

UNIVERSITY OF NAIROBI
COLLEGE OF AGRICULTURE AND VETERINARY SCIENCES
DEPARTMENT OF VETERINARY PATHOLOGY, MICROBIOLOGY AND
PARASITOLOGY

ANNUAL REPORT 2010/2011

1.0 INTRODUCTION:

Department of Veterinary Pathology, Microbiology and Parasitology was among the first departments that started with set-up of Faculty of Veterinary Sciences of the University of East Africa, Makerere in 1962, which later evolved to Faculty of Veterinary Medicine in 1970, when University of Nairobi was established by an act of parliament.

The department is located on upper Kabete campus on Loresho Ridge Road, off Kapenguria Road, approximately 2 kilometers from the main Nairobi-Kikuyu-Limuru Highway. It is approximately 15 kilometers North-West of Nairobi City center. It comprises of the following sections: Pathology (gross-pathology, histopathology and clinical pathology), Microbiology (bacteriology, mycology, virology and immunology) and Parasitology (helminthology, entomology and protozoology); and carries out the following other services: diagnostic pathology, diagnostic microbiology, diagnostic parasitology, poultry clinic, and mycotoxin analysis.

The department is involved in:-

(1) The teaching of both undergraduate (Bachelor of Veterinary Medicine, BSc. in Biomedical Technology and BSc. in Wildlife Management and Conservation) and postgraduate (MSc and PhD) students in the following disciplines: - Pathology, Clinical pathology, Microbiology, Immunology, Parasitology and Diagnostic pathology, and Fish Science.

(2) Servicing other departments through teaching some of their courses. These include departments within the Faculty of Veterinary Medicine (Animal Production, Public Health, and Clinical Studies), Faculty of Human Medicine (Biochemistry) and Faculty of Agriculture [Department of Agricultural Economics and Department of Land Resource Management of Agricultural Technology (LARMAT)].

(3) Carrying out problem-oriented research, which is geared towards improving animal health and production (domestic and wild, including poultry, fish and rabbits), human health, poverty alleviation and ensuring environmental sustainability; respective findings being disseminated to the general public via publications, workshops, seminars, conferences, farm visits and field days

(4) Offering demand-driven diagnostic services in diseases of both domestic and wild animals, including poultry, fish and rabbits; and zoonotic diseases. These diagnostic services also form part of the training component for both undergraduate and postgraduate students

2.0 COURSES OFFERED IN UNDERGRADUATE PROGRAMS.

The Department teaches courses on pathology, microbiology and parasitology in the following programs that are offered by the faculty of veterinary medicine: Bachelor of Veterinary Medicine, BSc. in Biomedical technology and BSc. in Wildlife management and Conservation. The department also services course in degree programs offered by Faculty of agriculture and faculty of medicine

3.0 COURSES OFFERED IN POSTGRADUATE PROGRAMS AND STUDENT ENROLLMENT

a) MSc programs

	Students Registered in the department by 2010	Year Graduated	MSc. Programmes in the Department.	Number of Students Graduated in 2010/2011
1	1) Dr. Kyalo Micheal Makau 2) Dr.Obonyo Fredrick Ojiambo	2011	MSc. in Applied Vet. Parasitology	2

	3) Dr.Nyamweya Joel Makau 4) Dr. Donald Lubembe Mukolwe 5) Dr.Chege Hanna Wambui 6) Dr. Wagula D. Warui	2011		
2	1) Dr. Mutinda Wanzila Usyu 2) Dr. Gathogo Stephen Mwangi 3) Dr. Ithinji Duncan Gitonga 4) Dr. Eunice Cherono Chepkwony 5) Dr. Mutua Victoria Ngo'ndu 6) Dr. Kibore Benson 7) Dr. Maina S. Migwi 8) Kemboi David Chebutai	2011 2011 2011 2011	MSc. in Applied Microbiology	4
3	1) Hungu Charity Warigia 2) Dr. Mulei Isaac Rumpel 3) Dr. Kutto Elisha Kimutai 4) Dr. Mwihi Evalyn Wanjiru 5) Dr. Mavuti Stephen Kitonga 6) Dr. Muneri Caroline 7) Dr. Wilson Kuria Gachugia	2011 2011 2011	MSc. in Vet. Pathology & Microbiology	3
4.	1) Thanda Carter		MSc. in Vet Pathology and Diagnostics	0
5.	1) Dr. Kamundia Patick Waweru		MSc. in Fish Science	0

	Total number of MSc. graduated in 2011			9

b) **PhD Programs:** Each program offered at MSc is also offered for PhD

	Name of the student	Name of program	Year Graduated	No. Graduated in 2010/2011
1.	1) Thomas Manyimbe Nyariki	Vet Pathology and Diagnostics		0
2.	2) Simon Mwangi Kihu	Applied Microbiology		
3.	3) Dr. Vincent O. Obanda	Applied Microbiology		
	Total number of PhD graduated in 2010/2011			0

4.0 EXTERNAL EXAMINERS IN 2010/2011

- a) Dr.Ciira Kiiukia- Jomo Kenyatta University- Kenya (Microbiology- semester I)
- b) Dr. Joseph M. Nginyi- Kenya Agricultural Research Institute (Parasitology- Semester I)
- c) Dr. Rubaire- Akiiki- Makerere University- Uganda (Parasitology- semester II
- d) Dr. Denis K. Byarugaba- Makerere University- Uganda (Microbiology- Semester II
- e) Prof. George Mwamengele- Sokoine University of Agriculture- Tanzania (Pathology- Semester II)

5.0 ONGOING RESEARCH PROGRAMS

- a) Evaluation and commercialization of medicinal plants' extracts for improved livelihoods: a case study of East Coast fever'. Kenya Agricultural Productivity (KAPP) Project Prof. P.K. Gathumbi

- b) Camel Productivity. Kenya Agricultural Productivity (KAPP) Project. Dr. C.G. Gitao.
- c) The enhancement of the camel milk chain; the case of Wajir and Garisa Districts in North Eastern Province. A project supported by World Bank under the Kenya Agricultural Productivity programme 2006-2009 – Dr. C.G. Gitao.
- d) Enhancement of sustainable productivity of fish in the Lake Victoria through control of pollutants, VicRes Project. Dr. P.G.Mbuthia.
- e) A survey of enteric thermophilic bacteria in backyard and commercial chickens. Dr. J.K.N. Kuria,
- f) Microbial isolates from canine surgical wounds: A retrospective and prospective study. Dr. J.K.N. Kuria.
- g) Urban and Peri-Urban Livestock Farming and the Risks to human health – Lake Victoria Research Initiative (VicRes). Prof. P.W.N. Kanyari.
- h) Prevalence, intensity and pathology due to endo/ecto-and haemoparasites of indigenous chickens and ducks in Kenya. Dr. P.G. Mbuthia.
- i) Prevalence and pathology due to parasites in Tilapia and Catfish in River Tana and Lake Victoria Kenya. Dr. P.G. Mbuthia.
- j) Enhancement of sustainable productivity of Fish in lake Victoria through control of pollutants with emphasis on endocrine disruptors and microbial pathogens funded by The Lake Victoria Research (VicRes) Initiative Dr. P.G.Mbuthia
- k) Diagnostic and control tools and strategies for *Taenia solium* cysticercosis funded by ASARECA. Prof. N. Maingi
- l) Enhancing livestock productivity through control of Rift valley fever in East Africa – US\$ 60,000.00 awarded by RUFORUM Investigator: Prof. P.N. Nyaga, Investigators: Dr. L.W. Njagi, Prof. George Gitau, Prof. Kariuki, M.N
- m) Promoting Excellence in PhD training in East Africa) under PREPARE PhD project funded by EU. Prof. L.C. Bebora.
- n) Further work on Salmonella and E-coli. Prof. L.C. Bebora

6.0 RESEARCH RELATED ACHIEVEMENTS:

6.1 The **department** has established a successful tree nursery of medicinal plants (Figure 1) at University site at Ngong hills under the project on, ‘evaluation and commercialization of medicinal plants’ extracts for improved livelihoods: a case

study of East Coast fever'. Funded by World Bank grant through Kenya Agricultural Productivity (KAPP) led by **Prof. P.K. Gathumbi**. From this project, medicinal plants seedlings were donated to CAVS tree planting activities and to tree planting activities in selected schools

6.2 The **department** has established and maintained a successful botanical garden of medicinal plants at CAVS field station for conservation, teaching and recreational purposes under the project on, '**Evaluation and commercialization of medicinal plants' extracts for improved livelihoods: a case study of East Coast fever**'. Funded by World bank grant through Kenya Agricultural Productivity (KAPP) led by **Prof. P.K. Gathumbi** (Figure 2)

7.0 NEW RESEARCH GRANTS

7.1 ENHANCING VILLAGE CHICKEN PRODUCTIVITY THROUGH PARASITE MANAGEMENT FOR EFFECTIVE NEWCASTLE DISEASE VACCINATION IN KENYA by L.C. Bebor¹, N. Maingi¹, P.N. Nyaga¹, **P.G. mbuthia**¹, C.O. Gor¹, L.W. Njagi¹ and J.M. Githinji² selected for funding by RUFORUM (Requested funding **US\$ 59,984.0**)

7.2 L.C. Njagi - Research project on, 'controlling infectious bursal disease through development of local vaccines and establishing effective vaccination program'- Kshs. 2,500, 000, funded by the Kenya national Council For Science and technology in April 2011 (Appendix 20)

7.3 Dr. Joyce Maina, P.G. Mbuthia and others- Research project on 'Enhancement of sustainable aquaculture industry' – Kshs 7,000,000.00 funded by the Kenya National Council for Science and Technology(Appendix 21)- see Dr Mbuthia's file

7.4 Margaret Wanyoike, P.K. Gathumbi and others- Research project on 'Rabbit productivity Value Chain' - Kshs. 10,000.00 Funded by Kenya National Council for Science and Technology

7.5 G.N. Thoithi, P.K. Gathumbi and others- Research project on, ' Novel approaches towards identification of new anthelmintic drugs through bioprospecting' Kshs. 1,500,000.00 funded by National council For Science and Technology)

8.0 PUBLICATIONS

- 8.1 Sabuni Z A, **Mbuthia P G**, Maingi N, Nyaga P N, Njagi L W, Bebora L C and Michieka J N. **2010**. Prevalence of ectoparasites infestation in indigenous free-ranging village chickens in different agro-ecological zones in Kenya. *Livestock Research for Rural Development* 22 (11) 2011
- 8.2 L.W Njagi, P.N Nyaga, **P.G Mbuthia**, L.C Bebora, J.N Michieka, U.M Minga **2010**. A retrospective study of factors associated with Newcastle disease outbreaks in village indigenous chickens. *Bulletin of Animal Health and Production in Africa*, **58: 22-33**
- 8.3 A.G Thaiyah, P.N Nyaga, J.M Maribei, D Nduati, **P.G Mbuthia**, T.A Ngatia. **2010**. Experimental *Solanum incanum* poisoning in goats. *Bulletin of Animal Health and Production in Africa*, **58: 35-43**.
- 8.4 J.M. Nguta, J.M. Mbaria, D.W. Gakuya, P.K. Gathumbi, S.G. Kiama (2010). Traditional antimalarial phytotherapy remedies used by South Coast community, Kenya. *J Ethnopharmacol.131: 256-267*
- 8.5 S.M. Kihu^{1,*}, C.G. Gitao¹, L.C. Bebora¹, J.M. Njenga¹, G.G. Wairire², N. Maingi¹, R.G. Wahome, ¹Risk factors and socio-economic effects Associated With Spread of Peste Des Petits Ruminants in Turkana District Kenya . Second Biannual conference of the Regional Universities Forum for Capacity Building in Agriculture 20th-24th September 2010 Entebbe
- 8.6 C.G. Gitao¹, S.M. Kihu^{1,*}, L.C. Bebora¹, J.M. Njenga¹, G.G. Wairire², N. Maingi¹, R .G. Wahome, ¹ Developing capacity for implementing innovative PPR control strategies based on the Epidemiology and Socio-economic aspects of the disease in the East African region. Second Biannual conference of the Regional Universities Forum for Capacity Building in Agriculture 20th-24th September 2010 Entebbe

- 8.7 JM Kagira, **PWN Kanyari**: The role of Veterinary and Medical Personnel in the Control of Zoonoses in Urban Settlements on the Shores of Lake Victoria, Kenya. 13th Association of Institutions for Tropical Veterinary Medicine (AITVM) conference Aug. 22nd – 26^h 2010. Sofitel centara Grand Hotel Bangkok Thailand
- 8.8 **C.J. Nganga**, D.W. Gakuya, R.M. Waruiru, A.Z., Sabuni and B.S. Muasa (2010). Use of Albendazole - levamisole combination in controlling multiple anthelmintic resistance in a sheep farm in Kabete, Kenya. 7th Faculty of Veterinary Medicine Biennial conference Sept. 8th – 10th 2010
- 8.9 Njagi L.W., Nyaga P.N., Mbuthia P.G., Bebora L.C., Michieka J. N., and Minga U.M.(2010): A respective study of factors associated with Newcastle disease outbreaks in village indigenous chickens. *Bulletin of Animal and Production, vol 58, No 1* (2010)
- 8.10 Chepkwony E.C. **Gitao C.G.** Muchemi G.M, collection, serotyping and characterization and of Foot and Mouth disease virus in circulation in the Somali Eco-system in Kenya. The Faculty of Veterinary Medicine Biennial conference Sept. 8th – 10th 2010
- 8.11 Cheplwony E.C. **Gitao C.G.** Muchemi G.M. Factors leading to Non-confirmation and Under-reporting of Foot and Mouth disease virus in circulation in the Somali Eco-system in Kenya. The Faculty of Veterinary Medicine Biennial conference Sept. 8th – 10th 2010
- 8.12 Chepkwony E.C. **Gitao C.G.** Muchemi G.M. Sero-prevalence of Foot and Mouth disease in the Somali Ecosystem in Kenya Sept. 8th – 10th 2010
- 8.13 **N Maingi** and G K Njoroge: A Constraints on production, disease perceptions and ticks and helminths control practices on dairy cattle farms in Nyandarua District, Kenya. *Livestock Research for Rural Development. Volume 22, Article 138, Retrieved August 2,*

- 8.14 G O Matete, **N Maingi***, G Muchemi, W Ogara and J M Gathuma: Design and development of an electronic identification and traceability system for cattle under pastoral production systems: A case for Kenya *Livestock Research for Rural Development. Volume 22, Article #139, Retrieved August 2, 2010*
- 8.15 L W Njagi, P N Nyaga, **P G Mbutia**, L C Bebor, J N Michieka, J K Kibe and U M Minga.2010. Prevalence of Newcastle disease virus in village indigenous chickens in varied agro-ecological zones in Kenya [Livestock Research for Rural Development 22 \(05\) 2010](#).
- 8.16 **Mbutia P.G.**, C.G. Mathenge and P. W. Kamundia. **2010**. Fish Diseases in Kenya: Current Status and Future Trends in Changing Environment. Presented at 7th Biennial Scientific Conference & Exhibition, 2010. Faculty of Veterinary Medicine University of Nairobi. Theme: One Health in a Changing Environment at CAVS Kabete on 8th to 10th September 2010 (abstract in the proceedings).
- 8.17 Kamundia, P.W., **P.G. Mbutia**, Waruiru R. M, Njagi L. W., Nyaga P. N., Mdegela, R.H., Byarugaba, D. K. and Otieno R.O. **2010**. Pathological Changes in selected organs of Nile Tilapia and Nile Perch in Lake Victoria, Kenya. Presented in the 7th Biennial Scientific Conference & Exhibition, 2010. Faculty of Veterinary Medicine University of Nairobi. Theme: One Health in a Changing Environment at CAVS Kabete on 8th to 10th September 2010 (Abstract in the proceedings).
- 8.18 Kamundia, P.W., **P.G. Mbutia**, Waruiru R. M, Njagi L. W., Nyaga P. N., Mdegela, R.H., Byarugaba, D. K. and Otieno R.O.**2010**. The Occurrence of Trypanosoma in Fish in lake Victoria. Presented in the 7th Biennial Scientific Conference & Exhibition, 2010 Faculty of Veterinary Medicine University of Nairobi. Theme: One Health in a Changing Environment at CAVS Kabete on 8th to 10th September 2010 (Abstract in the proceedings).
- 8.19 Kibebe, H.W., P.K.Gathumbi, C.S. Kigonde, **P.G.Mbutia**, J.W. Karioki. **2010**. Early Detection of Hyperglycemia using Glycated Heamoglobin in mice model. Presented in the 7th Biennial Scientific Conference & Exhibition, 2010 Faculty of Veterinary Medicine University of Nairobi. Theme: One Health in a

Changing Environment at CAVS Kabete on 8th to 10th September 2010 (Abstract in the proceedings).

8.20 C. M. Gichohi, **P. G. Mbuthia** R. M. Waruiru, T. A. Ngatia, P. W. Kamundia, M. N. Mutune and R. O. Otieno **2010**. Prevalence and Intensity of *Paracamallanus* Spescies Infection in Farmed and Wild Catfish in Upper River Tana Basin, Kenya. Presented in the 7th Biennial Scientific Conference & Exhibition, 2010 Faculty of Veterinary Medicine University of Nairobi. Theme: One Health in a Changing Environment at CAVS Kabete on 8th to 10th September 2010 (Abstract in the proceedings).

8.21 George K. Gitau, Joshua W. Aleri **Paul G. Mbuthia** and Charles M. Mulei. **2010**. Major causes of calf mortality in peri-urban area of Nairobi, Kenya. Tropical Animal Health and Production 2010 (Also Presented in 7th Biennial Scientific conference &Exhibition, 2010).

8.22 Kamundia, P.W., Mbuthia, P.G., **Waruiru, R.M.**, Njagi, L.W., Nyaga, P.N., Mdegela, R.H., Byarugaba, D.K. & Otieno, R.O. (2010). Some pathological changes in Nile Tilapia and Nile Perch from Lake Victoria.

8.23 Kamundia, P.W., Mbuthia, P.G., **Waruiru, R.M.**, Njagi, L.W., Nyaga, P.N., Mdegela, R.H., Byarugaba, D.K. & Otieno, R.O. (2010). Trypanosoma infection in carrier fish of Lake Victoria, Kenya.

8.24 GATHUMBI P.K.: EMERGING LIVESTOCK: CURRENT STATUS AND GLOBAL PERSPECTIVES WITH A LOCAL FOCUS: 7th Biennial Scientific Conference of Faculty on veterinary Medicine September 8th to 10th 2010.

8.25 GATHUMBI P.K.: EMERGING LIVESTOCK: CURRENT STATUS, GLOBAL PERSPECTIVE WITH A LOCAL FOCUS. 7th Biennial Scientific Conference of Faculty on veterinary Medicine September 8th to 10th 2010.

8.26 GATHUMBI P.K.Gakuya,D.W.,^{1*} Mbaria, J.M.², Kiama,S.G.³, Mathiu,M.³, Nguta,J.M². (2010)ETHNOVETERINARY MEDICINE: THE PROSPECTS OF INTEGRATING MEDICINAL PLANTS PRODUCTS IN VETERINARY MEDICINE IN KENYA7th Biennial Scientific Conference of Faculty on veterinary Medicine September 8th to 10th 2010.

8.27 GATHUMBI P.K.D.W.Gakuya,^{1*} Kiama,S.G.,²Mbaria,J.M.³, Mathiu, M.², Nguta,J.M³ TRADITIONAL MEDICINE IN KENYA: PAST AND CURRENT STATUS, CHALLENGES AND THE WAY FORWARD 7th Biennial Scientific Conference of Faculty on veterinary Medicine September 8th to 10th 2010.

8.28 GATHUMBI P.K.Kibebe, H.W.^{1*} Kigondu C.S³, Mbuthia P.G², Kariuki J.W.⁴P16 EARLY DETECTION OF HYPERGLYCEMIA USING GLYCATED HEMOGLOBIN IN MICE MODEL 7th Biennial Scientific Conference of Faculty on veterinary Medicine September 8th to 10th 2010.

8.29 GATHUMBI P.K.Hesbon Z. Amenity^{1*} and James M. Mbaria¹ P18 ACUTE TOXICITY AND CYTOTOXICITY OF AQUEOUS AND CHLOROFORMIC EXTRACTS OF RAPANEA MELANOPHLOEOS MODEL 7th Biennial Scientific Conference of Faculty on veterinary Medicine September 8th to 10th 2010.

8.30 D N Karanja, Aleri, A N Kipyegon, J D Mande, C M Mulei. A Poster presentation in 7th Biennial Scientific Conference of the Faculty of Veterinary Medicine on 8th – 10th September, 2010,

8.32 Karanja D N, Toxic poisoning of pigs encountered naturally in smallholder farms in Nairobi and its environ. Ngatia T A, Wabacha J K and Bebora L C. A Poster presentation in 7th Biennial Scientific Conference of the Faculty of Veterinary Medicine on 8th – 10th September, 2010,

8.33 D N Karanja¹J W Aleri, ¹A N Kipyegon, ¹J D Mande, ¹C M Mulei and. **An acute respiratory distress syndrome due to babesiosis in a dog.** A Poster presentation in 7th Biennial Scientific Conference of the Faculty of Veterinary Medicine on 8th – 10th September, 2010,

8.34 Karanja D N^{1*}, Ngatia T A¹, Wabacha J K² and Bebora L C¹. **TOXIC POISONING IN SMALLHOLDER PIG FARMS IN NAIROBI AND ITS ENVIRONS** 7th Biennial Scientific Conference of the Faculty of Veterinary Medicine on 8th – 10th September, 2010,

8.35 J. Kagira. And P.W.N. Kanyari (2010). Occurrence of risk factors for zoonoses in Kisumu city, Kenya: A questionnaire survey. *East African Journal of Public Health* 7: 1-4

8.36 Gathumbi P.K and E. Dobson (2011) Post mortem and forensic report & procedures. A paper presented in the Kenya Veterinary Association Annual Scientific Conference Kisumu on 27th to 29th April 2011 at Kisumu Hotel Kenya

8.37 E.Dobson, E.Okoth, P.K. Gathumbi and Bishop, R.(2011) Pathology of African Swine fever virus infection in domestic pigs in Busia County, Kenya

9.0 WORKSHOPS AND CONFERENCES

9.1 7th Faculty of Veterinary Medicine Biennial Conference held on 8th – 10th Sept. 2010. at CAVS, Kabete (In attendance):

Prof. L.C. Bebora

Prof. N. Maingi

Prof. W.K. Munyua

Prof. P.N. Nyaga

Prof. P.N. Kanyari

Dr. P.G. Mbuthia

Dr. J.N. Chege

Dr. Karanja

Dr. N.K. Kuria
Dr. C.G. Gitao
Dr. R.M. Waruiru
Dr. S.M. Githigia
Dr. Ayuya

- 9.2 Prof. Bebora L.C.-** Attending grantee meeting and Biennial conference held by RUFORUM, 2319-23rd Sept. 2010, in Uganda.
- 9.3 Dr. P.G. Mbutia** - Attended Basic Training Course on WAHIS and WAHID Disease Notification for OIE Focal Points on Aquatic Animal diseases, Organized by World Organization for Animal Health (OIE) with the support of the European Commission, held at the regional Animal Health Centre for Southern Africa (RAHC-SA) Gaborone, Botswana on **August 31st – September 1st 2010** (Awarded Certificate of participation).
- 9.4 JM Kagira, PWN Kanyari:** The role of Veterinary and Medical Personnel in the Control of Zoonoses in Urban Settlements on the Shores of Lake Victoria, Kenya. 13th Association of Institutions for Tropical Veterinary Medicine (AITVM) conference Aug. 22nd – 26^h 2010. Sofitel centara Grand Hotel Bangkok Thailand (Appendix 1A)
- 9.5 Prof. L.C. Bebora** – Attendance to level III Food Safety Training at KEMRI, Kenya 1st – 6th November 2010
- 9.6 Dr Mbutia** attended VICRES Fisheries and aquaculture cluster workshop 12th to 15th Dec. 2010. Lakairo Hotel Mwanza Tanzania
- 9.7 Dr P.G. Mbutia** Poultry Biosecurity Meeting in Dar es Salaam, Tanzania on 15th -18th November 2010 sponsored by FAO-ECTAD. The purpose of the meeting was to finalize a Regional Biosecurity Guidelines for Poultry in East Africa.

- 9.8** **Professor Gathumbi** participated in and was the moderator in the Natural Products Industry Initiative Stakeholders workshop at *National* museums of Kenya on December 9, 2010
- 9.9** **Professor Gathumbi** is a member of the One health Kenya group and he participated in a workshop on One Health Concept hosted by USAID/RESPOND project at Merica Hotel Nakuru on 8th December 2010
- 9.10** **Dr. Njagi** attended a workshop and training on sanitary / phytosanitary (SPS) and risk analysis; held in Addis Ababa, Ethiopia, on 14th to 24th September 2010
- 9.11** **Prof. Nyaga** Presented a Keynote paper entitled ,'engaging agricultural universities in responding to emerging challenges: transboundary animal-human health epidemics', at RUFORUM 2nd biennial seminar held at Entebbe, Uganda, on 23rd-28th September 2010
- 9.12** **Professor Gathumbi** participated in a workshop on Veterinary Education, Accreditation and Quality Assurance organized by The Kenya Veterinary Board on 4th November, 2010 at KCB retreat centre Karen
- 9.13** **Prof. Gathumbi** is a member of one health Kenya group and he participated in the one health leadership training held on 14th and 15th December at Serena Hotel Nairobi, Kenya sponsored by USAID/RESPOND project and was issued with a certificate of attendance
- 9.14** **Dr. Njagi** attended a workshop and training on strategies for promotion of good animal welfare; held at Agricultural Information Resource Centre, Nairobi on 28th and 29th October 2010.
- 9.15** **Dr Gitao C.G.** participated in developing a Camel training curriculum in training Institutions Came Sector Stakeholder Workshop On Development of an Integrated Came l Management Package 7th - 8th December 2010, Methodist Guesthouse, Nairobi

- 9.16 P.N. Nyaga** participated in a seminar for the Kenya Government on Avian Influenza preparedness on January 24-28, 2011
- 9.17 P.N. Nyaga** participated in a Kenya Government meeting on Disaster management at Intercontinental Hotel on February 7-11, 2011
- 9.18 L.C. Bebora** attended a feedback workshop on measures to reduce food safety risks in urban and peri-urban agriculture , jointly organized by Swedish University of Agricultural Sciences (SLU) and University of Nairobi, held at Jakaranda Hotel, Westlands on 4/2/2011- **Prof Bebora to submit**
- 9.19 P.G. Mbutia** Facilitated as an instructor during the poultry Health and well-being training workshop held at Sunshine Hotel Kericho on Jan. 26-28, 2011
- 9.20 P.G. Mbutia** Facilitated as an instructor during the poultry Health and well-being training workshop held at Jamindas Paradise motel Kakamega on February 2-4, 2011
- 9.21 P.K Gathumbi** participated in a one day workshop to develop policy recommendations targeting the emergence and spread of antibiotic resistance on March 2 , 2011, at Panafric hotel Nairobi
- 9.22 P.N. Nyaga** traveled to Arusha to meet students on RUFORUM project on March 4-6, 2011
- 9.23 P.K Gathumbi and L.C Bebora** were trainers of trainers in PREPARE PhD SUPERVISION training Workshop held on 23-25th March , 2011 at CAVS UoN
- 9.24 P.W.N. Kanyari** Attended Kenya Veterinary Association Annual Scientific Conference Kisumu on 27th to 29th April 2011 at Kisumu Hotel Kenya
- 9.25 P.W.N. Kanyari** attended a training of national officials of WTO-agreement on application of sanitary and phytosanitary measures (SPS), negotiations and

science based arguments in international standard making process from 9th to 11th May 2011 at KEPHIS Hqts, Nairobi, Kenya

9.26 Prof. P.N. Nyaga Presented a on One Health One World and the impact of transboundary diseases in the communities in a RUFORUM workshop at the Windsor hotel on May 22-27,2011

9.27 P.K. Gathumbi organized, attended and participated in a one day workshop on Forensic Veterinary Science on 18th May 2011. In the Department of Veterinary Pathology, Microbiology and Parasitology

9.28 L.C. Njagi Attended the vaccine technical committee meeting on 11th May 2011 at KEVIVAPI Embakasi, Kenya

9.29 Dr. S.M. Githigia attended a pork product value chain stakeholders' workshop on 21st to 24th June, 2011 at KARI station THIKA.

9.30 P.K. Gathumbi was invited to a retreat on June 17-19 2011, at Kenya School of law complex Karen, to prepare a proposal on natural products industry initiative for presentation to the full council of National Economic and Social Council (NESC)

9.31 P.K. Gathumbi Participated and chaired session during the 4th annual dissemination Conference of the National Council for Science and Technology , on May 3-6, 2011

9.32 P.K. Gathumbi was invited to a retreat , on May 3-6, 2011 to prepare a proposal on the natural product industry initiative for presentation to NESC

10.0 VISITORS TO THE DEPARTMENT IN THE DEPARTMENT IN 2010/2011

- 10.1** Prof. G. Mwamengele, Sokoine University of Agriculture and Prof. Rubaire Akiiki, Makerere University – July 19, 2010
- 10.2** Prof. J.N. Maina, University of Johannesburg,, South Africa – July 22, 2010
- 10.3** Dahlia O'brien & Gnumimal Ocbay, Delaware State university September 1, 2010
- 10.4** Gebrehowot Tadesse, Asst Professor, College of Vet. Medical, Nekelle University, Ethiopia & Immaculate Nakalembe, Makerere University, September 10, 2010
- 10.5** Ella Hoxina, Dr. Innocent Rwego, Dr. Mbaabu Mathiu, Respond East Congo, Dr. Geoffrey Kabagambe Rugamba Health Science , September 23, 2010
- 10.6** Dr. Inyagwa, C. Maloke & Nicholas M. Karugu, Egerton University, September 12, 2010
- 10.7** Prof. George Aning, School of Vet. Media University of Ghana & Philip Arundow Director, Physical Development Municipal Services Lagos, January 19, 2011
- 10.8** Elizabeth Debson, ILRI February 2, 2011
- 10.9** Kiran Mhajan Nana Ikidara, NADA Hotels March 7, 2011
- 10.10** Viktar Proshehanka, General Manager& Dr. Beranard Aseto Regional Business Director Norbrook Kenya Ltd April 1, 2011
- 10.11** John E. Cooper, Dept. of Vet Medicine, Cambridge University & Margret Cooper, May 15, 2011

10.12 Elizabeth Archic, Universty of Notredam & Obanda Vincent, KWS Dept.
June 24, 2011

11.0 OUTREACH AND COMMUNITY SERVICE

- 11.1 **Dr. P.G. Mbutia:** News brief entitled, “Watch out for fish diseases” published on the Friday September 10, 2010, Daily Nation Newspaper, page 10 under Briefly in Nairobi
- 11.2 **Dr. J.N. Chege:** Courses offered in the College of Agriculture and Veterinary Sciences and the admission criteria. Talks given to Secondary School Students visiting the college during the 7th Biennial Scientific conference and exhibition
- 11.3 **Dr P.G. Mbutia** trained Women on Poultry Disease Recognition, Management and Biosecurity in Central Kenya (held at Wambugu ATC, Nyeri) and Eastern Province (Lysak Park Hotel,) Machakos under Women training and Poultry Health and Welfare/Well-being in Kenya in October 2010
- 11.4 **Professor Gathumbi** participated in meeting between the Rabbit Development Stakeholders Forum, Kenya (RDSF (K) and the Kenya National Bureau of Statistics (KNBS) on November 23rd 2010, to discuss the requirements for conducting a national survey to determine the status of the rabbit industry in Kenya.
- 11.5 **Professor Gathumbi** Participated in a launch of the Kenya Veterinary Board /Kenya Veterinary Association strategic plan launch at Silver Spring Hotel on 16th December 2010
- 11.6 **Prof. N. Maingi, Dr. S.M. Githigia, Dr. C.J. Nganga, Dr. F.Obonyo, Dr. E. Eshiteria, Mr. E.H. Weda and Mr. R. Otieno** participated in the training of pig farmers and other stakeholders on *Taenia solium* cysticercosis/taeniosis in Homa bay District, Kenya. The training was carried out from 12th to 14th October 2010

under the auspices of the ASARECA project on “Diagnostic Tools and Control Strategies for *Taenia solium*”

12.0 LINKAGES ESTABLISHED OR CONTINUED

12.1 The University of Nairobi, Faculty of Veterinary Medicine and the University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, Romania have signed an MoU for purposes of joint research projects among other collaborative activities. This initiative is as a result the visit to Romania by **Prof. P.W.N. Kanyari** in the month of September, 2011. At the moment, there is a visiting team of eight(8) from the Romanian University undertaking joint research work in the Northern part of Kenya.

The fore mentioned team have brought with them the following two pieces of equipment:

- A Digital Microscope valued at KES 900,000.00
- A Stereo Microscope valued at KES 600,000.00

12.2 Prof. P.N. Nyaga – Invitation to attend the Regional Conference on Building Capacity for improved food and livelihood Security 20th – 24th September 2010, Entebbe, Uganda.

13.0 MEMBERSHIP IN COMMITTEES

a) COLLEGE COMMITTEES

1. College Management Board(CMB)	Prof. P.K. Gathumbi , Chairman of the Department
2. College Exhibition Committee 3. College Disposal committee	Dr. J.N. Chege Prof. P.K. Gathumbi

b) FACULTY COMMITTEES

	FACULTY COMMITTEE	DEPARTMENTAL REPRESENTATIVE	DEPARTMENT	CHAIRMAN, FACULTY COMMITTEE
1.	Postgraduate Studies Committee	Prof. L.C. Bebora Dr. L.C. Njagi	Vet. Pathology,	Prof. L.C. Bebora
2.	Curriculum Committee	Dr. R.M. Waruiru	Vet. Pathology Vet. pathology	
3.	Timetabling Committee	Dr. P.G. Mbutia Dr. D.K. Kagunya	Vet. Pathology Vet. pathology	Dr. P.G. Mbutia
4.	Student Attachment & Projects Committee	Dr. S.M. Githigia	Vet. pathology	
5.	Faculty Biennial Scientific Conference	Dr. D.N. Karanja Prof. P.K. Gathumbi	Vet. Pathology	Prof. P.K. Gathumbi
6.	Module II Policy Guidelines Implementation Committee	Dr. M.O. Odongo	Vet. pathology	
7.	Veterinary Farm Management Committee	Prof. P.K. Gathumbi	Vet. Pathology	
8.	Library Committee	Dr. M.O. Odongo	Vet. pathology	
9	Biosafety Committee	Dr. J.K. Gathumbi	Vet. pathology	
10	Exhibitions Committee	Dr. J.N. Chege	Vet. pathology	Dr. J.N. Chege
11	Grants, research and external liaison committee	Prof. P.K. Gathumbi	Vet. pathology	

c) OTHER COMMITTEES

1	Faculty of Agriculture environmental committee	Prof. P.K. Gathumbi	Vet. pathology	

14.0 CONSULTANCIES

- 14.1 **Prof. Bebora L.C.** – Consultative meeting of women scientists of University of on 14th July 2010, UoN, Council Chamber.
- 14.2 **Prof. Bebora L.C.** – Consultative meeting on how to strengthen and improve academic programmes and other related activities, attended by all professors on 6th Sept. 2010, UoN, Council Chamber.
- 14.3 **Prof. Bebora L.C.** Judging poultry classes at ASK, Nairobi Internal show, to be held from 27th September to 3rd October 2010, at Jamhuri Park, Nairobi. Also the Poultry and Pigs subcommittee chairman at the show.
- 14.4 **Prof. P.N. Nyaga** – Meeting on Rift Valley Fever (RVF) with Ministry of Livestock Development.
- 14.5 **Prof. Nyaga** carried out consultancy assignment for the East African Community on the assessment of animal-human health expertise in avian influenza, other zoonoses and transboundary animal diseases in October, 2010.
- 14.6 **Dr. Gitao C.G.** carried out consultancy training on, draught power of camel (training workshop) in Makindu. for KARI –KASAL 10-13th Nov 2010.
- 14.7 **Prof. Nyaga** carried out consultancy assignment for the East African Community on the assessment of animal-human health expertise in avian influenza, other zoonoses and transboundary animal diseases in October, 2010
- 14.8 **Dr. Gitao C.G.** carried out consultancy training on, draught power of camel (training workshop) in Makindu. for KARI –KASAL 10-13th Nov 2010

15.0 OTHER ACTIVITIES

15.1 Dr. P.G. Mbutia – Was an External Examiner in Veterinary Pathology at SOKOINE UNIVERSITY OF AGRICULTURE, TANZANIA in the period June/July 2010

15.2 Dr. P.G. Mbutia - served as an External Examiner for five (5) theses for Jomo Kenyatta University of Agriculture and Technology.

15.3 Dr. P.G. Mbutia - served as an External Examiner for one (1) thesis for Makerere University, Uganda.

15.4 Dr. P.G. Mbutia - Reviewed two (2) manuscripts for The Kenya Veterinarian journal.

15.5 Dr. P.G. Mbutia - Has been given a letter for ‘**Commendation for Good performance and Support of the faculty**’ in my role as the “**Chairman of the Timetabling Committee**”.

15.6 Dr. P.G. Mbutia - Has been given a letter for ‘**Commendation for Good performance and Support of the faculty**’ as a dedicated member of the “**Faculty Curriculum Committee**”.

15.7 Prof. P.K. Gathumbi – Chaired a successful 7th Biennial Scientific Conference Faculty of Veterinary Medicine and 4th Exhibition of College of Agriculture and Veterinary Sciences, 8th to 10th September, 2010.

15.8 Dr Mbutia examined the following thesis:

- a) **Dr. Stephen Kitonga Mavuti** MSc thesis entitled, “Prevalence, Intensity and Pathology Associated with Parasitic Infections in Ducks in Nairobi and its Environs” a student at **University of Nairobi, November 2010.**

- b) **George Ngondi Michuki** Ph.D. thesis entitled, “Metagenomic Characterization of vaginal Ecosystem and Association of Bacteriophage, Bifidobacterium and Oenococcus with Bacterial vaginosis in HIV infected Women” a student at **Jomo Kenyatta University of Agriculture and Technology**, October, **2010**.
- c) **Afayoa mathias** MSc thesis entitled, “Lesions and Prevalence of Newcastle Disease in Chicken Presented for Necropsy at faculty of Veterinary Medicine, Makerere University” a student at **Makerere University**, October **2010**.
- d) **Dr. Mbuthia** received a certificate of attendance to the 7th Biennial scientific conference 8th to 10th September 2010 (**Appendix 28**)

15.10 Prof. P.K. Gathumbi, Prof P.N. Nyaga, Dr. J.N. Chege and Dr. Lucy Njagi, participated in arranging for a departmental seminar on forensic science by Prof. J. Cooper and Dr. Margaret Cooper on 24th November 2010.

15.11 Professor Gathumbi participated as a committee member, in activities of the management committee of the veterinary farm in October 2010

15.12 Professor Gathumbi participated as a committee member, in activities of the disposal committee of the College of Agriculture and Veterinary Sciences in October 2010

15.13 Prof. Nyaga reviewed a grant application research proposal for the South African National research Council in October 2010

15.14 Prof. Nyaga reviewed a manuscript for , ‘African Journal of Microbiology in October 2010

16.0 LIST OF MEMBERS OF ACADEMIC STAFF

NAME	QUALIFICATION	DESIGNATION
1. PROF. P.N. NYAGA	BVM, MPVM, PhD	Professor
2. PROF. W.K. MUNYUA	BVM, MSc., PhD	Professor (on contract)
3. PROF. P.N. KANYARI	BVM, MSc., PhD	Professor
4. PROF. T.A. NGATIA	BVM, MSc., PhD	Associate Professor
5. PROF. B.A. KIMETO	BVM, MSc., PhD	Associate Professor (on contract)
6. PROF. L.C. BEBORA	BVM, MSc., PhD	Associate Professor
7. PROF. P.K. GATHUMBI	BVM, MSc., PhD	Chairman/Associate Professor
8. PROF. N. MAINGI		Associate Professor
9. DR. R.M. WARUIRU	BVM, MSc., PhD	Senior Lecturer
10. DR. C.G. GITAO	BVM, MSc., PhD	Senior Lecturer
11. DR. J.N. KURIA	BVM, MSc., PhD	Senior Lecturer
12. DR. P.G. MBUTHIA	BVM, MSc., PhD	Senior Lecturer
13. DR. S.M. GITHIGIA	BVM, MSc., PhD	Senior Lecturer
14. DR. J.N. CHEGE	BVM, MSc., PhD	Senior Lecturer
15. DR. J.K. GATHUMBI	BVM, MSs., PhD	Lecturer
16. DR. L.W. NJAGI	BVM, MSc., PhD	Lecturer
17. DR. D.N. KARANJA	BVM, MSc., PhD	Lecturer
18. DR. J.M. AYUYA	BVM, MSc., PhD	Lecturer
19. DR. M.O. ODONGO	BVM, MSc.	Lecturer
20. DR. D.K. KAGUNYA	BVM, MSc.	Lecturer
21. DR. E.S. KILELU	BVM, MSc.	Lecturer
22. EZEKIEL H. WEDA	BVM, MSc HND	Chief Technologist

17.0 LIST OF MEMBERS OF TECHNICAL AND SUPPORT STAFF

NAME	QUALIFICATION	DESIGNATION
1. JULIUS K. KIBE	HND	Senior Technologist
2. ROSE W. GITARI	BSc/HND	Senior Technologist
3. MARY N. MUTUNE	HND	Senior Technologist
4. VIRGINIA M. GICHOHI	HND	Senior Technologist
5. JACKSON M. GACHOKA	HND	Senior Technologist
6. JOHN MUKIRI	HND	Senior Technologist
7. DAVID M. GUCHEMA	HND	Senior Technologist
8. ANN K. MUNENE	HND	Senior Technologist
9. CHARITY W. GATHENYA	HND	Senior Technologist
10. REBECCA W. GITHINJI	HND	Senior technologist
11. ZACHARY W. MUNENE	JLT	Technologist ABC (post retirement Contract)
12. EDITH A KEYA	HND	Junior Technologist IV
13. EPHANTUS M. NYAGA	HND	Junior Technologist IV
14. GEORGE DIMBU	HND	Junior Technologist IV
15. SARAH M. MUKABANA	-	Secretary Grade A
16. JANE W. GACHIGUA	JLT	Junior Technologist IV
17. RICHARD O. OTIENO	JLT	Junior Technologist IV
18. JOHN M. KINYURU	JLT	Junior Technologist IV
19. MARY W. MURIAKIARA	CPE	Junior Technologist III
20. PATRICK M. WAHOME	KCE	Junior Technologist III
21. SAMUEL INDECHE	KCE.	Junior Technologist III
22. ADIEL K. MURATHI	KCSE	Driver Grade IV
24. GORDON OTIENO	KCSE	Cleaner grade II (Contract)

18.0 IMAGES

Chairman Department of Veterinary pathology, Microbiology and Parasitology
Prof. P.K. Gathumbi



Figure 1 Medicinal plant tree nurseries at Ngong established under the project on, ‘evaluation and commercialization of medicinal plants’ extracts for improved livelihoods: a case study of East Coast fever’. Funded by World Bank grant through Kenya Agricultural Productivity (KAPP) led by Prof. P.K. Gathumbi, Department of Veterinary Pathology, Microbiology and Parasitology



Figure 2a and b Botanical garden of medicinal plants at CAVS field station established under the project on, ‘evaluation and commercialization of medicinal plants’ extracts for improved livelihoods: a case study of East Coast fever’. Funded by World Bank grant through Kenya Agricultural Productivity (KAPP) lead by **Prof. P.K. Gathumbi**, Department of Veterinary Pathology, Microbiology and Parasitology

Figure 2a



Figure 2b

