlorodiphenyl trichloroethane, DDT, microbial degraders from uncontaminated tropical soils.
- **Fred O. Orina (Msc-Medical Microbiology)**- Effects of Temperature and Media On Preservation and Recovery Of *Mycobacterium tuberculosis* Strains
- **Regina Mongana Ntabo (Msc. Microbiology )**- Influence of culture media and incubation conditions on the pollution of cultivable microorganisms in soils and termite guts and isolation of antibiotic and enzyme producing strains.

- **Salome O. Gitari (Msc.Public Health)**-Aetiology and antimicrobial susceptibility patterns of bloody diarrhea at Tabitha Medical Clinic in Kibera, Kenya.
- **Victoria Dinda ( Msc. Public Health)**-Surveillance of surgical site infections at the Aga Khan University Hospital, Nairobi, Kenya.
- **Sheila konga Emmanuel (Msc.)**. Prevalence and associated factors for syphilis in pregnant women in Juba, Southern Sudan.
- **Robert Onsare Sanaya( Msc.)** Plasmid and integron analysis of multi-drug resistant strains of non-typhoid Salmonell isolated from patients in Nairobi Kenya
- **Victor Oduor Omballa (Msc.)**. Incidence and subtype of human metapneumo-virus among selected rural and urban populations of Kenya, 2006-2009
- **Ndegwa, Doris Wangari (Msc)**. Characterization of Aminoglycoside reasistant strains of Escherichia, Klebsiella, Pseudomonas and Acinetobacter implicated in invasive infections in Nairobi, Kenya
- **Moses Mucugi Njire (Msc.)**. Antimicrobial effects of selected herbal extracts on multi-drug resistant Gram-negative bacteria
- **Ahenda Petronella Achieng (Msc.)** Prevalence and Epidemiology of Enteric viruses in children attending Lwak Mission Hospital, Western Kenya
- **Nerry Jepehircher Kittur (Msc.)**. Factors Associated with uptake of voluntary counseling and HIV testing among pregnant women attending antenatal clinic at Kenyatta National Hospital, Kenya
- **Muhonja N. Christabel (Msc.)**. Characterisation of antibiotic Resistance among environmental enteric pathogens in Gatwekere village of Kibera Slum-Kenya.
- **Eliud Nalianya Wafula (Msc.)**. Molecular and culture-based analyses of soil bacteria in Ngare Tea catchment area of Murang`a County, Kenya.

#### **Maseno University**

- **Sarah Awuor Wandili (Msc)**. Phenotypic and Genotypic Characterization of Salmonella Isolated from *Oreochromis niloticus* (Nile Tilapia) along Lake Victoria in Western Kenya.
- **Elizabeth Ockeyo Otieno ( Msc. Hospitality and tourism )**- Post harvest fish quality safety and socio economic conditions of small scale traders in Kisumu City.
- **Scolastica Auma ( PhD. Zoology )**.-Pollution in Lake Victoria and determination of effects of pollutants on the microbial flora of the lake and the dynamics of gene transfer and resistance in the wetlands of the Lake region

#### **University of Eldoret**

- **Lydia Nyamuamu (PhD. Biological Sciences)**- *In vitro* and *in vivo* antiamebic activity, cytotoxicity, phytochemical screening and acute toxicity of *Senna dydymobotria (fresen)* Irwin crude extract

#### **PhD Thesis examined at Kenyatta University:**

- **Tom K. O. Olielo (PhD óNutrition and Dietetics)**- Availability, Nutritional quality and safety of processed fruit products in Nairobi, Kenya.

- **John Muthini Maingi ( PhD- Plant and microbial Sciences)-** Nitrogen fixation in promiscuous soybean ( Glycine Max (L.) varieties in Eastern Kenya.
- **Bonventure Wachekone Juma (PhD)** Molecular Epidemiology of Enterotoxigenic Escherichia coli and other Enteric pathogenic Bacteria isolated in Machakos District Hospital, Machakos County, Kenya

#### **Review of external journals**

- Journal of Applied Science and Technology
- East African Medical Journal
- Journal of Tropical Microbiology and Biotechnology
- African journal of Environmental studies and Human Sciences (AJESHS)

#### **PUBLICATIONS IN INTERNATIONAL JOURNALS**

1. **Okemo, P, Fabry, W and Ansorg, R. (1996).**Activity of East African medicinal plants against *helicobacter pylori*. *European Journal of Chemotherapy*, 42:315-317.
2. **Okemo p.,Fabry, W. and Ansorg, R (1996)** Fungistatic and Fungicidal activity of East African medicinal plants. *European Journal of Mycoses*,39: 67-70.
3. **Okemo, P., Fabry W, Wanjiru, M. Chhabra, S. C. and Ansorg, R. (1996).**Susceptibility of *Helicobacter pylori* and *Candida spp.* to the East African plant, *Terminalia spinosa*. *European Journal of Drug Research*, 46(1).5:539-540.
4. **Oguge, N. Ndungu, D. Okemo, P. (1997).** Effects of Neem plant (*Azadirachta indica juss, Meliaceae*) on maize grain consumption by three common pests in Kenya. *Belgium Journal of Zoology*,127:129-135.
5. **Okemo, P. Wanjiru, M. and Chhabra, S. C. (1998).** Antibacterial activity of plant extracts-a comparison of agar dilution and microtitre broth dilution methods. *Discovery and innovation*, 1/2:106-110.
6. **Fabry, W. Okemo, P. and Ansorg, R. (1998).** Antibacterial activity of East African medicinal plants. *Journal of Ethnopharmacology*, 6:79-84.
7. **Okemo, P. Mwatha, E. W. Ngigi, S. K. (1999).** Activity of some medicinal plant extracts against fungal plant pathogens. *East African Journal of Science*,1(2):89-95.
8. **Okemo,P. Mwatha W.E. Chhabra S.C. and Fabry, W. (2001).** The kill kinetics of *Azadirachta indica A. Juss. Meliaceae*).extracts on *Staphylococcus aureus*, *Escherichia coli*, *Pseudomonas aeruginosa* and *Candida albicans*. *African Journal of science and Technology*, 2(2):113-118.

9. **Okemo, P.** Harsh, P. B. and Vivanco, M. (2002). In-vitro activity of *Maesa lanceolata* extracts against plant pathogens. *FITOTERAPIA* ,74: 312-316.
10. **Okemo, P.** Mwatha, E. W. (2002). In-vitro activity of extracts of East African medicinal plants against HIV/AIDS related *Mycobacterium spp.* *Journal of Tropical microbiology*, 1:30-36.
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15. **Okemo, P. O.** (2004). Time-kill kinetics of *Entada abyssinica* A. Rich (*Leguminosae*),extracts against pathogenic *Staphylococcus aureus*, *Escherichia coli*, *Pseudomonas aeruginosa* and *Candida albicans* .*East African Journal of Science* :5(1):3-10).
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23. Ernest K. Ruttoh, Paul K. Tarus, Christine C. Bii, Alex K. Machocho ,Lucas K. Karimi and **Paul O. Okemo (2009)**. Antibacterial activity of *Tabernaemontana Stapfiana Britten* (Apocynaceae) extracts. **African Journal of traditional, Complementary and alternative Medicines 6(2): 186-194.**
24. Omwenga E. O. **Okemo P.** Mbugua P. K. and C.P.K. Ogol **(2009)**. Ethnobotanical survey and Antimicrobial Evaluation of Medicinal plants used by the Samburu Community (Kenya) for treatment of Diarrhorea. **Pharmacognosy Research 4(18):166-176.**
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26. Njue, L. G., **P.O Okemo** and E.O Monda **(2009)**. Efficacy of onion (*Allium cepa* L.) and garlic (*Allium sativum* L.) juice against common pathogens associated with meat. **Journal of Tropical Microbiology and Biotechnology. 5: 8-13**
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29. Githiri M, **Okemo P. O,** and Kimiywe J.**( 2010)**. Hygienic practices and occurance of Coliform and Staphylococcus on food at a public hospital in Nairobi, Kenya **International Journal of Applied Biosciences, 27:1727-1731.**
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  36. Richard M. Mariita, **Paul O. Okemo**, John A. Orodho, Claude Kirimuhuzya, Joseph N. Otieno, Magadula J. Joseph. (2010). Efficacy of 13 medicinal plants used by indigenous communities around Lake Victoria, Kenya, against tuberculosis, diarrhoea causing bacteria and *Candida albicans*. **International Journal of pharmacy and technology. 2 (3): 771-791.**
  37. John Orodho, C. Kirimuhuzya, Joseph N. Otieno, Joseph J. Magadula, and **Paul Okemo (2011)**. Local Management of Tuberculosis by Traditional Medicine Practitioners in Lake Victoria Region. **The Open Complementary Medicine Journal 3: 1-9**
  38. Omori E. Omwenga, Richard M. Mariita, Lawrence Alaro and **Paul Okemo (2011)**. Evaluation of methanolic extracts of six medicinal plants used by herbal practitioners in central province, Kenya. **International Journal of Pharmaceutical Sciences and Research, 2(4):867-874.**
  39. Marita R. M., Orodho, J. A, **Okemo, P. O.** Kirimuhuzya C. Otieno J. N. And Magadula J. J. (2011). Methanolic extracts of Aloe secundiflora Engl. Inhibits in-vitro growth of tuberculosis and diarrhea-causing bacteria. **Pharmacognosy Research. 3(2):100-104**
  40. Ngari , J. M. K. Kotut., and **P. Okemo (2011)**. Threat to wildlife posed by enteric pathogens from Nakuru sewage treatment plant.. **African Journal of Health Sciences 18(1-2): 85-95)**
  41. Bunalema L., Kirimuhuzya C., Tabuti J., Waako P., Magadula J., Otieno N., Orodho J., **Okemo P. (2011)**. The efficacy of the crude root bark extracts of *Erythrina*

*abyssinica* on Rifampicin *Mycobacterium tuberculosis*. **African Health Sciences** 2 (4): 587-593.

42. Kiruki Silas, Limo Kiprop Moses, Njagi Eliud Nyaga, and **Paul Owuor Okemo (2011)**. Bacteriological quality and diarrhoeagenic pathogens on River Njoro and Nakuru Municipal water, Kenya. **International Journal for Biotechnology and Molecular Biology Research** Vol. 2(9) pp. 150-162
43. Otieno J.N. Magadula J.J. , Kakudidi E. Kirimhuzya C. Orodho J., and **Okemo P. (2011)**. Use of Ethnobotanical criteria for Conservation assessment of plants used for respiratory diseases in Lake Victoria Region, Tanzania. **International Journal of Biodiversity and Conservation**. 3(10):712-800.
44. Kirimuhuzya C., Bunalema L., Waako P., Tabuti J., Orodho J., Magadula J., Otieno N., **Okemo P., (2012)**. Efficacy of *Cryptolepis sanguinolenta* root extract on slow-growing rifampicin resistant *Mycobacterium tuberculosis*. **Journal of Medicinal Plant Research** 6 (7): 1140-1146.
45. Kiende J.I, Kawaka, F. Orinda G. And **Okemo P. (20012)**. Assessment of heavy metal concentrations in urban grown vegetables in Thika town Kenya. **African Journal of Food Science** 6(3)41-46.
46. Eric Omwenga Ogot Calistus Paul Mbugua and **Paul Okemo, (2012)**. Ethnobotanical identification and anti-microbial Evaluation of some anti-diarrhoeal plants used by the Samburu Community, Kenya, 8(2): 68-74. **Malaysian Journal of Microbiology**
47. Joseph J. Magadula, Joseph N. Otieno, Ramadhani S. Nondo, Claude Kirimuhuzya, E. Kadukuli, John A. Orodho and **Paul Okemo (2012)**. Anti-Mycobacterial and Toxicity Activities of some priority medicinal plants from Lake Victoria Basin, Tanzania. **European Journal of Medicinal Plants** 2(2): 125-131
48. Omwenga E.O, **Okemo P.O,** and Mbugua P.K. (2012). *In- Vtro* antimicrobial and preliminary Phytochemical scening of some Samburu Anti-diarrhoeal medicinal plants-Kenya. **South Asian Journal of Experimental Biology**, 2(5): 217-226
49. E. K. Kago, Z. M. Kinyua, **P. O. Okemo,** and J. M. Maingi (2013). Efficacy of Brassica Tissue and Chalim<sup>Tm</sup> on control of Plant parasitic Nematodes. **Journal of Biology** 1(1):25-32
50. Margaret Githiri, Judith Kimiywe and **Paul Okemo (2013)**. Knowledge in food hygiene and hygienic practices differ-in food handlers at a hospital in Nairobi, Kenya. **African Journal of food Science and Technology** 4(1):19-24.
51. Nyamboya Rosemary Atieno, **Okemo Paul Owuor,** and Ombori Omwoyo (2013). Heavy metal and associated antibiotic resistance of fecal coliforms, fecal streptococci and pathogens isolated from wastewaters of abattoirs in Nairobi, Kenya. **Journal of Applied Biosciences** 64:4858-4866

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57. Omari A, **Okemo P.O**. Machocho A. Mbugua P. Njagi. N.M. and Nyamache A K. (2013). The Role of Phytomedicine in the Challenges of Emerging, Re-Emerging Diseases; and pathogens Resistance to Antibiotics. *International Journal of Herbal Medicine* 1(4):92-101
58. Kemoi E. K. **Okemo P.O** and Bii, C. C (2013). Pathogenic Cryptococcol species Co-presence with Salmonella in rectal swabs of domestic chicken (*Gallus Gallus*) at Kabigeriet Village, Nakuru County, Kenya. *East African Medical Journal* (90)1: 116-120
59. Kago E. K., Kinyua Z,M, **Okemo P.O** and Maingi J.M (2014). Effects of Cabbage Tissue and Calcium Hypochlorite on soil Fertility and yield of selected Solanaceous Crops. *Annual Research and Review in Biology* 4(3): 547-559
60. Caroline N.W , **Paul O. Okemo** and Kebira A. N. (2014). Microbial quality and Antibiotic Reseistant Bacterial pathogens isolated from Groundwater Used by Residents of Ongata Rongai, Kajiado North County, Kenya. *International Biological and Biochemical Sciences* 8(1): 134-143
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63. Mutuku, C. **Okemo P. O.**, and Boga H., (2014). Metal pollutants distribution within Lake Victoria Basin and their influence on the Native and Transient Microbial Flora. *Journal of Agricultural and Biological Sciences*, 9(4): 127-133.
64. Omari A., **Okemo P. O.** Machocho A and Mbugua P. K. (2014). Ethnobotanical Survey of selected Medicinal Plants used by Ogiek Community in Kenya against Microbial Infections. *Ethnobotany Research and Applications* 12:1547-1565
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71. **Okemo P.** Aloo P. A. Makila D. M. Jumbe J and Sifuna W. (2016). Contamination of minnow, *Rastrineobola argentea* through handling at landing sites and retail markets around Lake Victoria. *East African Medical Journal* 94: 1-5
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#### PAPERS PRESENTED AT CONFERENCES

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2. **Okemo, P. O.** Mwatha E. W. Chhabra, S.C. (1999). Activity of some medicinal plant extracts against slow growing *Mycobacteria* . National conference of microbiology. April 17<sup>th</sup>-20<sup>th</sup>, Nairobi, Kenya.
3. **Okemo P. O.** Mwatha, E. W. (2001). Activity of *Ximenia caffra* extracts against pathogenic bacteria. Regional conference of applied microbiology April 24<sup>th</sup>-28<sup>th</sup>, Nairobi, Kenya.
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