



DEPARTMENT OF PUBLIC HEALTH, PHARMACOLOGY AND TOXICOLOGY

NEWSLETTER

VOLUME 1, ISSUE 1 APRIL-JUNE 2013

SPECIAL POINTS OF INTEREST:

- Accreditation of the Meat Training Institute
- Consultancy activities in Somalia
- Training programs in Leather Science and technology
- Medicinal Plants research.
- Postgraduate students enrolment

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UNIVERSITY OF NAIROBI ACCREDITS THE MEAT TRAINING INSTITUTE TO OFFER DIPLOMA IN VETERINARY PUBLIC HEALTH AND MEAT TECHNOLOGY

In 2011, the University of Nairobi accredited the Meat Training Institute to offer a 2-year diploma training in Veterinary Public Health and Meat Technology under the supervision of the Department of Public Health, Pharmacology and Toxicology. The department in collaboration with the Ministry of Livestock development and Meat Training Institute developed the program which was later approved by the University Senate.

The decision to develop the program arose from the felt need to produce middle level personnel with skills and technical competence required to control emerging zoonoses and food borne diseases; advice on the hygiene and quality of meat, milk, fish and eggs meant for

human consumption; inspect meat, milk, eggs, and fish meant for human consumption; grade carcasses correctly and advise farmers on how to produce high quality animals; instruct, supervise



The first group of 36 applicants were admitted in November 2012.

and advise on all slaughterhouse operations; control hygiene in slaughterhouses, fish landing sites, meat and

fish processing plants and meat transport containers; and facilitate local and international trade of live animals and animal products.

In addition, the program will provide opportunities for career development to the large number of Ministry of Livestock staff carrying out the important meat hygiene and inspection duties who hold only certificates in animal health and meat inspection. This cadre of staff have worked in the same grade for a long time as there were no opportunities to progress academically.

The Diploma in Veterinary Public Health is the first of its kind in Kenya and in the region and will provide opportunities for academic progression of such disadvantaged workforce. It attracted a large number of applicants from the Ministry of

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The Department Supports NGOs to Implement Development Projects in Somalia

For the past three years, the Department of Public Health, Pharmacology and Toxicology has been supporting FAO and VSF-Germany to implement development projects in Somalia regions that are emerging from the long time effects of civil war.

Staff from the Department of Public Health, Pharmacology and Toxicology and those from other Departments of the Faculty of Veterinary Medicine are involved in this endeavor. Areas

in which the Department has been involved include training, livestock and meat value chain analysis and needs assessment. The training programs are aimed at capacity building for the livestock and public health sectors, while value chain analysis and needs assessment are meant to identify areas that require development and policy interventions to enhance performance of the sector.

The department has implemented the following training

programs for the livestock sector:

1. Training of meat inspectors for Puntland and Somaliland regions.
2. Training of Public Health Master trainers for Central Somalia
3. Development of Public Health training manual.
4. Training in milk hygiene and quality assurance for Puntland staff

Prof. Jackson N. Ombui,
Chairman

Faculty of Veterinary Medicine starts to offer training in Leather Science and Technology



The Faculty of Veterinary Medicine, University of Nairobi launched training programs in Leather Science and Technology this academic year 2012/2013. The University Senate approved the Diploma in Leather Technology, BSc in Leather Science and Technology, Masters in Leather Science and PhD in Leather Science in 2011 after extensive consultation with the major stakeholders including the Ministry of Livestock Development tannery owners and other private sector players.

This is the first University in Kenya (and indeed in the Eastern Africa region) to offer the training programs.

Previously, only certificate training in Leather Technology was done at the Animal Health and Industrial Training Institute (AHITI), Kabete. Training at higher levels could only be done in South Africa, United Kingdom and India where these courses are offered.

However, due to the high costs involved, few people have managed to go for further studies and they have done so through government scholarships which are normally few and competitive. For instance, in the past 30 years, the Government of Kenya through the Ministry of Livestock Development has been able to train only six (6) people at Diploma level, four (4)

at Bachelor's level and three (3) at Master's level. This number is obviously inadequate for the rapidly expanding local leather industry considering that some of them have already left the government service through natural attrition.

Currently, there is a serious shortage of skilled manpower in the country's leather sector both at technical and managerial levels. This shortage will be alleviated by the training programs which have been launched at the faculty. The local leather sector has huge economic development potential in terms of job and wealth creation, as

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The leather sub-sector was identified as one of the economic pillars in vision 2030 in the government blue print.

Livestock Development staff when it was first announced in May 2012, confirming the existence of a huge demand for this kind of program in the country.

The first group of 36 students were admitted for their first semester in September 2012 and are being trained at the meat training Institute. Training is mainly done by the staff at the Meat Training Institute who are Veterinary doctors holding Bachelor of Veterinary Medicine. Staff from the Faculty of Veterinary Medicine are involved through guest lectures and training in

Laboratory practical. Students will be exposed to extensive field training. Persons interested in joining the program are encouraged to visit the departmental website: www.phpt@uonbi.ac.ke for admission requirements.

Prof. Jackson N. Ombui, PhD
Chairman

Department Appoints New Lecturer



Dr. Gabriel Oluga Aboge was recently recruited to position of Lecturer in the Department. Dr Aboge who recently got his PhD from Gifu University in Japan joined the Department in November 2012. He brings to the Department important molecular pharmacology skills that are required to carry out cutting edge research in the area of novel drug discovery such as antifolates and Doxp based drugs using recombinant DNA technology.

PhD Student Wins Research Grant



Mrs Lucy Gicuku Njue, a PhD student in the department won a research grant from the National Council for Science and Technology to develop a natural meat preservative from garlic. Conventional preservatives cause a number of health problems while garlic has potential to prevent development of high blood pressure and cancer.

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well as in industrial development of the country. The leather sector was identified as one of the economic pillars in vision 2030 in the government blue print.

The Leather Science and Technology programs launched at the Faculty of Veterinary Medicine will therefore develop the required skilled manpower at affordable costs and within reach of qualified students both in Kenya and the East African region. Training is currently being done in collabora-

tion with Animal Health and Industry Institute, Kabete, and

The first group of 13 diploma students in a practical session.

local tanneries where students go for practical classes. Among the tanneries, Alpha Rama and East African Tanneries have hosted students for practical lessons. Potential students are encouraged to enroll in these programs as there is a bright future for leather technology

experts. The ministry of Agriculture, livestock and fisheries is in the process of developing a leather institute at Ngong that will go along way to support training in leather Science and Technology

By Joel Mwendu

Part-time Lecturer and PhD Student



“Rush to enroll for postgraduate studies in Veterinary Epidemiology and Economics”

Surely there must be a good reason for this. Find out and join them ASAP..

Masters in Veterinary Epidemiology and Economics recorded a 4-fold increase in enrolment

For the first time since inception of the Master of Veterinary Epidemiology and Economics in 1992, the program recorded a 4-fold increase in student enrolment reaching an all time high of 18 students. On average, the program normally enrolls 4 students per academic year. This is in contrast to the other four masters programs offered in the department that enrolled between 0-3 students this academic year.

The increased enrolment can be attributed partly to the increasing demand for epidemiologists in the Ministry of Livestock Development and partly to a perception of a lucrative job market for skills in epidemiology and economics by potential applicants. Enrolment to the program in the last four years was as follows:

2012/2013: 18 students
2011/2012 : 4 students
2010/2011: 2 students

2009/2010: 4 students

There must be a good reason for this rush to enroll for postgraduate studies in Veterinary Epidemiology and Economics.

Prof. JN. Ombui
Chairman

A Masters student carries out research on animal bites and burden of rabies in Kangundo and Machakos Counties



Ms. Leelia Rasamond Andrews, a postgraduate student from Liberia undertaking Masters in Veterinary Epidemiology and Economics is carrying out research

on the prevalence of animal bites and associated burden of rabies in Kangundo and Machakos Counties.

The project is aimed at estimating the incidence of animal bites on humans and the application of the One Health Approach in the control of rabies in the two counties. Animal bites on humans is a growing problem in large urban centers in many parts of the world. They can result in dangerous infections that include rabies, pasteurellosis, cat scratch fever, tularemia and tetanus. In Kenya, rabies problem has been greatest in the two counties where

the disease has persisted since mid 1950s. The information to be collected will be used by policy makers to formulate appropriate strategies to control the problem of animal bites and burden of rabies in the two counties.





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Consultancy Services Offered

The Department provides the following consultancy services:

- Microbiological quality analysis of food, water and feed
- Toxicity studies for pest control products
- Antibiotic residue analysis of food, honey and animal feeds
- Pesticide residue analysis of food and feed products including meat, fish, milk, honey, feeds, etc
- Mycotoxin analysis of food, feeds and other samples
- Toxicological analysis of food and animal feeds
- Drug assays and efficacy trials
- Meat speciation tests
- Heavy metal analysis in foods, water and animal feeds.

Natural products Research in the Department

Conventional medicines that have been used for centuries to date were mainly produced from microorganisms such as penicillium, streptomycetes and others. Discovery of new medicines based on microorganism has not happened for along time now. New medicines are now being discovered from natural products especially medicinal plants. There are more than 250,000 known plant species on earth, but only about 5000 or so species are known and are being utilized to provide food and medicines world wide.

The benefits of the rest of the plant species have not been identified and hence not yet been utilized in any way. There are possibly many plant species that have potential to produce efficacious medicines for use to cure the many ailments affecting both human and livestock.

This fact has been acknowledged by researchers worldwide and currently there is an accelerated effort towards discovery of drugs based on natural products. In Kenya a lot of people depend on natural remedies to cure an array of ailments in

both human and animals. The knowledge on which plants are of medicinal value is mainly with the indigenous communities and among few people who practice the trade.

To participate in drug discovery, the department recently launched a masters program in Natural Products and Bio-prospecting that is focusing on identification of natural products



with medicinal value, document the available indigenous knowledge and validate natural products already in use. Seven students are currently enrolled in the program, while 3 students are pursuing their PhD in this area.

Potential students are invited to apply for admission into these programs to participate in this new frontier of drug discovery as it is now clear that future medicines will be based on natural products. This is evidenced by the discovery of *artemisinin*, an anti-malarial products that is now the major remedy for control of malaria.

Prof. Jackson. N Ombui
Chairman

Note to contributors

This newsletter will be published on a quarterly basis. The next issue will be produced in the period July-September 2013. Staff and students are encouraged to contribute short topical stories to be featured in subsequent issues.