

## INTRODUCTION

The Department of Public Health, Pharmacology and Toxicology (PHPT) is one of the five academic departments in the Faculty of Veterinary Medicine. It offers training, research and consultancy services in the following areas: Veterinary Public Health, Epidemiology, Food Hygiene (meat, milk and eggs), Meat Inspection, Zoonoses, Water Hygiene, Food Microbiology, Food Safety and Quality Assurance, Livestock Economics and Business Management, Pharmacology and Toxicology of Veterinary Drugs and Natural Products. Teaching takes place in the Department for both undergraduate and post graduate programs.

The Department is located at the College of Agriculture and Veterinary Sciences (CAVS), Upper Kabete Campus of the University of Nairobi. It comprises of two sections:

- Public Health Section
- Pharmacology and Toxicology Section

## ACADEMIC PROGRAMMES

### Undergraduate training:

The department offers the following courses to undergraduate students studying for the following Bachelor's degrees in the faculty.

- Bachelor of Veterinary Medicine
- Bachelor of Wildlife and Tourism Management
- Bachelor of Science in Leather Science and Technology
- Diploma in Leather Technology
- Diploma in Veterinary Public Health and Meat Technology
- Certificate in Meat Hygiene and Quality Assurance

### Courses Offered:

- Public Health
- Epidemiology
- Biostatistics and Computer use
- Pharmacology and Toxicology
- Livestock Economics and Business Management
- Management and Entrepreneurship
- Food and Beverage Production, Sales and Service
- House Keeping

- Tourism Economics and Impact Management
- Public Relations and Entrepreneurship
- Leather Technology

The Department in collaboration with the Meat Training Institute will soon start offering Diploma in Veterinary Public Health and Meat Technology

### Postgraduate training:

Courses are offered in each academic year starting in October. Application for admission can be received any time.

### Masters programs:

The Department offers the following four masters degree programs that are offered by coursework and thesis.

1. Master of Science in Pharmacology and Toxicology
2. Master of Veterinary Public Health
3. Master of Veterinary Epidemiology and Economics
4. Master of Natural Products and Bioprospecting
5. Master of Science in Leather Science

### PhD programs:

Ph.D. programs are offered in the following areas of specialization.

1. PhD in Pharmacology and Toxicology
2. PhD in Veterinary Public Health
3. PhD in Veterinary Epidemiology and Economics
4. PhD in Natural Products and Bioprospecting
5. PhD in Leather Science

The PhD programs are currently offered by research and thesis.

### Consultancy Services:

The Department of PHPT provides consultancy services in the following areas:

- Microbiological quality analysis of food, water and feeds
- Toxicity studies for pest control products
- Antibiotic residue analysis of food, honey and animal feeds (HPLC is used for analysis)
- Pesticide residue analysis of food and feed products including meat, fish, milk, honey, feeds, etc (GC) is used for analysis

- Aflatoxin analysis of food, feeds and other samples (using TLC, ELISA and HPLC techniques)
- Toxicological analysis of food and animal feeds
- Drug assays, residues and clinical trials of drugs
- Meat speciation tests
- Epidemiological and field surveys on areas of specialization.
- Training on Department areas of specialization

### Research Areas:

The Department carries out research mainly in the following areas:

- Food safety and hygiene (Meat, milk and fish)
- Zoonotic diseases: Epidemiology, diagnosis, control and prevention
- Food borne diseases: Epidemiology, diagnosis, control and prevention
- Chemical residues in foods and feeds (antibiotics, and other drugs, pesticides and mycotoxins)
- Evaluation of safety and efficacy of drugs
- Molecular pharmacology
- Pharmacology and toxicology of medicinal plants
- Toxicity of new pesticides
- Epidemiology and economics of livestock diseases

## ACADEMIC STAFF AND THEIR AREAS OF SPECIALIZATION

### Chairman:

Prof. Ombui, J.N. B.V.M. M.Sc., Ph.D. (Nbi) - Public Health, Food safety and hygiene, microbial biotechnology, antibiotic residues in food, antibiotic resistance..

### Professors:

Gathuma, J.M., B.V.Sc., M. Sc., Ph.D. (Nbi) – Veterinary Public Health. Parasitic zoonosis, epidemiology, Animal health economics.

Maitho, T. E., B.V.M. M.Sc. (Nbi) Ph.D. (London) – Pharmacology and Toxicology. Non-steroidal anti-inflammatory drugs, clinical trials, pesticide and drugs residues in food and feeds.

Mitema, S.E.O., B.V.M. (Nbi), M.S. (Kansas), Ph.D. (Nbi) – Pharmacology and Toxicology. Chemotherapeutic agents

against haemoprotozoa, antibiotic residues studies, calcium channel blockers.

Kang'ethe, E.K., B.V.M. (Nbi), M.Sc., (Bristol), Ph.D. (Nbi) – Public Health. Meat Science, forensic meat science, meat hygiene, Urban animal husbandry.

#### **Associate Professors:**

Kagiko, M. M., B.V.M., M.Sc., Ph.D. (Nbi) – Public Health. Parasitic zoonoses, immunology and food microbiology.

Arimi, S.M., B.V.M., M.Sc. (Nbi), Ph.D. (Reading) – Public Health, Milk hygiene, food microbiology and zoonosis.

Ombui, J. N., BVM, MSc., PhD (Nbi). Public Health, Food safety and hygiene, microbial biotechnology, environmental hygiene.

Njeruh, F.M., B.V.M., M.Sc., Ph.D. (Nbi) – Public Health., Immunology of parasitic zoonosis. Milk hygiene.

Ogara, W. O., D.V.M., M.Sc., Ph.D. (Moscow) – Public Health, Meat and Fish hygiene, Environmental Health and hygiene, Environmental Impact Assessment.

Kitala, P.M., B.V.M., M.Sc., Ph.D. (Nbi) – Public Health. Viral zoonoses, epidemiology and disease control programs on rabies.

Mbaria, J.M., B.V.M., M.Sc., Ph.D. (Nbi) - Pharmacology and Toxicology. Medicinal and poisonous plants.

#### **Senior Lecturers:**

Gathura, P.B., B.V.M., M.Sc., Ph.D. (Nbi) – Public Health. Parasitic zoonosis, immunology and water hygiene.

Kanja, L. W., B.Sc., M.Sc., Ph.D. (Nbi) – Pharmacology and Toxicology, Analytical chemistry, pesticide residues in food and mother's milk.

Muchemi, G.M., B.V.M., M.Sc., Ph.D. (Guelph) – Public Health. Parasitic zoonoses, Biostatistics.

#### **Lecturers:**

Nderu, F.M.K., B.V.M., (Nbi), M.P.V.M. (California) – Public Health. Meat hygiene.

Kahunyo, J.M., B.V.M., M.Sc., (Nbi) – Pharmacology and Toxicology. Pesticide residue in food, mycotoxins.

Senerwa, D. M., B.V.M., M.Sc., Ph.d. ongoing (Nbi) – Public Health; Food microbiology, Molecular biology, bacterial plasmid transfer and resistance.

Macharia, S.M., B.V.M., M.Sc., (Nbi) – Public Health. Epidemiology and animal health economics, control of zoonoses.

Oguna, M.J., B.V.M., MSc., (Nbi) ongoing Ph.D. (Nbi) – Pharmacology and Toxicology. Reproductive pharmacology.

Mapenay, I.M., B.V.M., M.Sc., Ph.D. (Nbi) – Pharmacology and Toxicology. Reproductive pharmacology.

Nguta, J. M., B.V.M., M.Sc., ongoing Ph.D – Pharmacology and Toxicology, Medicinal plants.

Above G. O., B.V.M., M.Sc (Nbi), Ph.D. (Japan) – Molecular Pharmacology

#### **Tutorial Fellows:**

Onono, J. O., B.V.M., MSc., Ph.D.– Public Health. Epidemiology and Biostatistics.

#### **Chief Technologist:**

Nduhiu Gitahi, HND., P.M. (KIM), M.Sc., (KU). Immunology, Molecular Biology, Food Microbiology.

#### **Senior Technologists:**

Mr. Robert R. Koske, HND, BSc. (MKU)

Mr. Kenneth N. Maloba, HND

Mrs. Lucy W. Mwangi, HND

Mrs. D. W. Nduati, HND, Bphil. (TUK)

#### **Technologists:**

Marimba, A. K.

Macharia, J. K.

Gitau F. K.

Nderitu J. G.

Mainga A. O., Dip., BSc. (MKU)

Bett L. K.

Ateku A. P.



The Department has much more to offer to industries, the public and all stakeholders in Public Health, Pharmacology, and Toxicology related areas.

Clients are encouraged to visit or call the department for services.

For more information on training, research collaboration consultancy and partnerships, please contact the chairman through the contacts given over leave.



## **UNIVERSITY OF NAIROBI**

### **COLLEGE OF AGRICULTURE AND VETERINARY SCIENCES (CAVS)**



### **FACULTY OF VETERINARY MEDICINE**

### **DEPARTMENT OF PUBLIC HEALTH, PHARMACOLOGY AND TOXICOLOGY**

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