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**UNIVERSITY OF NAIROBI**  
COLLEGE OF AGRICULTURE AND VETERINARY SCIENCES  
FACULTY OF VETERINARY MEDICINE

**FACULTY OF VETERINARY MEDICINE**

**ANNUAL REPORT**

**2011/2012**



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## inary Medicine

The Faculty of Veterinary Medicine is one of the oldest Faculties in the University of Nairobi having started training in diplomas in the 1940s. It later became fully fledged Faculty offering degrees in 1962 and celebrated its 50 years (Golden Jubilee) since inception in April 2012. It has produced a large part of the alumni of over two thousand both undergraduate and postgraduate.

Currently, it has a teaching staff of 115, technical, secretarial and support staff of 140. The Faculty currently offers five (5) degree programs namely; Bachelor of Veterinary Medicine, B.Sc. in Biomedical Technology and B.Sc. in Wildlife Management & related options, B.Sc. in Leather Science & Technology and B.Sc. in Fisheries & Aquaculture Management. In addition, it offers over 20 M.Sc. and PhD programs, 1 postgraduate certificate, 3 diplomas, and 4 certificate program.

Having undertaken to participate in achieving the vision 2030, it has joined the other stakeholders in developing the leather technology programs at diploma, B.Sc, M.Sc. and PhD levels. The above courses have been launched.

The Faculty continues to participate in outreach and community services and has regular Biennial conferences that attract local, regional and international participants. The 8th Biennial conference was held in April 2012 . plans are underway for the next (9th) Biennial conference in 2014.

**Prof. Mulei Charles M., Dean, Faculty of Veterinary Medicine**

**COLLEGE OF VETERINARY MEDICINE**

The Faculty conducts five undergraduate degree programs.

- Bachelor of Veterinary Medicine
- Bachelor of Science in Biomedical Technology
- Bachelor of Science in Wildlife Management and Related options
- Bachelor of Science in Fisheries and Aquaculture Management
- Bachelor of Science in Leather Science & Technology

**Postgraduate Degree Programs**

The Faculty trains students for Masters of Science (MSc.) and Doctor of Philosophy degrees in various fields of specialization.

- Veterinary Anatomy
- Comparative Mammalian Physiology
- Veterinary Theriogenology
- Veterinary Surgery
- Veterinary Medicine
- Wildlife Health and Management
- Natural Products & Bioprospecting
- Pharmacology and Toxicology
- Reproductive Biology
- Biochemistry
- Veterinary Pathology, Microbiology and Parasitology

- Applied Parasitology
- Applied Microbiology
- Veterinary Pathology & Diagnostics
- Clinical Pathology and Laboratory Diagnosis
- Fish Science
- Poultry Science
- Animal Genetics and Breeding
- Livestock Production Systems
- Animal Nutrition and Feed Science
- Veterinary Public Health
- Veterinary Epidemiology & Economics

**Postgraduate Certificate Courses**

- Epidemiology & Disease Surveillance

**Diploma Courses**

- Animal Health & Production
- Leather Technology
- Veterinary Public Health & Meat Technology

**Certificate Courses**

- Artificial Insemination & Fertility Management
- Meat Hygiene and Quality Assurance
- Poultry Management
- Dairy Management

**CURRICULA REVIEWED WITHIN THE YEAR**

- Bachelor of Science in Wildlife Management and Related options
- Diploma in Animal Health and Production

**CURRICULUM DEVELOPED WITHIN THE YEAR**

NUMBER OF STUDENTS ADMITTED INTO EACH UNDERGRADUATE PROGRAM IN 2011/2012	
	<p><b>FACULTY OF VETERINARY MEDICINE</b></p> <p>1. Bachelor of Veterinary Medicine 132</p> <p>2. B.Sc. in Biomedical Technology 0</p> <p>3. B.Sc. in Wildlife Management 14</p> <p>4. Dipl in Animal Health and Prod. 19</p> <p>5. Certificate in Artificial Insemination 25</p> <p><b>TOTAL 158</b></p>
NUMBER OF STUDENTS WHO GRADUATED FROM EACH PROGRAM IN 2011/2012	
	<p><b>FACULTY OF VETERINARY MEDICINE</b></p> <p>1. PhD 4</p> <p>2. MSc. 116</p> <p>3. Bachelor of Veterinary Medicine 50</p> <p>4. B.Sc. in Biomedical Technology 24</p> <p>5. B.Sc. in Wildlife Management 16</p> <p>6. Dip. in Animal Health and Prod. 11</p> <p>7. Artificial Insemination 8</p> <p><b>TOTAL 229</b></p>

	NAME	DEPARTMENT	INSTITUTION
1.	Dr. Benard Bett	PHPT	ILRI, Kenya
2.	Dr. B.O. Bebe	AP	Moi University
3.	Dr. Charles Muleke	VAP	Egerton University
4.	Dr. Ciira Kiiyukia	VPMP	JKUAT
5.	Dr. David N. Gacheru	VAP	Egerton University
6.	Dr. Dennis Byarugaba	VPMP	Makerere University
7.	Dr. Gideon Kikvi	PHPT	JKUAT
8.	Dr. Hastings O. Suba	CSD	IPR
9.	Dr. Henry K. Kiara	PHPT	ILRI
10.	Dr. J.M. Nginyi	VPMP	VRC KARI, Kenya
11.	Dr. Joseph K. Rotich	PHPT	Moi University
12.	Dr. Michael M. Gicheru	PHPT	KU
13.	Dr. Samuel Obwoya Okello	VAP	Sokoine University
14.	Godwin Kinyua Njeri	PHPT	Nairobi
15.	Dr. I.M. Nyariki	CSD	Nairobi, Kenya
16.	Dr. J.K. Kimani	CSD	Nairobi, Kenya
17.	Prof. Alexander K. Kahi	AP	Moi University
18.	Prof. Charity W. Gichuki	CSD	Presbyterian Uni of E.A.
19.	Prof. G. Mogoma	Biochemistry	JKUAT
20.	Prof. G.L. Mwamengele	VPMP	Sokoine University
21.	Prof. Gabriel Magoma	Biochem.	JKUAT
22.	Prof. Gabriel Mbaasa	VAP	Sokoine University
23.	Prof. George O. Oliech	AP	Moi University
24.	Prof. John Acon	CSD	Makerere University
25.	Prof. Mbaruk A. Suleiman	CSD	IPR
26.	Prof. Nkumbuka Mtambo	CSD	Sokoine University
27.	Prof. Noel L. Kanuya	CSD	Sokoine University
28.	Prof. P.M. Gatongi	PHPT	Moi University
29.	Prof. Resto D. Mosh	PHPT	Sokoine University
30.	Prof. Rubaire Akiiki	VPMP	Makerere University

## VISITORS TO THE COLLEGE

### FACULTY OF VETERINARY MEDICINE

Department	Name	From Where	Date
Dean's Office, Faculty of Veterinary Medicine	Kevin M. Mutisya	Kitengela	13/7/2011
	Bernard Langat	Nairobi	13/7/2011
	Omari Ali	Nairobi	13/7/2011
	Dr .Chris Wanga	Nairobi	13/7/2011
	M. Kariuki Njenga	Nairobi	13/7/2011
	Walter N. Masiga	Nairobi	13/7/2011
	Judy Kimaru	Nairobi	13/7/2011
	Joan Magero	Nairobi	13/7/2011
	Dr. Patricia Kungu	Nairobi	13/7/2011
	Dr. Josephine Wright	Nairobi	13/7/2011
	Dr .Peter Maina Ithondeka	Nairobi	13/7/2011
	Kenneth M. Lusaka	Nairobi	13/7/2011
	Dr. Ouko E.O.	Nairobi	13/7/2011

	kiniiya	Nairobi	13/7/2011
		Grenadad	22/7/2011
		Nairobi	22/7/2011
	Prof. v.O. Raino	University of Ibadan, Nigeria	16/8/2011
	Prof. B.O. Oke	University of Ibadan, Nigeria	16/8/2011
	Dr. K.O. Soetan	University of Ibadan, Nigeria	16/8/2011
	Susan Baggs	Albuquerque NM, USA	23/8/2011
	Jen Gardioso	Albuquerque NM, USA	23/8/2011
	Vibeke Halkgher Kivodson	Albuquerque NM, USA	23/8/2011
	Laura E. Jones	Albuquerque NM, USA	23/8/2011
	Michael Majewski	Washington, DC	23/8/2011
	Dr. Jalango J.N.	Vet Labs, Nairobi	23/8/2011
	Carlos A. Salazar	Albuquerque NM, USA	23/8/2011
	Dr. Anna Songolo	MLFD, Lusaka	24/8/2011
	Dr. & Mrs. Joachim Songwe	Carmeroon	25/8/2011
	Dr. Lois Hild	Hemet, C.A.	3/1/2012
	Dr. Jim Randall	University of Prince Edward, Island	19/1/2012
	Dominic Travis	University of Minnesota CVM, USA	25/1/2012
	Geoffrey Kabagambe Rugamba	OHCEA	25/1/2012
	Hannu Korhonen	MTT Agrifood Research, Finland	26/1/2012
	Riielea Kesleimen	MTT Agrifood Research, Finland	26/1/2012
	Tapani Poykko	HAMK, Finland	26/1/2012
	Jukka Kola	University of Helsinki, Finland	26/1/2012
	Joseph Mukiibi	MAF, S. Sudan	1/2/2012
	Atens Garang	MAF, S.Sudan	1/2/2012
	George Tadu	MAF, S.Sudan	1/2/2012
	Lako Busuk	MAF, S.Sudan	1/2/2012
	Virginia Wangari	KARI- HQs	1/2/2012
	Andrei Mihalca	CLUJ-Napoca, Romania	1/2/2012
	Dadgos Bintoiu	CLUJ-Napoca, Romania	1/2/2012
	Damico G. Anluca	CLUJ-Napoca, Romania	1/2/2012
	Dr. Luboya Kasongo Mutemba	University of Kinshasa, DRC	6/2/2012
	Dr. Ngulu Nsasi Arthur	University of Lububashi, DRC	6/2/2012
	Dr. Kasongo Aseke Owkanga Gregoire	University of Lububashi, DRC	6/2/2012
	Dr. Mahangaiko Nuyuriba	University of Lububashi, DRC	6/2/2012
	Saad Naandi	Ambassador of Algeria	14/2/2012
	Raabed Ahned	Government of Algeria	14/2/2012
	Dr. K. Tirnd	University of Al-Tarb, Algeria	14/2/2012
	Dr. A. Kadi	University of Annaba, Algeria	14/2/2012
	Dr. Tara Harrison DM	Michigan State University	6/3/2012
	Dr. Christine Thurantine - Uckeeven	Loyal Veterinary College, University of London	19/3/12
	Dr. Ayona Silva-Fletcher	Loyal Veterinary College, University of London	21/3/2012
	Prof. Oshiund D. Mwandemele	University of Namimbia	10/4/2012
	Mr. S.P. Muewa	University of Namimbia	10/4/2012
	Prof. Mause Francisco	University of Namimbia	10/4/2012
	Dr. Kenneth K. Matenga	University of Namimbia	10/4/2012
	Jimmy W. Smith	ILRI Campus	10/4/2012

		Nairobi	10/4/2012
		ILRI	23/4/2012
	M.J.	DVC (A & F) Egerton University	23/4/2012
	Dr. Guro L.O.	KVA	24/4/2012
	Prof. Isaac Jumba	University of Nairobi	24/4/2012
	Jeffrey Wichtel	Altantic Veterinary College, University of Prince Edward Island, Canada	14/5/2012
	Morgan Findlay	Western College of Veterinarian Medicine	14/5/2012
	Jennifer Huizen	Atlantic Veterinary College	14/2/2012
	Jolginberg	University of Michigan	7/5/2012
	Springer Bislene	University of Missouri	6/7/2012
	Margaret Kunnard	Mpala Research Centre	6/7/2012
	Shadowm Deem	Institute for Conservation Medicine, St. Lois Zoo	6/7/2012

### COMMITTEES OF THE FACULTY OF VETERINARY MEDICINE

	FACULTY COMMITTEE	DEPARTMENTAL REPRESENTATIVE	DEPARTMENT	CHAIRMAN, FACULTY COMMITTEE
1.	Postgraduate Studies Committee	Prof. L.C. Bebora Prof. D.O. Kihurani Dr. J. Jungca Prof. S.M. Kisia Dr. R.O. Ojoo Dr. J.M. Kitala Dr. J.M. Kamau Dr. L.W. Njagi	Vet. Pathology Clinical Studies Animal Production Vet. Anatomy & Physiology Vet. Anatomy & Physiology PHPT Biochemistry Vet. Pathology	<b>Prof. L.C. Bebora</b>
2.	Curriculum Committee	Dr. V.T. Tsuma Dr. R.M. Waruiru Dr. D.W. Gakuya Dr. B.M. Kavoi Prof. P.G. Mbuthia Dr. E. Maina Dr. G.M. Muchemi Prof. C.K. Gachuri Dr. J. M. Kitaa	Clinical Studies Vet. Pathology Clinical Studies Vet. Anatomy & Physiology Vet. Pathology Biochemistry PHPT Animal Production Faculty Timetabling Committee	<b>Dr. V.T. Tsuma</b>
3.	Timetabling Committee	Dr. J.M.A. Kitaa Prof. P.G. Mbuthia Dr. L.W. Kanja Dr. Joel Ochieng Dr. D.K. Kagunya Dr. A. W. Nyongesa Dr. J.M. Kamau Dr. E.M. Nderitu	Clinical Studies Vet. Pathology PHPT Animal Production Vet. Pathology Vet. Anatomy & Physiology Biochemistry Clinical Studies	<b>Dr. J. M. Kitaa</b>
4.	Student Attachment & Projects Committee	Dr. J.A. Oduma Dr. G.O. Abonge Mr. K. L. Oluoch Dr. J.O. Jungca Dr. H.M. Mutembe	Vet Anatomy & Physiology PHPT Biochemistry Animal Production Clinical Studies	<b>Dr. J.A. Oduma</b>

	Conference	Dr. A.N. Makanya Dr. C.N. Kimwele Dr. V.T. Tsuma Prof. G.K. Gitau Prof. S.N. Arimi Prof. J.M. Mbaria Dr. J.K.N. Kuria Dr. D.N. Karanja Dr.P.W. Macheru Dr. J.G. Maina Ms. E.G. Kanduma	Vet. Pathology Vet. Pathology Vet. Anatomy & Physiology Vet. Anatomy & Physiology Clinical Studies Clinical Studies PHPT PHPT Vet. Pathology Vet. Pathology Vet. Anatomy & Physiology Animal Production Biochemistry	<b>Prof. P.K. Gathumbi</b>
7.	Veterinary Farm Management Committee	Prof. C.K. Gacuiiri Dr. J.D. Mande Prof. E.R. Mutiga Prof. P.K. Gathumbi Dr. S.M. Macharia Prof. M.S. Badamana Dr. T.O. Abuom Prof. P.W. Kinyanjui Prof. J.N. Ombui	Animal Production Clinical Studies Clinical Studies Vet. Pathology PHPT Animal Production Vet. Farm Biochemistry PHPT	<b>Prof. C.K. Gacuiiri</b>
8.	Library Committee	Dr. M. Odongo Dr. A.W. Nyongesa Dr. G.M. Muchemi Dr. G.Kirui Dr. E.K. Muge Dr. J. Ochieng Dr. D.N. Karanja	Vet. Pathology Vet. Anatomy & Physiology PHPT Clinical Studies Biochemistry Animal Production Vet. Pathology	<b>Dr. M. Odongo</b>
9.	Senate Representative	Prof. R.G. Wahome	Animal Production	
10	Bio Safety, Animal Use and Ethical Committee	Dr. R.O. Ojoo Dr. E.G. Mogoia Prof. P.N. Mbugua Prof. T.E. Maitho Dr. J.K. Gathumbi Dr. L. W. Waibochi Dr. C.N. Kimwele Prof. S.W. Mbugua	Vet. Anatomy & Physiology Clinical Studies Animal Production PHPT Vet. Pathology Biochemistry Vet. Anatomy & Physiology Clinical Studies	<b>Dr. R.O. Ojoo</b>
11	Exhibition and Show Committee	Dr. D.W. Gakuya Dr. L.W. Njagi Dr. J.K. Muthee Dr. J.M. Nguta Mr. B.A.O. Inyangala Dr. A.W. Nyongesa Mr. K.L. Oluoch	Clinical Studies Vet. Patology Clinical Studies PHPT Animal Production Vet. Anatomy & Physiology Biochemistry	<b>Dr. D.W. Gakuya</b>
12	Grants Research and External Liaison Committee	Prof. P.W.N. Kanyari Prof. R.G. Wahome Dr. H. Mutembe Prof. E.K. Kang'ethe	Vet. Pathology Animal Production Clinical Studies PHPT	<b>Prof. P.W.N. Kanyari</b>



		Dr. Nyachio Atunga Dr. C.G. Gitao Dr. Isaac Mulei Prof. G.K. Gitau	PHPT Vet. Anatomy & Physiology Vet. Anatomy & Physiology Biochemistry Vet. Pathology Vet. Pathology Clinical Studies	
13	Science Park Committee	Prof. S.M. Kisia	Associate Dean, Faculty of Veterinary Medicine	
14	One Health Committee	Prof. S.M. Kisia Dr. A.G. Thaiya Dr. V.T. Tsuma Prof. J.M. Mbaria Dr. B.M. Kavoi Dr. L.W. Njagi Dr. P.M. Mathiu	Vet. Anatomy & Physiology Clinical Studies (Secretary) Clinical Studies PHPT Vet. Anatomy & Physiology Vet. Pathology Vet. Anatomy & Physiology	<b>Prof. S.M. Kisia</b>

OFFICE, FACULTY OF VETERINARY MEDICINE

		Designation
1.	Prof. C.M. Mulei	Dean
2.	Prof. S.M. Kisia	Associate Dean
3.	Mr. D.K. Cheboi	Assistant Registrar
4.	Ms. Monica Agunda	Senior Secretary
5.	Ms. Beth Kiragu	Assistant Secretary
6.	Ms. Benadine Okola	Assistant Secretary
7.	Mr. Patrick Karuu	Records Clerk
9.	Mr. Jonathan Toromo	Records Clerk
10.	Mr. Njoroge Kahiga	Driver
11.	Ms. Caroline Akoth	Cleaner
13.	Mr. Patrick Keya	Cleaner



**UNIVERSITY OF NAIROBI**  
COLLEGE OF AGRICULTURE AND VETERINARY SCIENCES  
FACULTY OF VETERINARY MEDICINE

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

**ANNUAL REPORT**

**2011/2012**



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Pharmacology & Toxicology annual report for 2010/2011 gives an overview of the physical facilities available including those that have been acquired and maintained in the academic year to enable smooth running of its activities.

A detailed outline of academic programs, both at undergraduate and postgraduate levels, as well as the current students undertaking Masters and Doctors of Philosophy degrees is given alongside their areas of study and a brief statement of their findings.

The report highlights research publications in peer reviewed journals by members of staff, research projects awarded, conferences and workshops they attended including workshops held in the department. In addition the report captures consultancy projects won by the department, donations received in the academic year and a list of linkages and collaborations the department has made with other institutions. The report concludes with a list of staff, their grades and areas of specialization where applicable.

It is my hope that you will find the report informative.

**Prof. J.N. Ombui**

**Chairman,**

**Dept. Of Public Health, Pharmacology & Toxicology**

Pharmacology and Toxicology (PHPT) is one of the five academic units in the Faculty of Veterinary Medicine, University of Nairobi. It was established 39 years ago in the 1972/73 academic year by combining the closely related disciplines of Pharmacology, Toxicology and Veterinary Public Health. The two disciplines were originally in different departments. Veterinary Public Health was at the clinical studies while Pharmacology and Toxicology was in the Department of Veterinary Pathology and Microbiology.

The Department is located 15 Km from the city centre at the College of Agriculture and Veterinary Sciences, of the University of Nairobi. The establishment of the Department of PHPT's physical facilities was financed by a grant from the Norwegian government which also provided initially the academic staff to run the department and resources that were used for development of local academic staff and finance research activities. The first local academic members of staff to serve the department got their postgraduate training through the Norwegian government and USAID grants. Some staff trained in Norway and locally using the Norwegian government grant. Others trained in America under USAID grant.

The Department of Public Health, Pharmacology and Toxicology provides training, research in the following specialized areas: Veterinary Public Health (Food Microbiology, Food Hygiene, Food and Environmental Toxicology, Zoonoses, Meat hygiene), Pharmacology, Toxicology, Epidemiology, Livestock Economics and Business management, Biostatistics, Computer Application and Information Systems, Immunology and Microbial Biotechnology, Food and beverage production and sales, House keeping, Tourism economics, Public relations and tourism management, Management, Entrepreneurship, Information Technology, Biochemical-Pharmacology Biochemical-Toxicology. Consultancy services are provided in the following areas: Acute toxicity testing of pesticides, Drug efficacy trials, toxicological analysis of feed samples, microbiological analysis of food, water and feeds, mycotoxin analysis, slaughterhouse design and construction and field surveys.

#### **Vision**

To be committed to academic excellence and promotion of research and outreach activities.

#### **Mission**

To be a centre of excellence for learning and scholarship, research and consultancy, fostering an intellectual culture and contribute to socio-economic development.

#### **Core values**

1. Commitment to provision of quality teaching, research and consultancy services
2. Espouse virtues of truth, integrity, honesty, tolerance, professionalism and teamwork.
3. Uphold ethical practices in provision of services.
4. Promotion of creativity and innovativeness
5. Ensure openness and transparency in our operations
6. Respect the beliefs and values of others
7. Respect and protect the environment
8. Be responsive and adaptive to changing conditions

#### **Strategic objectives**

1. Provide quality teaching and research
2. Continuously revise training programs to reflect global changes and customer needs
3. Develop new programs that address emerging problems
4. Provide quality consultancy services
5. Disseminate research findings through publications, conferences and workshops
6. Participate in outreach activities through exhibitions, workshops, field and open days
7. Create working partnerships and linkages with local and international institutions and organizations.



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Certificate in Meat Hygiene and Quality Assurance

### **Diploma**

Diploma in Veterinary Public Health and Meat Technology (offered at the Meat Training Institute)

Diploma in Leather Technology

### **Undergraduate**

#### **Teaching is done for the following undergraduate programs**

Bachelor of Veterinary Medicine  
Bachelor of Science in Biomedical Technology  
Bachelor of Science in Wildlife and Tourism management  
Bachelor of Science in Biochemistry  
Bachelor of Science in nutrition and dietetics

### **Masters Programs**

Master of Science in Pharmacology and Toxicology  
Masters in Epidemiology and Economics  
Masters in Veterinary Public Health  
Master of Science in Natural products and Bioprospecting  
Master of Science in Leather Science

### **PhD Programs**

PhD in Pharmacology and Toxicology  
PhD in Epidemiology and Economics  
PhD in Veterinary Public Health  
PhD in Natural products and Bioprospecting  
PhD in Leather Science

Reg. No.	Name	Program
J56/81176/12	KiraitheMicheni Ndei	NP
J56/79712/12	Kabubii Nyaituha Zelipha	NP
J56/79717/12	Aonda Ochami Ezra	MVEE
J56/77673/12	Wangila Sitawa Rinah	MVEE
J56/79406/12	Gichuyia CianjokaMercy	MVEE
J56/79225/12	Akwalu Kamwilu Samuel	MVEE
J56/79900/12	Macharia Kariuki James	MVEE
J56/80864/12	Muriuki Muthii John	MVEE
J56/80615/12	Ngunga Makau Laban	MVEE
J56/80831/12	Kiraithe Nkiria Zaverio	MVEE
J56/81473/12	Waruri Sebastian	MVEE
J56/81254/12	Onduso Richard	MVEE
J56/83293/12	Nyaga Wanja Nazaria	MVEE
J56/80896/12	NguueMakau Dennis	MVEE
J56/83717/12	Odera Oduor Charles	MVEE
J56/81871/12	Chacha Nchagwa Isaiah	MVEE
J56/80317/12	Maina Samuel Kahariri	MVEE
J56/81091/12	Kiungu Nkirote Purity	MVEE
J56/84231/12	Mwololo Katee Damaris	MVEE
J56/82672/12	Ganda Ogola Joseph	MVEE
	Langat Kipkemoi Paul	Leather Science
	Ramtu Shukuru Paul	Leather Science
J56/78797/12	Chebet Tenai Betty	P&T
J56/84296/12	Mvova Joel Paul	P&T
J56/60509/13	Ogola Okoth Joseph	P&T

NP - Natural Productions & Bioprospecting

MVEE - Veterinary Epidemiology & Economics

P&T - Pharmacology & Toxicology

**Others (continuing)**

REG. NO	NAME	Program
J56/7853/97	Opiyo Anyango Teresa	MVPH
J56/7497/01	Mwaura Zachery Ndungu	MVEE

	si	MVEE
		MVEE
	loki	MVEE
J56/7127/02	Manga Thomas N	MVEE
J56/7911/05	Nguyo Charity Njoki	P&T
J56/71059/07	Mweu Marshal Mutinda	MVEE
J56/76983/09	Sirma Anima Jematia Kigen	MVPH
J56/76743/09	Chege Maina Stephen	MVEE
J56/75134/09	Ouko Omolo Elizabeth	MVEE
J56/79042/10	Kimani Njoki Clare	P&T
J56/64930/10	Miriam Jepkosgei Nakeel	MVEE
J56/64794/10	Mabior Mabil Awar Yuot	MVEE
J56/64950/10	Omwenga Mokaya Isaac	P&T
J56/66135/10	Lanyasanya Pat Rupunye	NP
J56/66636/10	Rukenya Muthii Zachary	NP
J56/65992/10	Menni Kuria James	NP
J56/66135/10	Lanyasanya Rupunye Pat	NP
J56/66657/10	Okindo Onzago Ronald	NP
J56/69345/11	Toroitich Kisa Charles	MVEE
J56/69638/11	Wamwatila Naliaka Selestine	MVEE
J56/69318/11	Ochieng Owange Nelson	MVEE
J56/68818/11	Ngethe Wangari Esther	MVPH
J56/69182/11	Wahome Mukundi Joseph	P&T
J56/69921/11	Ngugi Njenga David	P&T
J56/70486/11	Andrews LeeLia Rosamond	MVEE

## PhD

Reg. No.	Name	Program
J80/8528/03	Oguna Maina Mary	P&T
J80/8310/05	Dr. F.D. Wesonga	MVEE
J80/82302/09	Dr. Portas Olwande	MVEE
J80/8150/09	Dr. Kamanja Irene Thuguku	P&T
J80/80143/10	Massimo Castiello	Public Heath
J87/81202/12	Ms. Lucy Gicuku Njue	Public Health
2008	Kithuka James Mutiira	MVEE
2008	Mr. Peter O. Lamuka	MVEE
2009	Dr. Koros Kipsengeret	P&T



	ungo	VEE
	a	VEE
	Shinan Mwaura Mwangi	VEE
2011	Mark Opiyo Nanyingi	VEE
2011	Joseph Olesarioyo Seneiya	VEE
2011	Emily Kamanthe Muema	VEE
2011	Gachohi John Mwangi	VEE
2011	Sophycate Wanjiru Njue	VEE
2011	Esther Namikoye Wafula	VEE
2012	Joseph Kisivo Musau	P&T
2012	Alexander Kipruto Kipronoh	VEE
2012	Jacqueline Kasiiti Lichoti	VEE
2012	Joel Musyoka Mwendu	Leather Science

VEE . Veterinary Public Health

P&T . Pharmacology & Toxicology

**International Students**

Mabior Mabil Awaar Yuot      J56/64794/10   -      Sudan

Andrews LeeLia Rosamond      J56/70486/11   -      Liberia

1. Kabaka Waweru	J56/75600/09	MVEE	Prevalence and risk factors for gastrointestinal nematode infections and efficacies of anthelmintics in cattle in Mukurwe-in and Nakuru districts of Kenya
2. Ayieko Paul Odhiambo	J56/71880/08	MVEE	A comparative economic analysis of the contribution of livestock to household incomes: a case of Uriri, Karungu and Nyatike divisions
3. Mary Gichure Nyambura	J56/77076/09	MVEE	Prevalence and risk factors of African horse sickness in the donkey population of Kiambu west district, Kenya
4. Japhet M. Mwanampiu	J56/8159/01	MVPH	A study of organochlorine pesticides residues in fish and sediment from Lake Naivasha
5. Francis Ochola Okumu	J56/72044/08	P&T	Pharmaco-epidemiological and toxicological study of snake envenomations in selected areas of Kenya
6. Dominic Kiragu Mureithi	J56/72213/08	P&T	Prevalence of antimicrobial resistance and characterization of resistance genes in Escherichia coli isolates from captive baboons
7. Hesbon Zablun Ameyia	J56/72183/08	P&T	Acute and subacute toxicological studies of Rapanea melanophloeos (L) mex in laboratory rats
8. Itonga Stanley Mwebia	J56/71391/07	P&T	Ethnobotanical survey of plants used in traditional medicine and as biopesticides in Meru Central, Kenya and preliminary toxicological evaluation of Tephrosia vogelii
9.			
10. Joseph Kisivo Musa	J56/71880/08	P&T	Antimicrobial activity, cytotoxicity and phytochemistry of selected medicinal plants in Meru Central District, Kenya

#### **EXTERNAL EXAMINERS APPOINTED IN 2011/2012 ACADEMIC YEAR**

1. Dr. Michael Muita Gicheru (Kenya University)- For Public Health and Immunology courses
2. Dr. Henry Kimathi Kiara (ILRI) . For Epidemiology and Economics courses
3. Dr. Gideon M. Kikui (JKUAT) : For Undergraduate Pharmacology and Toxicology courses
4. Mr. Godwin Njeru (USIU) . for BSc. Wildlife and Tourism Courses)



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- For Biostatistics courses (Sokoine University) . For Postgraduate Pharmacology and

## **RESEARCH**

### **Prof. E. Kang'ethe**

1. 2011 . 2013 Development of Continuing Professional development courses for Veterinary Public Health Funded FAO Rome
2. 2010 . 2013: Capacity building to improve safety in the feed dairy chain with special focus on healthy risks associated with biological contaminants- Funded by Ministry of Foreign Affairs, Finland
3. 2012 . 2015 Safe food, fair food 2: Building capacity to improve the safety of animal-source foods and ensure continued market access for poor farmers in sub Saharan Africa Funded by BMZ and GIZ Germany
4. 2012 –2015: Environmental and Social Ecology of Human Infectious Diseases . Funded by MRC UK
5. 2012 . 2016 : Improving Food Security in West and East Africa through Capacity Building in Research and Information Dissemination (Food Africa). Funded by Ministry of Foreign Affairs Finland.

### **Prof. Maitho**

2012. Mukundi J.W., Maitho T. and Mbaria, J.M. Toxicological Analysis of herbal medicines used orally in Nairobi County.

### **Prof. Mbaria**

- 1) A Study of Wound Healing and Antimicrobial Activity, phytochemistry and Toxicity of *Aspilia Pluriseta*
- 2) A toxicological and epidemiological study of environmental and occupational pesticide exposure on floricultural workers in Kenya
- 3) Acute and sub-acute toxicological studies of *Prosopis juliflora* from Marigat district, Kenya
- 4) Evaluation of antifertility properties of medicinal plants traditionally used in Tana River County, Kenya
- 5) Evaluation of Antimicrobial activity and Cytotoxic Effects of *Aloe turkanesis*
- 6) *In vivo* antimalarial and cytotoxic effects of selected plant extracts used in Kenya
- 7) Occurrence of Multiple Strains, Antibiotic Resistance of Enteropathogenic *Staphylococcus aureus* in some Foods of Animal Origin in Nairobi Kenya
- 8) Pharmacological and Toxicological Study of *Clerodendrum myricoides*, an ethnomedical Herbal Remedy Used in Kenya
- 9) Pharmacology, toxicology and phytochemical analysis of selected antimalarial plants in Kenya
- 10) Phytochemical and antihelmintic activity of *Entalda leptostachya* (MIMOSACEAE) and *Rapanea rhododendroides* (MYRINACEAE)
- 11) Prevalence of aflatoxin B<sub>1</sub> in foods and cattle feeds stocked in Nairobi using Enzyme-Linked Immunosorbent Assay
- 12) Study of Antimalarial Activity, Cytotoxicity and Acute Toxicity of *Zanthoxylum chalybeum* Engl. and *Vernonia lasiopous* O. Hoffman (Collaboration with KEMRI).



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peoples of Machakos and Kitui, Kenya for management of  
Activity of *Vernonia hymenolepsis*, a Medicinal Plant used in

### **Dr. Nguta**

Evaluation of Brine Shrimp lethality and antifungal activity of *Zanthoxylum Chalybeaum* Engl. Species  
. Deans Committee Research Grant

### **Dr. Kanja**

Development of meat preservative from garlic (*Allium sativa* L. extracts) - Deans Committee Research Grant

A toxicological and epidemiological study of environmental and occupational pesticide exposure on floricultural workers in Kenya

An assessment of pesticide and heavy metal residues in inland fish farming in Machakos and Kiambu counties, Kenya.

## **PUBLICATIONS**

### **Dr. Nguta**

J.M. Nguta, J.M. Mbaria, D.W. Gakuya, P.K. Gathumbi, J.D. Kabasa, S.G. Kiama. Cytotoxicity of animalarial plants extracts from Kenyan biodiversity to the brine shrimp, *Artemia salina* L. (Artemiidae). *Drugs and Therapy Studies* 2012; volume 2:e12.

J.M. Nguta, J.M. Mbaria, D.W. Gakuya, P.K. Gathumbi, J.D. Kabasa, S.G. Kiama Evaluation of acute toxicity of crude plant extracts from Kenya biodiversity using brine shrimp, *Artemia saline* L. (Artemiidae). *The Open Conference Proceedings Journal*, 2012, 3, 30-34

J.M. Nguta, J.M. Mbaria, D.W. Gakuya, P.K. Gathumbi, J.D.Kabasa, S.G.Kiama, 2011. Biological Screening of Kenyan Medicinal plants using *Artemia salina* L. (Artemiidae).

J.M. Nguta, J.M. Mbaria, D.W. Gakuya, P.K. Gathumbi J.D.Kabasa and S.G.Kiama, 2012. Evaluation of Acute Toxicity of Crude Plant Extracts from Kenyan Biodiversity using Brine Shrimp, *Artemia salina* L. (Artemiidae)

Joseph Mwanzia Nguta, James M.Mbaria, Peter K.Gathumbi, Daniel Gakuya, John David Kabasa and Stephen Gitahi Kiama. 2011. Ethnodiagnostic skills of the Digo community for malaria: a lead to traditional bioprospecting

F.K. Mutua, C.E. Dewey, S.M. Arimi, E. Schelling, W.O. Ogara and M. Levy, 2011. Reproductive performance of sows in rural communities of Busia and Kakamega Districts, Western Kenya.

#### **Prof. Ogara**

Francis Gakuya<sup>1</sup>, Luca Rossi, Jackson Ombui, Ndichu Maingi, Gerald Muchemi, William Ogara, Ramón C Soriguier and Samer Alasaad, 2011. The curse of the prey: *Sarcoptes* mite molecular analysis reveals potential prey-to-predator parasitic infestation in wild animals from Masai Mara, Kenya

F.K. Mutua, C.E. Dewey, S.M. Arimi, E. Schelling, W.O. Ogara and M. Levy, 2011. Reproductive performance of sows in rural communities of Busia and Kakamega Districts, Western Kenya.

Florence Kanini Mutua, Catherine Dewey, Samuel Arimi, Willaim Ogara, Mike Levy, Esther Schelling, 2011. A description of local pig feeding systems in village smallholder farms in Western Kenya.

W.O. Ogara, J.S. Olesarioyo, G. Muchemic and N. Oguge, 2011. Community based best practices in natural resources management and pastoralism in Ewaso Nyiro Ecosystem, Kenya: A case study of Namunyak and Naibungwa conservancies.

F.K. Mutua, C.E. Dewey, S.M. Arimi, W.O. Ogara, S.M. Githigia, M. Levy and E. Shelling, 2011. Indigenous pig management practices in rural villages of Western Kenya.

#### **Dr. Onono**

Joshua Orungo Onono, Barbara Wieland, Jonathan Rushton, 2012. Productivity in different cattle production systems in Kenya.

#### **Dr. Muchemi**

Gakuya F., Ombui, J., Maingi, N., Muchemi, G., Ogara, W., Ooriguer, R.C. and Alasaad, S. (2012). Sarcoptic mange and cheetah conservation in Masai Mara (Kenya): Epidemiological study in wildlife/livestock systems. *Parasitology* (2012).

Gakuya, F., Ombui, J., Henkelbach, J., Maingi N., Muchemi, G., Ogara, W., Mijele, D., and Alasaad, S. (2012). Knowledge of mange among Masai pastoralists in Kenya. *PLoS ONE* journal Vol. 7, Issue 8 (2012).

#### **Prof. Mbaria**

O Ombasa, P G Kareru, G. Rukunga, **J Mbaria**, J M Keriko, B O Owuor (2012). *In-vitro* anthelmintic effects of two Kenyan plants extracts against *Haemonchus contortus* adult worms. *International Journal of Pharmacological Research* 2(3):113-116

, J Mbaria, J M Keriko, B O Owuor (2012). Mortality of Entada leptostachya Harms. and Rapanea rhododendroides (Gil) Mez. Extracts. *African. J. Ethnomed. Pract.* 1 (1):36-43

#### **Dr. Kanja**

Mureithi D., Danish W.S., Ikenaka Y., Kanja L., Mayumi I. (2012). Cytochrome P4503A in RNA expression along goat and rat gastrointestinal tract. *Japanese Journal of Veterinary Research* 60 (4) 205-210.

#### **Prof. Maitho**

Bundotich J.K., Mbaria, J.M. and Maitho, T. 2012. Study of acute toxicity of Zanthoxylum chalybeum using mice and brine shrimp experimental model. *African Journal of Traditional, Complementary and Alternative Medicine* (In, Press).

Nkoro J.K. and Maitho T. 2012. Prevalence and control of mastitis in Mathira Constituency, Nyeri country. *The Kenya Veterinarian* (final review).

#### **Prof. Kitala**

Kipronoh, K.A., Gathuma, J.M, Kitala, P.M. and Kiara, H.K. 2011. Prevalence of tick-borne infections in extensive cattle management system in West Pokot District, Kenya.

John Gachohi, Rob Skilton, Frank Hansen, Priscilla Ngumi and Philip Kitala, 2012. Epidemiology of East Coast fever (*Theileria parva* infection) in Kenya: past, present and the future.

Kipronoh, K.A, Gathuma J M, Kitala P M\*and Kiara H K, 2011. Pastoralists' perception of the impact of East Coast fever on cattle production under extensive management in Northern Rift Valley, Kenya.

#### **Prof. Mbaria**

1. .M. Nguta, J.M. Mbaria, D.W. Gakuya, P.K. Gathumbi, J.D. Kabasa, S.G. Kiama. Cytotoxicity of animalarial plants extracts from Kenyan biodiversity to the brine shrimp, *Artemia salina* L. (Artemiidae). *Drugs and Therapy Studies* 2012; volume 2:e12.
2. J.M. Nguta, J.M. Mbaria, D.W. Gakuya, P.K. Gathumbi, J.D. Kabasa, S.G. Kiama Evaluation of acute toxicity of crude plant extracts from Kenya biodiversity using brine shrimp, *Artemia salina* L. (Artemiidae). *The Open Conference Proceedings Journal*, 2012, 3, 30-34
3. J.M. Nguta, J.M. Mbaria, D.W. Gakuya, P.K. Gathumbi, J.D.Kabasa, S.G.Kiama, 2011. Biological Screening of Kenyan Medicinal plants using *Artemia salina* L. (Artemiidae).
4. J.M. Nguta, J.M. Mbaria, D.W. Gakuya, P.K. Gathumbi J.D.Kabasa and S.G.Kiama, 2012. Evaluation of Acute Toxicity of Crude Plant Extracts from Kenyan Biodiversity using Brine Shrimp, *Artemia salina* L. (Artemiidae)

baria, Peter K.Gathumbi, Daniel Gakuya, John David Kabasa  
hndiagnostic skills of the Digo community for malaria: a lead

#### **Dr. Kanja**

Dominic Mureithi, Wageh Sobhy Darwish , Yoshinori Ikenaka, Laetitia Kanja and Mayumi Ishizuka  
2012. Cytochrome P450 3A mRNA expression along goat and rat gastrointestinal tracts

#### **Dr. Aboge**

Yan Li, Mohamad Alaa Terkawi, Yoshifumi Nishikawa, Gabriel Oluga Aboge, Yuzi Luo, Hideo Ooka,  
Youn-Kyoung Goo, Longzheng Yu, Shinuo Cao, Yongfeng Sun, Junya Yamagishi, Tatsunori  
Masatani, Naoaki Yokoyama, Ikuo Igarashi, and Xuenan Xuan 2011. Macrophages Are Critical for  
Cross-Protective Immunity Conferred by *Babesia microti* against *Babesia rodhaini* Infection in Mice

#### **Prof. Ombui**

Francis Gakuya<sup>1</sup>, Luca Rossi, Jackson Ombui, Ndichu Maingi, Gerald Muchemi, William Ogara,  
Ramón C Soriguer and Samer Alasaad, 2011. The curse of the prey: *Sarcoptes* mite molecular  
analysis reveals potential prey-to-predator parasitic infestation in wild animals from Masai Mara,  
Kenya

#### **Prof. Kangethe**

Erastus Kangethe, Violet Kimani, Delia Grace, Grace Mitoko, Brigid McDermott, Julie Ambia,  
Concepta Nyongesa, Gabriel Mbugua, William Ogara, Peninnah Obutu, 2012. Development and  
delivery of evidence-based messages to reduce the risk of zoonoses in Nairobi, Kenya

Violet N. Kimani, Grace Mitoko, Brigid McDermott, Delia Grace, Julie Ambia, Monica W. Kiragu , Alice  
N. Njehu, Judith Sinja, Joseph G. Monda, Erastus K. Kangethe, 2012. Social and gender  
determinants of risk of cryptosporidiosis, an emerging zoonosis, in Dagoretti, Nairobi, Kenya

Erastus K. Kangethe, Violet N. Kimani, Brigid McDermott, Delia Grace, Alfred K. Langat, Monica W.  
Kiragu, Nancy Karanja, Alice N. Njehu, Thomas Randolph, Gabriel Mbugua, Tabitha W. Irungu,  
Peninnah Ombutu, 2012. A trans-disciplinary study on the health risks of cryptosporidiosis from dairy  
systems in Dagoretti, Nairobi, Kenya: study background and farming system Characteristics.

Delia Grace, Joseph Monda, Nancy Karanja, Thomas F. Randolph, Erastus K. Kangethe, 2012.

Participatory probabilistic assessment of the risk to human health associated with cryptosporidiosis  
from urban dairying in Dagoretti, Nairobi, Kenya

Delia Grace, Erastus Kangethe, David Waltner-Toews, 2012. Participatory and integrative approaches  
to food safety in developing country cities

Erastus K. Kangethe, Erastus K. Mulinge, Robert A. Skilton, Moses Njahira, Joseph G. Monda,

Concepta Nyongesa, Cecilia K. Mbae, Stanley K. Kamwati 2012. Cryptosporidium species detected in  
calves and cattle in Dagoretti, Nairobi, Kenya

Erastus Kangeche, Harrison N. Nyangaga, Delia Grace, Violet Kimani,

Erastus Kangeche, Alfred K. Langat, Gabriel Mbugua, Grace Mitoko, Erastus K. Kangeche, 2012.

Erastus Kangeche, Brigid McDermott, Delia Grace, Cecilia Mbae, Erastus Mulinge, Joseph Monda, Concepta Nyongesa, Julie Ambia, Alice Njehu, 2012. Prevalence of cryptosporidiosis in dairy cattle, cattle-keeping families, their non-cattle-keeping neighbours and HIV-positive individuals in Dagoretti Division, Nairobi, Kenya

Delia Grace, Jeff Gilbert, Thomas Randolph, Erastus Kangeche, 2012. The multiple burdens of zoonotic disease and an ecohealth approach to their assessment

#### **Prof. Gathuma**

Kipronoh, K.A., Gathuma, J.M, Kitala, P.M. and Kiara, H.K., 2011. Prevalence of tick-borne infections in extensive cattle management system in West Pokot District, Kenya.

Stephen G. Mbogoh and Joseph Gathuma, 2012. Methodological issues applications in economic evaluation of alternative livestock disease control strategies. The case of the CBPP Quarantine line in North-Eastern Kenya.

Kipronoh K A, Gathuma J M, Kitala P M and Kiara H K, 2011. Pastoralists' perception of the impact of East Coast fever on cattle production under extensive management in Northern Rift Valley, Kenya

#### **PAPERS PRESENTED**

##### **Dr. Muchemi**

Nanyingi, M.O., Kiama, S.G., Thumbi, S.M. and Muchemi, G.M. (2012). Climate change vulnerability, adaptation and mitigation of livestock systems in Kenya. Joint Faculty of Veterinary Medicine and KVA conference, April, 2012, Nairobi.

Chege, S., Kitala, P., Muchemi, G. and Iqbal, M. (2012). Factors associated with ungulate morbidity and mortality in Al Ain Wildlife Park and Resort, UAE. Joint Faculty of Veterinary Medicine and KVA conference, April, 2012, Nairobi.

##### **Prof. Kangeche**

Erastus K. Kangeche, Hannu J. Korhonen, Sheila Okoth, Gatwiri Murithi, Christine K. Mburugu, Joseph K. Mungatu and Harrison N. Mburu. Animal feeds types and sources in Nandi and Makueni counties, Kenya: aflatoxins and fumonisins contamination, International silage conference, haemelinna, Finland, 2<sup>nd</sup> July 2012

##### **Dr. Nguta**

J.M. Nguta. Efficacy, safety and phytochemical screening of selected antimalarial plants from Kenya. 13<sup>th</sup> International Symposium on Natural Products Chemistry and Related Biological Sciences, International Centre for Chemical and biological Sciences (ICCBS), University of Karachi, Pakistan, Sept. 22-25, 2012.

J.M. Nguta. Spectroscopic determination of cobalt and copper in grass pastures in Kabete, Kenya. 4<sup>th</sup> International Toxicology Symposium in Africa, Samora Machel School of Veterinary Medicine, University of Zambia 2-4<sup>th</sup> Sept. 2012.



ad poisoning by waste from a battery manufacturing company  
in Nakuru, Kenya. September 3<sup>rd</sup>, 2012. 4<sup>th</sup> International Toxicology Symposium in Africa. Held Samora  
Machel School of Veterinary Medicine, University of Zambia.

J. M. Mbaria (2012) Mapping the double disease burden and complications. March 1<sup>st</sup> to 2<sup>nd</sup>, 2012:  
Expert meeting on indigenous peoples, diabetes and development, organized by International  
Diabetes Federation and World Diabetes Foundation. Held at Marriot Hotel, Copenhagen Denmark.

#### **Prof. Maitho**

Maitho, T. Clinical trials of herbal medicines in animals. 30<sup>th</sup>-31<sup>st</sup> January, 2012. Hotel Boulevard,  
Nairobi.

Maitho, T. pesticides uses, benefits and hazards in Kenya. Advances in Pest Management and the  
Role of Veterinarians 16<sup>th</sup> September 2011. Faculty of Veterinary Medicine, Kabete Campus.

Rao, K.P. Kamamia E.K., Maitho T. and Pratima S. Design and formation development paracetamol  
----- 4<sup>th</sup> International conference on Drug Discovery and Therapy . 12<sup>th</sup>-15<sup>th</sup> February 2012, Dubai,

#### **CURRENT STAFF ESTABLISHMENT**

<b>Title</b>	<b>In post</b>
Professor	4
Ass. Professor	7
Senior Lecturer	2
Lecturer	9
Tutorial Fellow	1
Chief Technologist	1
Senior Technologist	4
Technologists	7
Assistant Secretary Grade A	1
Junior Technologist IV	1
Technical Assistant III	2
Subordinate Staff II	3
Driver II	1

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

**Professors:**

Gathuma, J.M., B.V.Sc., M. Sc., Ph.D. (Nbi) . Veterinary Public Health. Epidemiology, Animal health economics.

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.

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

Kang'ethe, E.K., B.V.M. (Nbi), M.Sc., (Bristol), Ph.D. (Nbi) . Veterinary Public Health. Meat Science, meat hygiene, and Immunology.

**Associate Professors:**

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

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

Njeruh, F.M., B.V.M., M.Sc., Ph.D. (Nbi) . Veterinary Public Health,. Immunology, parasitic Zoonoses, Milk hygiene.

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

Kitala, P.M., B.V.M., M.Sc., Ph.D. (Nbi) . Verinary Public Health. Viral zoonoses and Epidemiology



Pharmacology and Toxicology, Natural Products and

**Senior Lecturers:**

Gathura, P.B., B.V.M., M.Sc., Ph.D. (Nbi) . Veterinary Public Health. Zoonoses, 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.

**Lecturers:**

Nderu, F.M.K., B.V.M., (Nbi), M.P.V.M. (California) . Veterinary Public Health. Epidemiology and Food hygiene.

Kahunyo, J.M., B.V.M., M.Sc., (Nbi) . Pharmacology and Toxicology. Pesticides and, mycotoxins.

Senerwa, D. M., B.V.M., M.Sc., (Nbi) . Veterinary Public Health; food microbiology, Molecular biology, bacterial plasmid transfer and resistance.

Macharia, S.M., B.V.M., M.Sc., (Nbi) . Veterinary Public Health. Epidemiology and animal health economics.

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

Muchemi, G.M., B.V.M., M.Sc., Ph.D. (Nbi) . Veterinary Epidemiology. Parasitic zoonoses, Biostatistics.

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

Nguta, J. M., B.V.M., M.Sc., Ph.D, (Nairobi) . Pharmacology and Toxicology, Natural Products and Pharmacology and Toxicology of medicinal plants.

**Tutorial Fellows:**

Onono, J. O., B.V.M., MSc., ongoing Ph.D.. Veterinary Epidemiology, Animal Health Economics and Biostatistics.

Nduhiu Gitahi	Chief Technologist	HND (KP), MSc. (KU), Dip. Project Mgt (KIM)
Dorcas Nduati	Senior Technologist	HND (KP)
Ronoh Kosgei	Senior Technologist	BSc. (MKU)
Lucy Wanjiru Mwangi	Senior Technologist	HND (KP)
Kenneth Maloba	Senior Technologist	HND (KP)
Francis Gitau	Technologist	Diploma (KP)
Kiogora A. Marimba	Technologist	Diploma (KP)
Joseph Gichuki Nderitu	Technologist	Diploma (NTI)
Alfred Mainga	Technologist	Diploma (KP)
Penina Ateka	Technologist	Diploma (KP)
Kipkorir Bett	Technologist	Diploma (NTI)
James K. Macharia	Technologist	Certificate, JLT (KP)
Leah Mwaniki	Junior Technologist	Certificate, JLT (KP)
Grace Pacho	Technical Assistant III	Certificate, JLT (KP)
Mercy Gitungo	Technical Assistant III	Certificate, JLT (KP), Certificate SLT
Peter K. Njeru	Driver	KCSE
Caroline N. Maina	Assistant Secretary A	Certificate, SS (Temple)
Martin Dongo Ogotu	Technical Assistant II	KCSE
Jackline M. Nyaribo	Technical Assistant II	KCSE
Johnson Silas Mwakio	Technical Assistant II	Certificate, JLT (NTI)

### Teaching and Research facilities

Sony Data Projector	1
HP Pavilion Laptop	1
HP 2200 workstations (desktop computers)	4
Catalina chairs . high density cushions	35
Laboratory stools high density cushions	25
Sony LCD projector	1

### Key visitors

Khalid Saeed	FAO
Dr. H.K. Kihanya	Meat Training Institute
Kasongo Owkanga	University of DRC



**UNIVERSITY OF NAIROBI**  
COLLEGE OF AGRICULTURE AND VETERINARY SCIENCES  
FACULTY OF VETERINARY MEDICINE

**DEPARTMENT OF VETERINARY PATHOLOGY, MICROBIOLOGY  
AND PARASITOLOGY**

**ANNUAL REPORT  
2011/2012**

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

## ATE PROGRAMS AND STUDENT ENROLLMENT

No.	Name of Students	Year Graduated	Programmes in the Department.	No. Graduated in 2011/ 2012
1	Dr. Wilson Kuria Gachugia	-	MSc. in Vet Pathology and Microbiology	-
2	Dr. Kyalo Micheal Makau	-	MSc. in Applied Vet. Parasitology	-
3	Dr. Nyamweya Joel Makau	-	MSc. in Applied Vet. Parasitology	-
4	Dr. Mwhia Evalyn Wanjiru	-	MSc. Clinical Pathology and Laboratory Diagnosis	-
5	Thanda Carter	-	MSc. in Vet Pathology and Diagnostics	-
6	Dr. Kibore Benson	-	MSc. in Applied Microbiology	-
7	Dr. Mutua Victoria Ngoqndu	-	MSc. in Applied Microbiology	-
8	Dr. Wagura D. Warui	-	MSc. in Applied Vet. Parasitology	-
9	Dr. Kamundia Patrick Waweru	-	MSc. in Fish Science	-
10	Dr. Chege Hanna Wambui	-	MSc. in Applied Vet. Parasitology	-
11	Dr. Maina S. Migwi	-	MSc. in Applied Microbiology	-
12	Dr. Kemboi David Chebutai	-	MSc. in Applied Microbiology	-
13	Dr. Christine Minoo Bindyo	-	MSc. in Applied Microbiology	-
14	Dr. Dhaval Shah	-	MSc. in Vet Pathology and Diagnostics	-
15	Dr. Paul Okumu Onyango	-	MSc. Clinical Pathology and Laboratory Diagnosis	-
17	Mubemba Benjamin (Foreign Student)	-	MSc. In Fish Science	-

### b) PhD PROGRAMS

Name of the student	Year registered	Name of program	Year Graduated
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			Vet Pathology and Diagnostics	ongoing
2.	Simon Mwangi Kihu	2010/2011	Applied Microbiology	ongoing
3.	Dr. Vincent O. Obanda	Processing his registration	Applied Parasitology	ongoing
4	Benear A. Obanda	Processing his registration	Applied Microbiology	ongoing
5.	Nkando Isabella Gacheri	Processing her registration	Applied Microbiology	On going
6.	Dr. Mutinda Wanzila Usyu`	Processing her registration	Applied Microbiology	On going
7.	Dr. Donald Mukolwe Lubembe	Processing his registration	Applied Vet. Parasitology	On going

### 3.0 EXTERNAL EXAMINERS IN 2011/2012

- 3.1 Dr. Ciira Kiiukia- Jomo Kenyatta University- Kenya (Microbiology- semester I)
- 3.2 Dr. Joseph M. Nginyi- Kenya Agricultural Research Institute ( Parasitology- Semester I)
- 3.3 Dr. Rubaire- Akiiki- Makerere University- Uganda (Parasitology- semester II
- 3.4 Dr. Denis K. Byarugaba- Makerere University- Uganda ( Microbiology- Semester II
- 3.5 Prof. George Mwamengele- Sokoine University of Agriculture- Tanzania (Pathology- Semester II)

### 4.0 ONGOING RESEARCH PROGRAMS

5.1 P.G. Mbutia attended 2<sup>nd</sup> Planning meeting for the project %Enhancement of Sustainable Productivity of Fish in Lake Victoria through control of pollutants with Emphasis on Endocrine Disruptors and Microbial pathogens+. VicRes Project. Held at Sunset Motel, Entebbe on 12<sup>th</sup> to 14<sup>th</sup> August 2011. All costs were met by the project, such as:

- 4.1 Air fare . USD 340.0
  - 4.2 Per diem . USD 110 per day
  - 4.3 Local travel . USD 35.0
  - 4.4 Health insurance . USD 27.0
- (Appendix 10A)

5.2 P.G. Mbutia attended meeting Aquaculture Stakeholders in Kirinyaga County, held on 18<sup>th</sup> and 19<sup>th</sup> August 2011 for the project, Enhancing Sustainability and Commercialization of Aquaculture through Efficient Production, Value Addition, and Partnership Development+. All travel and per diem costs were met by the research grant.



**MENTS:**

and a successful tree nursery of medicinal plants (Figure 1) at  
under the project on, **Evaluation and commercialization of**  
medicinal plants extracts for improved livelihoods: a case study of East Coast feverq 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

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 feverq Funded by World bank grant through Kenya  
Agricultural Productivity (KAPP) led by **Prof. P.K. Gathumbi** (Figure 2)

**6.3 Prof. E. Maingi** , *Diagnostic and Control Tools and Strategies for Taenia soliu  
cysticercosis (ASARECA/AB/2009/01). Total funding: US\$ 521,859. Funding to  
University of Nairobi: US\$ 120,145”* .

**6.5 Prof. L.C. Bebor** , , Prof. N. Maingi, Prof. P.N. Nyaga, Dr. P.G.  
Mbuthia, Dr. C.O. Gor and Dr. L.W. Njagi , *“Enhancing Village  
Chicken Productivity through Parasite Management for Effective Newcastle  
Disease Vaccination in Kenya”*

**6.6 Dr. J.G. Maina, Dr. P.G. Mbuthia** , Prof. E.G. Karuri, Dr. Sabina W., Prof.  
E.G. Karuri, Mr. George O. Owiti, Dr. Bethuel Omolo, Mr. Paul Orina, Ms Jane  
Ngugi, *“Enhancing Sustainability and Commercialization of  
Aquaculture through best Production Practices, Value Addition and Partnership in  
Development”*.

**6.7 Dr. P.G. Mbuthia** , *“Enhancement of Sustainable Productivity of Fish in Lake Victoria  
through Control of Pollutants with Emphasis on Endocrine Disruptors and Microbial  
Pathogens”*.

**6.8 Prof. P.W.N. Kanyari**, Dr. J.Kagira, Prof. J.R.L. Mhoma and Prof. Akiiki  
**Rubaire** *“Characterizing and Assessing the benefits and Public Health Risks of Urban and Peri-  
Urban Livestock Production in Three Urban Settlements around Lake Victoria namely Kisumu,  
Entebbe and Mwanza”*.

**6.9 Prof. P.W.N. Kanyari**, *“Developing Reforms for promoting ASAL communities in drought  
mitigation and maximization of livestock resources for improved livelihoods through strategic  
linkages”*

and phylogeographic relations among ectoparasites of wild  
mountain ranges (Kulal and Nyiru) from Northern Kenya". \

**6.92 Dr. C.G. Gitao**, a research on *“Improvement Of Dairy Productivity And Marketing In Sub humid And Pastoral Areas Of Kenya Through Improved Dairy Value Chain” – 2010-2013* KAPAPCGS/CN/2010/LS/RC NO. O4, 2010-2013 (Appendix 8c)

**6.93 Dr. C.G. Gitao**, a proposal on *“Development of strategies for clean milk marketing and production in east Africa:EAAPP-OCGS-01-2011-18, 21<sup>st</sup> February, 2012.*

6.94 **Dr. C.G. Gitao** together with other collaborating Institutions: Sokoine University of Agriculture; Ministry of livestock, Dept Veterinary Services; FAO; Networks East Africa, a research on *“Developing capacity for implementing innovative PPR control strategies based on the Epidemiology and Socio-economic aspects of the disease in the East African region (RU/CFP/CGS/TADS/09/1*

## 7.0 NEW RESEARCH GRANTS

**7.1 Prof. P.W.N. Kanyari**, *“Diversity and phylogeographic relations among ectoparasites of wild birds and small mammals in two mountain ranges (Kulal and Nyiru) from Northern Kenya”*

**7.2** As a result of his visit to Romania in the month of September last year, the University of Nairobi, Faculty of Veterinary Medicine and the University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, Romania signed an MoU.

The following two pieces of equipment were acquired:

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

**7.3 Prof. P.W.N. Kanyari**, *Post graduate Training Course: MSc in Veterinary Epidemiology and Public Health by Distance Learning .*

**7. Dr. J.K.N. Kuria** was confirmed a collaborator in the SUBPROJECT *“Developing 4 reforms for Promoting ASAL Communities in Drought Mitigation and Maximisation of Livestock Resources for Improved Livelihoods through Strategic Linkages”*, letter dated 20/01/2012.

## 8.0 Consultancies

**9.1 Prof. N. Maingi** attended a three days consultative, planning and write-shop at the Hilton Hotel in Nairobi from 7<sup>th</sup> to 9<sup>th</sup> November 2011. The meeting was organized by the Agro-biodiversity & Biotechnology Program (AGROBIO) of ASARECA. It brought together scientists from various countries who have been participating in eight (8) projects funded by ASARECA

the Principal Investigator for one of the projects titled  
ategies for *Taenia solium* cysticercosis.

The objectives of the meeting were:

1. To prepare manuscripts for publication of data collected under the projects. These are to be published as regional papers where more than one country is involved.
  2. Prepare regional manuals, posters, pamphlets and other materials from the project.
  3. Plan and agree on appropriate delivery pathways for the generated information products.
1. Plan on the next phase of the project since ASARECA has agreed to extend project activities up to 2013.

**9.1 Dr. Githigia, S.M. National Consultant – Pig Sector Review in Kenya-** Project of FAO .  
ECTAD Regional Office for East Africa , July . October 2010.

Submitted a comprehensive report on the pig sector in Kenya after interacting with various stakeholders in the livestock industry in Kenya. The report included current policies and legal framework affecting the pig sector in Kenya. The strength, potential and weaknesses of the industry were analyzed and a strategy for the pig industry formulated.

**9.2 Dr. S.M. Githigia Appointed member to the taskforce on National Pig Development Strategy (NPDS) by PS Ministry of Livestock Development – June 2012**

## 10.0 PUBLICATIONS

**10.1 Lucy W. Njagi.** Paul G. Mbutia. Phillip N. Nyaga. Lilly C. Bebor. Uswege M. Minga

( 2011) Viral nucleoprotein localization and lesions of Newcastle disease in tissues of indigenous ducks *Trop Anim Health Prod DOI 10.1007/s 11250-011-9958-2*

**10.2 John M. Kagira. Paul N. Kanyari.** Samuel M. Githigia. N. Maingi. James C. Ngang'a. John M. Gachohi ( 2011) Risk factors associated with occurrence of nematodes in free range pigs in Busia District, Kenya *Trop Anim Health Prod DOI 10.1007/s11250-011-9951-9* .

**10.3 Gakuya, F. Rossi, L., Ombui, J., Maingi, N., Muchemi, G., Ogara, W., Soriguer, R. and Alasaad, S.** (2011). The course of the prey: *Sarcoptes* mite molecular analysis reveals potential prey-to-predator parasitic infestation in wild animals from Masai Mara, Kenya. *Parasites and Vectors* Article No. 1794326039587938 of 2011.

**10.4 P. G. Mbutia, L. W. Njagi, P. N. Nyaga, L. C. Bebor, U. Minga, Jens Peter Christensen & J. E. Olsen;** (2011) Time course investigation of infection with a low virulent

nal and immune-suppressed 12 week-old free range chickens:  
8.

- 10.5 Sabuni Z A, **Mbuthia P G**, Maingi N, Nyaga P N, Njagi L W, Bebora L C and Michieka J N **2011**. Prevalence of haemoparasites infection in indigenous chicken in Eastern Province of Kenya. Livestock Research for Rural Development 23(11)2011. <http://www.lrrd.org/lrrd23/11/sabu23238.htm>
- 10.6 J. M. Nguta, J.M. Mbaria, D.W. Gakuya, **P.K. Gathumbi**, J.D. Kabasa, S.G. Kiama. Biological screening of Kenyan Medicinal plants using *Artemia Salina L*. Pharmacologyonline 2: 458-478 (2011).
- 10.7 **Karanja D N**, Ngatia T A, Wabacha J K, Bebora L C and Ngong'o C J (2011). The pathogenic effects associated with natural gastrointestinal helminth infections in pigs in Kenya. Bull Anim Hlth Prod Afr. 59: 53-59
- 10.8 J.W. Aleri, A.N. Kipyegon, J.D. Mande, C.M. Mulei, and **D. N. Karanja**. Acute Respiratory Distress Syndrome Due to Babesiosis in a Dog: Case Report. Research Journal of Animal Sciences 5 (2): 14 . 16, 2011.
- 10.9 Muthee J.K., Mbaria J M, Thaiya A G, **Karanja D N** and Gakuya D W. Clinical, Haematological, Biochemical and Pathological Manifestations of Sub-Acute Toxicity of *Nicandra Physaloides(L)* Gaertn in calves. Bull.Anim. Hith. Prod. Afr: (2011).59 17-24.
- 10.10 Karanja D.N, Ngatia T.A, Wabacha J.K. & **Bebora L.C.** (2011): Cases of pig poisoning encountered naturally in small holder farms in Nairobi and its environs. Kenya Veterinarian 35(1): 52-55.
- 10.11 Kutto, Ngigi, Karanja D.N., Kangeqhe, **Bebora L.C.**, Lagarkvist, Mbuthia, Njagi and Okello (2011): Bacterial contamination of Kale along the value chain in Nairobi and its environs. Paper presented at the 10<sup>th</sup> African Crop Science Society Conference, 10<sup>th</sup> . 13<sup>th</sup> October 2011, at Maputo, Mozambique.
- 10.12 **Prof. John Cooper**, Dr. Margaret Cooper, Prof. P.K. Gathumbi, Prof. P.N. Nyaga, P.G. Mbuthia, L.W. Njagi, J. Mbaria, M.Ogeto, Laban Njoroge (2011) . A report on Veterinary Forensic Works. The bulletin of the Royal College of Pathologists 156:255 . 257.
- 10.13 P.G. Mbuthia, L.C. Njagi, P.N. Nyaga, L.C. Bebora, U.Minga, P. Christensen and J.E. Olsen (2011) Time . Course investigation of infection with a low virulent *Pasteurella multocida* strain in

- 10.14 **Dr.P.G. Mbutia**, “Risk (Predisposing) factors for non-infectious claw disorders in Dairy cows under varying zero Grazing Systems”, in a book Birds-eye view of Veterinary Medicine edited by Carlos C. Perez-Marin, published February, 2012.(Appendix 1)
- 10.15 Obonyo F.O., **Prof. E.Maingi**, Githigia S.M. and Ngaqng;a C.J. 2012, Prevalence, intensity and spectrum of helminthes of free range pigs in Homabay District, Kenya. *Livestock Research for Rural Development, Volume 24, Article #48*. Retrieved March 14, 2012, from <http://www.lrrd.org/lrrd24/3/obon24048.htm> (Appendix 2)
- 10.16 **Dr. L.W. Njagi**, Prof. P.N. Nyaga, Prof.L.C. Bebora, Dr. P.G.Mbutia, and Uswege M. Minga a Research Article on “Effect of Immunosuppression on Newcastle Disease Virus Persistence in Ducks with Different Immune Status, International Scholarly Research Network ISRN Veterinary Science Vol.2012, Article ID 253809.” to verify the possibility of ducks being sources of Newcastle disease (ND) virus infection for chickens in mixed flocks 4<sup>th</sup> January, 2012. (Appendix 3)
- 10.17 **Prof. cooper J, Margaret Cooper and the Department of Veterinary Pathology Microbiology and Parasitology** Companion Bsava on 29/1/2012 . hosted Prof. John cooper and his wife Margret a one-day Forensics Workshop in Kenya 25/01/2012. (Appendix 4)
- 10.18 **Dr.P.G. Mbutia**, “Risk (Predisposing) factors for non-infectious claw disorders in Dairy cows under varying zero Grazing Systems”, in a book Birds-eye view of Veterinary Medicine edited by Carlos C. Perez-Marin, published February, 2012
- 10.19 Obonyo F.O., **Prof. E.Maingi**, Githigia S.M. and Ngaqng;a C.J. 2012, Prevalence, intensity and spectrum of helminthes of free range pigs in Homabay District, Kenya. *Livestock Research for Rural Development, Volume 24, Article #48*. Retrieved March 14, 2012, from <http://www.lrrd.org/lrrd24/3/obon24048.htm>.
- 10.20 **Dr. L.W. Njagi**, Prof. P.N. Nyaga, Prof.L.C. Bebora, Dr. P.G.Mbutia, and Uswege M. Minga a Research Article on “Effect of Immunosuppression on Newcastle Disease Virus Persistence in Ducks with Different Immune Status, International Scholarly Research Network ISRN Veterinary Science Vol.2012, Article ID 253809.” to verify the possibility of ducks being sources of Newcastle disease (ND) virus infection for chickens in mixed flocks 4<sup>th</sup> January, 2012.

**10.21 Dr. S.M. Githigia**, Sam Okuthe and Bouna Diop, FAO, 2012:” *Pig Sector Kenya, FAO Animal Production and Health Livestock Country Reviews No. 3 Rome*

10.22 Gichohi, C.M., Mbuthia, P.G., **Waruiru, R.M.**, Ngatia, T.A., Kamundia, P.W., Mutune, M.N. & Otieno, R.O. (2011). Prevalence and intensity of *Paracamallanus* species infection in farmed and wild catfish. *The Kenya Veterinarian*, 35: 25-32.

**10.23** Joseph Mwanzia Njguta, James M Mbaria, **Peter K Gathumbi**, Daniel Gakuya, John David Kabasa and Stephen Gitahi Kiama, **Ethnodiagnostic skills of the Digo Community for malaria: a lead to traditional bioprospecting.**+

10.24 Ngugi M Piero, Njagi N Joan, Kibiti M Cromwell, Ngeranwa J Joseph, Njagi N M Eliud, Njue M Wilson, **Gathumbi K Peter** and, **Herbal management of Diabetes Mellitus; A rapidly expanding research avenue**+

10.25 Ngugi M Piero, Murugi N Joan, Kibiti M Cromwell, Ngeranwa J Joseph, Njue M Wilson Maina Daniel, **Gathumbi K Peter** and Njagi N Eliud, **Hypoglycemic Activity of some Kenyan plants traditionally used to manage Diabetes Mellitus in Eastern Province.**+

10.26 JM Nguta, JM Mbaria, DW Gakuya, **PK Gathumbi**, JD Kabasa and SG Kiama **Biological screening of Kenya Medicinal plants using Artemia Salina L. (ARTEMIIDAE).**

**10.27** Njagi J.M., Ngugi M.P., Kibiti C.M, Ngeranwa N.J.J., Njagi, E.N.M, Mbiti W.N., Maina D. and **Gathumbi P.K.** Evaluation of anti diabetic effects of *Kleinia Squarrosa* on alloxanized diabetic mice

10.28 Njagi J.M. , Ngugi M.P, Kibiti C.M, Ngeranwa N.J.J, Njagi, E.N.M, Njue, M.W., Maina D., and **Gathumbi P.K.** Hypoglycemic effects of *Caesalpinia Volkensii* on alloxan . induced diabetic mice

**10.29** AG Thaiyah, PN Nyaga, JM Maribei, **TA Ngatia**, JPM Kamau and JM Kinyuru, **Acute, sub-chronic and chronic toxicity of Solanum incanum L in sheep in Kenya.**+

uiru, TA Ngatia, PW Kamundia, M Nthenya and RO Otieno  
lanus species infection in farmed and wild catfish+

10.31 **DN Karanja**, TA Ngatia, JK Wabacha and LC Bebor, %Cases pig poisoning encountered naturally in smallholder farms in Nairobi and its environs.+

10.32 Epaphras A Muse, Ramadhan B Matondo, Esron D Karimuribo, Gerald Misinzo, Mbyuzi O Albano and **George G Gitao**, Clinico-pathological findings of the 2011 outbreak of Peste des Petits Ruminants (PPR) in Tandahimba District Southern Sudan.

10.33 Chepkwony E.C., **Dr. C.G. Gitao** and Muchemi G.M. "Seroprevalence of Foot and Mouth Disease in the Somali Eco-System in Kenya.+

10.34 Purity N Nguhiu, Claire N Wamae, Japheth K Magambo, **Paul G Mbutia**, Daniel C Chai and Dorcas S Yole, Gross and histopathological findings in Cercopithecus aethiops with experimental Cyclospora infection in Kenya

10.35 **Dr. S. M. Githigia**, Sam Okuthe, Bouna Diop (2012) Pig Sector Kenya. FAO Animal Production and Health Livestock Country Reviews No. 3 Rome

10.36 Obonyo, F.O., Maingi, N., **Githigia, S.M.**, Nganga, C.J. (2012). Prevalence, intensity and spectrum of helminths of free range pigs in Homabay District, Kenya

10.37 Kenya Livestock Research for Rural Development 24 (03) 2012 Kagira, J.M.; Kanyari, P.W.N.; **Githigia, S.M.**; Maingi, N.; Nganga, J.C.; Gachohi, J.M. (2011). Risk factors associated with occurrence of nematodes in free range pigs in Busia District, Kenya. Trop Anim Health Prod

## 11.0 WORKSHOPS AND CONFERENCES

11.1 P.G. Mbutia presented and participated CL Davis Pathology Workshop on Enhanced Diagnostic Veterinary pathology Capacity of Transboundary Diseases, held in United Nations Center in Addis Ababa, Ethiopia on 14<sup>th</sup> September 2011. All costs were met by CL Davis and ICOPHAI, such as:

- a. Air fare . USD 254.0
- b. Per diem and local travel . USD 510.0
- c. Health insurance . USD 27.0 (paid by me)

11.2 P.G. Mbutia participated in 1<sup>st</sup> International Congress on pathogens at the Human-Animal Interface (ICOPHAI): Impact, Limitations and Needs in Developing Countries on 15-17<sup>th</sup> September 2011 at United Nations Conference Center Addis Ababa, Ethiopia

participated in a 2-day course on Trends in veterinary parasitology, held in the Dept of veterinary pathology, Microbiology and Parasitology on 10<sup>th</sup> and 11<sup>th</sup> August 2011. FVM, CAVS, Kabete. A CPD course.)

11.4P.K. Gathumbi (2011): Ethnoveterinary medicine and its relevance to Kenya; economy and Food security presented in RESEARCH conference Egerton University SEPT. 22, 2011. All costs were paid by the project. (

Travel 17,260/=,

per diem 13,200/=,

Accommodation 11,800/= . Total = Ksh. 42,260

11.5P.K. Gathumbi attended a stakeholders meeting organized by Global Antibiotic Resistance partnership (GARP) on August, 23-24<sup>TH</sup> 2011 at Panafric Hotel to discuss the situational analysis on antibiotic Resistance and use in Kenya

11.6P.K. Gathumbi presented and participated in a 2-day course on Trends in veterinary parasitology, held in the Dept of Veterinary pathology, Microbiology and Parasitology on 10<sup>th</sup> and 11<sup>th</sup> August 2011. FVM, CAVS, Kabete. A CPD course and presented a paper on parasitic disease of rabbit.

11.7N. Maingi presented and participated in a Two-days Continuing Professional Development (CPD) workshop on Trends in Veterinary Parasitology, held at the Department of Veterinary Pathology, Microbiology & Parasitology, University of Nairobi , 10<sup>th</sup> and 11<sup>th</sup> August 2011

11.8N. Maingi participated in a Five-day workshop at the Kenya School of Law from 12<sup>th</sup> to 16<sup>th</sup> September, 2011 to prepare Open and Distance Learning notes for the course AAS 204: Parasitology offered to BSc in Agricultural Education and Extension. The workshop was organized by the faculty of Agriculture in Conjunction with the College of Education and External Studies (CEES), University of Nairobi

11.9N. Maingi participated in a One-day workshop on recent developments in the immunodiagnosics for *Taenia solium* cysticercosis in pigs using a lateral flow system as a pen-side+test. The workshop was organized by ILRI under the auspices of the ASARECA . funded project on Diagnostic Tools and Strategies for *Taenia solium* cysticercosis and was held at ILRI on 21<sup>st</sup> September 2011.



11.11 R.M. Waruiru presented and participated in a Two-days Continuing Professional Development (CPD) workshop on Trends in Veterinary Parasitology, held at the Department of Veterinary Pathology, Microbiology & Parasitology, University of Nairobi, 10<sup>th</sup> and 11<sup>th</sup> August 2011. **Dr. P.G. Mbutia** attended the 2nd Monitoring and Evaluation and Research activity for the VicRes project in Kenya at Homabay town.

Travel costs = 4950.00, Per diem = 34,500.00, Others = 10,550.00

Sub total - Ksh **50,000.00**.

11.13 **Dr. P.G. Mbutia** attended Ruforum Research in Mbeere, Eastern Province. Questionnaires were administered and interacted with various stakeholders as well as interviewing indigenous chicken farmers.

Travel costs = Combined with Professor Bebora; Per diem = Ksh 18,000.00

Other consumables = Combined with Professor Bebora.

Subtotal - **18,000.00**

11.14 **Dr. P.G. Mbutia** attended VicRes Biennial conference in Munyonyo, Uganda - 1<sup>ST</sup> LAKE VICTORIA RESEARCH INITIATIVE (VICRES) BIENNIAL FORUM 9-13<sup>TH</sup> OCTOBER 2011, AT MUNYONYO, KAMPALA UGANDA. SPONSORED BY

THE INTER UNIVERSITY COUNCIL FOR EAST AFRICA

- a. Airticket . USD 340.00
- b. Full board . USD 480.00
- c. Others . USD 150.00
- d. Local travel in Kenya (to and from the Airport)- USD 35
- e. Health Insurance for the period . USD 30

Subtotal = USD 1035.00 x Ksh 90 = Ksh. **93,150.00**

11.15 During the Biennial forum our team presented a plenary paper entitled, "Endocrine disruptors and Microbial Pathogens in Lake Victoria in the East African Region"

11.16 **Prof. L.C. Bebora** attended regional dissemination workshop for "PREPARE PhD PROJECT", held in Arusha, Tanzania from November 29<sup>th</sup> - 30<sup>th</sup> November, 2011.

11.17 **Dr. Gitao C.G.** attended a baseline survey on the KAPAP project from 15-22 Nov 2011 in Embu, Garissa and Meru.

Technical Committee of Education and Quality Assurance  
retreat from 6 October to 8 October 2011 at Tigoni, Limuru.

11.19**Prof. P.K. Gathumbi** attended the World Veterinary Congress from 10<sup>th</sup> to 14<sup>th</sup> October, 2011 in Cape Town.

11.20**Prof. P.K. Gathumbi** served as a member of the working group to draft Natural Products Industry Policy, Bill and Institutional Framework(s) on 19<sup>th</sup> October, 2011.

11.21**Prof P.K. Gathumbi**, attended a RISE AFNNET workshop in Nairobi Node on 13<sup>th</sup> December, 2011

11.22**Prof. P.K. Gathumbi**, *invited to attend a stakeholders forum* to provide input to the draft natural products industry policy on 14<sup>th</sup> March, 2012

11.23**Prof. P.K. Gathumbi** was invited to attend Wangari Maathai Day together with world forestry day celebrated on March 21, 2012 at Freedom Corner.

11.24**Prof. P.K. Gathumbi** attended a meeting to present the draft natural Products Industry Policy to NESC Social Affairs sub-committee on Tuesday March 20, 2012, at NESC Boardroom KICC, 4<sup>th</sup> floor.

11.25**Prof. P.K. Gathumbi** was invited to attend National Economic and Social Council (NESC) meeting on The Natural Products Industry Policy . DRAFT at the Kenya School of Monetary Studies on 24/03/2012

11.26**Dr. P.G. Mbutia** was invited to *Limnology and Wetland Ecosystems(LWE) DIDACTIC workshop form 7<sup>th</sup> – 11<sup>th</sup> February 2012 at Lake Naivasha Country Club by UNESCO-IHE Institute for Water Education.*

11.27**Dr. P.G. Mbutia**, was awarded with a certificate of participation in the *Regional Seminar for OIE National Focal Points on Aquatic Animals, held in Accra (Ghana) 20 . 22 March 2012.*

11.28**Prof P.W.N. Kanyari**, hosted an *Orientation Workshop at the College Boardroom* with the Royal Veterinary College (RVC) London between 20<sup>th</sup> and 22<sup>nd</sup> March 2012.

and Bouna Diop, FAO, 2012:” Pig Sector Kenya, FAO Animal  
Production and Health Livestock Country Reviews No. 3 Rome.”

11.30 **Prof. P.N. Nyaga**, ANISE 2012: *Invited to attend the a3rd annual influenza surveillance held at the crownie plaza, Nairobi 1 – 3<sup>rd</sup> February 2012*

11.31 **Prof. P.N. Nyaga**, attended a one day seminar on /rift valley fever (RVF) held at ILRI on 2/02/2012 on the work done in Marigat and Thika on the Impact RVF outbreaks on the livelihoods of m=smallholder farmers.(Appendix 9b)

11.32 **Prof. P.N.Nyaga** attended committee meetings for the National Disaster preparedness Planning at the National Disaster Center 9NDOC), Nairobi. (Feb and March 2012

11.33 **Prof. P.N. Nyaga** attended a one week workshop at the University CCU between 12-16 March 2012, on GRANT PROPOSAL AND RESEARACH PROPOSAL WRITING TRAINING SEMINARY and was awarded with a certificate.(appendix 9d)

11.34 **Prof P.K. Gathumbi**, attended a RISE AFNNET workshop in Nairobi Node on 13<sup>th</sup> December, 2011

11.35 **Prof. P.K. Gathumbi**, *invited to attend a stakeholders forum* to provide input to the draft natural products industry policy on 14<sup>th</sup> March, 2012.

11.36 **Prof. P.K. Gathumbi** was invited to attend Wangari Maathai Day together with world forestry day celebrated on March 21, 2012 at Freedom Corner.

11.37 **Prof. P.K. Gathumbi** attended a meeting to present the draft natural Products Industry Policy to NESC Social Affairs sub-committee on Tuesday March 20, 2012, at NESC Boardroom KICC, 4<sup>th</sup> floor.

11.38 **Prof. P.K. Gathumbi** was invited to attend National Economic and Social Council (NESC) meeting for the stakeholders presentation of The Natural Products Industry Policy . DRAFT at the Kenya School of Monetary Studies on 24/03/2012

11.40**Dr. P.G. Mbutia**, was awarded with a certificate of participation in the *Regional Seminar for OIE National Focal Points on Aquatic Animals, held in Accra (Ghana) 20 - 22 March 2012*

11.41**Prof P.W.N. Kanyari**, hosted an *Orientation Workshop at the College Boardroom* with the Royal Veterinary College (RVC) London between 20<sup>th</sup> and 22<sup>nd</sup> March 2012.

11.42**Prof. P.N. Nyaga**, *ANISE 2012: Invited to attend the 3rd annual influenza surveillance held at the crownie plaza, Nairobi 1 – 3<sup>rd</sup> February 2012*

11.43**Prof. P.N. Nyaga**, attended a one day seminar on /rift valley fever (RVF) held at ILRI on 2/02/2012 on the work done in Marigat and Thika on the Impact RVF outbreaks on the livelihoods of smallholder farmers.

11.44**Prof. P.N. Nyaga** attended committee meetings for the National Disaster preparedness Planning at the National Disaster Center (NDOC), Nairobi. (Feb and March 2012)

11.45**Prof. P.N. Nyaga** attended a one week workshop at the University CCU between 12-16 March 2012, on GRANT PROPOSAL AND RESEARCH PROPOSAL WRITING TRAINING SEMINARY and was awarded with a certificate

11.46**Prof. P.N. Nyaga**, hosted a RUFORUM workshop on RUFORUM M&E System, at the Department of Veterinary Pathology, Microbiology & Parasitology, Museum room from 28<sup>th</sup> March to 30<sup>th</sup> March 2012.

11.47**Prof.P.K. Gathumbi** was the Chairman of the University of Nairobi Faculty of Veterinary Medicine (FVM) 8<sup>th</sup> Biennial Scientific Conference and the 46<sup>th</sup> Kenya Veterinary Association Annual Scientific Conference held at the Safari Park Hotel, Nairobi, Kenya on April, 25 - 27 2012. In this conference, many academic members of staff at CAVS presented papers as highlighted in the attached book of Programme and Abstracts. In this conference members of the Department of Veterinary Pathology, Microbiology and Parasitology presented the following papers (p):

- 11.49 Manyibe T.N and Muriuki S, **Prof. P.K. Gathumbi**, JD Kabasa and SG Kiama, **%Cytotoxicity of biodiversity to the Brine Shrimp, Artemia salina**
- 11.49 Manyibe T.N and Muriuki S, **Prof. P.K. Gathumbi**, Conservation medicine in the African context. **(Abstract 047)**
- 11.50 Gakuya DW, SG Kiama, JM Mbaria, PN Mbugua, **PK Gathumbi**, M Mathiu, **%The potential use of moringa oleifera Lam as pultry feed supplement in Kenya.+ (Abstract 021)**
- 11.51 Cooper JE, Cooper ME, **Nyaga PN, Gathumbi PK, Mbutia PG, Njagi LW, Githigia SM, %Veterinary forensic medicine: an emerging and important discipline+ (Abstract 040)**
- 11.52 Kyalo MM, **PG Mbutia, Maingi, PN. Nyaga, LW Njagi %Occurrence and lesions associated with echinostoma Revolution in free-range indigenous chickens in Kenya.+ (Abstract 027)**
- 11.53 Maina JG, **Mbutia PG**, Ngugi JN;, Karuri EG. “M. Effects of management practices and Economic stimulus program on fish production in Mwea Division of Kirinyaga County+**(Abstract 022)**
- 11.54 Nguhiu-Mwangi, J Mbithi, PMF Wabacha, J.K. **Mbutia PG** “The challenges of balancing between productivity and claw health of dairy cows in modernized husbandry in small holder farming units.+**(Abstract 018)**
- 11.55 JKN Kuria and Gathogo SM presented a paper on **%Dimorphic yeast fungi infections in beef cattle”** in the Joint Faculty of Veterinary Medicine (FVM) 8<sup>th</sup> Biennial Scientific Conference & 46<sup>th</sup> Kenya Veterinary Association (KVA) Annual Scientific Conference & Exhibition held at the Safari Park Hotel, Nairobi, from 25<sup>th</sup> . 27<sup>th</sup> April 2012.
- 11.56 Mathenge, C.G., **Mbutia, P.G., Waruiru, R.M., Ngatia, T.A., Mutune, M.N. & Otieno, R.O.** (2012). Prevalence, intensity and pathological lesions associated with *Contracaecum* species infection in farmed and wild catfish in the upper Tana river basin, Kenya.
- 11.57 Mavuti, S.K., **Mbutia, P.G., Waruiru, R.M., Njagi, LW., Mutune, M.N., Otieno, R.O. & Msoffe, P.L.M.** (2012). Prevalence of haemoparasites in free-range local ducks

Waruiru, R.M., Njagi, L.W., Mutune, M.N., Otieno, R.O.,  
G.K. (2012). Prevalence and pathology of *Echidnophaga*

**11.59**Maina, A.N., **Waruiru, R.M., Ngatia, T.A., Mbuthia, P.G.** & Munyua, W.K. (2012).  
Gastrointestinal parasites and other endoparasites of indigenous chickens traded in Nairobi, Kenya

**11.60**Waruiru, R.M., Nganga, J.C., **Munyua, W.K., Mutune, M.N. & Otieno, R.O.** (2012). Efficacy of  
copper oxide wire particles for the control of gastrointestinal nematode infections of indigenous  
goats

**11.61**Waruiru, R.M., **Munyua, W.K., Otieno, R.O., Mutune, M.N.,** Gichohi, V.M. & Gitari, R.N. (2012).  
Effects of medicated urea-molasses block supplementation on productivity and gastrointestinal  
nematode infections in sheep in Nyandarua District, Kenya.

**11.62**Dr. **C.G. Gitao** and Chepkwony E.C. Foot and Mouth disease Manifestation from a  
cattle boma in South Sudan

**11.63**Dr. **C.G. Gitao** and Field C, Experiences of camel health management in Botswana.

**11.64**Dr.**C.G.Gitao**, Toroitich K.C. and Mbindyo C, *"Dairy goat health problems affecting milk  
production in Meru, Nyeri and Embu counties"* *"The possible effects of camel milk on  
management of diabetes type 1*

**11.65** Dr. **C.G. Gitao**, Kihu S and **Maina S.M**, *Experimental infection of PPR in goats in  
Kenya*

11.66Akweya B, Kamau and **Gitao C.G.** The properties of potential camel lactobacilli cultures for  
yoghurt production

**11.67**Manyibe TN, **Gathumbi PK, Ngatia TA, Bebora LC,** Muchemi G, *Historical perspectives of  
lesser flamingo mortalities in Kenya*

**11.68**Lubembe DM, **Githigia SM,** Chogo P, Athumani HM and Kitaa JM *Management of Bovine  
Papillomatosis using an Autogenous Vaccine: A Case Study in Bukura Agricultural College, Western  
Kenya.*

Prof. Gathumbi P, Kagira J % Trypanosome Migration to the  
a Neuroscienc Conference on 18 . 19 June 2012

11.70 **P.N. Nyaga** Was the Moderator and facilitator for the Sector Specific Pandemic Preparedness Planning Workshop held on June 4th . 8th, 2012, Nakuru, Kenya (**Appendix 11a**)

11.71 **P.N. Nyaga**, Attended the Kenya National Government Pandemic Disaster Response Planning Workshop held on 16<sup>th</sup> . 20 April 2012, Reef Hotel Mombasa, Kenya.

11.72 **The Department of Veterinary Pathology, Microbiology and Parasitology** hosted a 5 days practical training for Diploma in Animal Health . Ahiti Ndomba.

11.73 **The Department of Veterinary Pathology, Microbiology and Parasitology** hosted USAID from the American people, FAO and the University of Georgia for a 5 days seminar on Basics of Field and Laboratory Diagnosis Train-the Trainers Workshop On 23<sup>rd</sup> April to 27<sup>th</sup> April.

## 12 NEW LINKAGES

12.0 **Prof. P.N. Nyaga**, made contacts with Dr. Tabitha Kimani of FAO and her collaborators in Sweden on the possibility of linkage with the Swish scientist to use samples that we have collected to study effectiveness of RVF vaccination in targeted areas.

12.1 **Prof. P.N. Nyaga** liaised with Prof. Denis Byarugaba of Makerere university to have his PhD student visit our department in the future to learn procedures on pathogenesis evaluation for Newcastle disease

12.2 **Prof. P.N. Nyaga** linkage with KEMRI-CDC/Kenya continues with the PhD student Dr. Peninah Munyua studies on Influenza epidemiology. (Appendix 9a)

12.3 **P.N. Nyaga** Linkage with KEMRI-CDC/Kenya continues with the PhD student Dr. Peninah Munyua studies on Influenza epidemiology. Will be travelling to Kisumu to visit the field sites July 1-3,

12.4 **P.N. Nyaga** Linkage with Dr. Mutinda of Mariakani Veterinary Investigation Laboratory continued regarding her studies with Infectious bursal disease (IBD).

## **13 VISITORS TO THE DEPARTMENT IN THE DEPARTMENT IN 2011/2012**

13.1 Prof. V.O. Taiwo, Prof. B.O. Oke Faculty of Veterinary Medicine, University of Ibadan and Dr. K.O. Sectoan Department of Vet. Physiology, Biochem and Pharmacology on 16/8/2011

13.2 Prof. Patrick T. Rubaihayo, Makerere University, on 30/8/2011

hah Kennedy and Agbo Feona of Federal University of  
ia, Rosemary N. Mwanza of Dips office Hill Plaza, Dr. Rina  
/2011

- 13.4 Dr. Christine Thurania, Royal Veterinary College, on 11/11/2011
- 13.5 Dr. J.M. Randall VP Academic, University of Prince Edward Island, Canada on 19/01/2012
- 13.6 Dominic Travis of University of Minnesota and Dr. Geoffrey Kabagambe of Kampala, 25/1/2012
- 13.7 Dr. Adrei Mihalca, Dragos Birton and Danico Gialuca of Romania on 1/2/2012
- 13.8 Drs. Kasongo Muteba, Ngulu Nsasi and Kasongo aseke of Lubumbashi, DRC. On 7/2/2012
- 13.9 Saad Maandi and Naabed Ahmed of Algeria on 14/02/2012
- 13.91 Dr. Sam Okuthe of FAO-ECTAD, E.A. and Edward Okoth of ILRI on 22/02/2012
- 13.92 Drs. Victor yamo, Ouko E.O, Sanyu Naluwooza, Johanna Lindstoke and Godfrey Kayobyoy on 28/02/2012
- 13.93 Barbora Dervena and Corrie Brown of Athens USA on 25/4/2012
- 13.94 Kaboret Yalace of University of Dakar, Senegal on 27/4/2012.
- 3.95 Eng. Joel Sigei and Anthony Kibuja of Plenser Ltd on 18/06/2012

## 14 OUTREACH AND COMMUNITY SERVICE

- 14.1 Dr. Njagi L.W.** had a research trip to Mbeere district for study lay - out and data collection between 11<sup>th</sup> and 12<sup>th</sup> November 2011.
- 14.2 Prof. P.K. Gathumbi** is reviewing a Manuscript entitled %histopathological changes in the Liver Tissue of *Clarias batrachus* treated with sago effluent+for Baraton University.
- 14.3 Prof. P.K. Gathumbi** has been invited to be in the Editorial Board of the journal Biological Research published by Asia Publishers Pakistan.
- 14.4 John and Margret Cooper**, who are associates in the Department, hosted a Workshop on Primate Pathology held in IPR, in November 2011.
- 14.5 Prof. L.C. Bebora** is member of Livestock Committee, and Chairman of Pigs & Poultry Sub-committee; Agricultural Society of Kenya (ASK).
- 14.6 Prof. L.C. Bebora** was nominated Judge for various classes of poultry, for ASK.
- 14.7 Prof. L.C. Bebora** and others (including 2 Msc students) went to Mbeere to map out work plan and collect samples for the 2 Msc. students on RUFORUM funding . Drs. Kemboi and Hannah Chege from November, 11<sup>th</sup> -12<sup>th</sup>, 2011. In the process, farmers had an opportunity to consult with them on various problems they, were experiencing regarding poultry.



to Rachuonyo to assess work carried out by a PhD student, I. In the process, farmers had an opportunity to consult with them on various problems they were experiencing regarding poultry.

**14.9 Prof. P.N. Nyaga** linked with Dr. Mutinda of Mariakani Veterinary Investigation Laboratory continued rearing her studies with Infectious bursal disease (IBD)

## 15 LINKAGES ESTABLISHED OR CONTINUED

**15.1** 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

**15.2 Prof. P.N. Nyaga** . Invitation to attend the Regional Conference on Building Capacity for improved food and livelihood Security 20<sup>th</sup> . 24<sup>th</sup> September 2010, Entebbe, Uganda.

## 16.0 OTHERS

**16.1 P.N. Nyaga** Evaluated papers for Professorial appointment for Sokoine University of Agriculture, member of staff, %Prof. L.J.M Kusiluka. (**Appendix 14a**)

**16.2 P.N. Nyaga** Serviced a course for the Department of Agricultural Economics (teaching and examinations), AIC 608: Statistics and research methods. (**Appendix 14b**)

**16.3 P.N. Nyaga** assessed MSc thesis by Dr. Victoria N. Mutua entitled, "**Impact Of Formal and Informal Interventions In The Control Of Rift Valley Fever Disease In Thika and Marigat Districts Of Kenya**", completed and ready for submission. (**Appendix 14c**)

**16.4 P.N. Nyaga** Liaised with Prof. Denis Byarugaba of Makerere University and trained his PhD student on Newcastle disease virus pathogenicity indices evaluation( Mean death time-MDT; intra cerebral pathogenicity index- ICPI; intravenous pathogenicity index . IVPI, Hemagglutination and hemagglutination inhibition tests (HA and HA) (**Appendix 14d**)

**16.5 Prof. P.K. Gathumbi**, was appointed to serve as a member of Management Committee of the Centre for Sustainable Dryland Ecosystems and Societies and also as a member of the Centre's Research Development Sub-Committee. (**Appendix 15a**)

- and awarded with a certificate of attendance during the Faculty 8<sup>th</sup> Biennial Scientific Conference & 46<sup>th</sup> Kenya Veterinary Scientific Conference & Exhibition held at the Safari Park Hotel, Nairobi, from 25<sup>th</sup> to 27<sup>th</sup> April 2012). **(Appendix 15b)**
- 16.7 **Prof. P.K. Gathumbi**, participated as Master of Ceremony in the Tree planting on World environment Day at the College of Agriculture and Veterinary Sciences on 5<sup>th</sup> June 2012. **(Appendix 15c)**
- 16.8 **Prof. P.N. Maingi**, appointed to assess of the research publications of Dr. S.O. Omotainse for readership position in veterinary pathology in the Department of Veterinary Pathology in Federal University of Agriculture Abeokuta, Nigeria. **(Appendix 16a)**
- 16.9 **Prof. P.N. Maingi**, invited by the Ministry of Higher Education, Science and Technology to review papers for the upcoming volume 3 Innovation Journal. **(Appendix 16b)**
- 16.91 **Dr. R.M Waruiru**, participated and awarded with a certificate of attendance during the Faculty of Veterinary Medicine (FVM) 8<sup>th</sup> Biennial Scientific Conference & 46<sup>th</sup> Kenya Veterinary Association (KVA) Annual Scientific Conference & Exhibition held at the Safari Park Hotel, Nairobi, from 25<sup>th</sup> to 27<sup>th</sup> April 2012). **(Appendix 17)**
- 16.92 **Dr. C.G. Gitao**, received an appreciation letter from RUFORUM for the concluded review of the RUFORUM M&E System. **(Appendix 18a)**
- 16.93 **Dr. C.G. Gitao**, attended the EAPP proposal writing workshop in Njoro, KARI 2<sup>nd</sup> to 4<sup>th</sup> May. **(Appendix 18b)**
- 16.94 **Mary Mutune, Mary M. Njeru and Ephantus M. Nyaga**, participated in a one day empowerment workshop on May 11<sup>th</sup> 2012 at the Clinical Studies seminar hall and awarded with certificates on Transformational Customer Care. **(Appendix 19)**
- 16.95 **Jackson Gachoka and Charity Gathenya**, participated in a one day training on Fire Safety on June 13, 2012 at the Clinical Studies Seminar Room as part of the University's preparedness for any fire disaster that may occur at the workplace. **(Appendix 20)**
- 16.96 **Prof. P.K. Gathumbi, Jackson Gachoka and Rose Gitari** participated in a two-day management training workshop on Managerial and leadership skills at the Clinical Studies Seminar Room on June 28 - 29 2012. **(Appendix 21)**
- 16.97 **Prof. P.K. Gathumbi**, invited as a reviewer for the Journal Avian Pathology. **(Appendix 22)**
- 16.98 **Dr. S.M. Githigia, Internal Examiner Obonyo Fredrick Ojiambo 's MSc thesis** Titled Epidemiology and public Health Importance of gastrointestinal helminthes and hemoparasites of pigs in Homabay District, Kenya. **July 201**
- 16.99 **Dr. S.M. Githigia Internal Examiner of Dr Kabaka Waweru MSc Thesis** Titled Prevalence and risk factors for Gastrointestinal nematode infection and efficacies of anthelmintics in cattle in Mukurwe-ini and Nakuru Districts **July 2011**

Examiner of Dr Eric Emali Eshitera's MSc Thesis titled MSc Thesis in free range pigs and the associated risk factors in Homa Bay District, Kenya **November 2011**

**16.74** Member of board of examiners for the following

- i. Dr Eric Eshitera Emali . Msc Thesis **March 2012**
- ii. Dr Fredrick Ojiambo MSc Thesis **August 2011**
- iii. Dr Waweru Kabaka MSc Thesis **August 2011**

**16.75** External Examiner – Department of Land Resources, Planning & Management 2010 –

2014 External examiner- Department of Land Resources and Animal Sciences, Department of Food Science and Technology Faculty of Agriculture Jomo Kenyatta University of Agriculture and Technology 2010 . 2014

**17.0 TRAVELS**

17.1 Dr Mbutia travelled as an external examiner for **Sokoine University of Agriculture** . He was veterinary pathology examiner in the Dept of Pathology in the period 31-07-211 to 06-08-2011. I examined Bachelor of Veterinary Medicine students written, practical and oral examinations in General Pathology (2<sup>nd</sup> Year), Veterinary Pathology II (3<sup>rd</sup> year); and Veterinary Clinicals a practical/oral examination to 5<sup>th</sup> year BMM. All travel cost were paid by Sokoine University as follows:

- a. Air ticket - 340 USD
- b. Hotel costs (Bed and Breakfast) at Arc Hotel
- c. Local travel in Kenya (to and fro the Airport) . USD 35
- d. Health Insurance for the period . USD 27
- e. Daily up keep allowance of Tshs 30,000/day
- f. Honorarium . Tshs 50000 per day while in Tanzania

(Appendix 11)

**6.0 MEMBERSHIP IN COMMITTEES**

**a) COLLEGE COMMITTEES**

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

**b) FACULTY COMMITTEES**

	COMMITTEE	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	
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**7.0 CONSULTANCIES**

- 14.1 Prof. Bebora L.C.** . Consultative meeting of women scientists of University of on 14<sup>th</sup> July 2010, UoN, Council Chamber.

meeting on how to strengthen and improve academic activities, attended by all professors on 6<sup>th</sup> Sept. 2010, UoN,

- 14.3 **Prof. Bebora L.C.** Judging poultry classes at ASK, Nairobi Internal show, to be held from 27<sup>th</sup> September to 3<sup>rd</sup> 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 10-13<sup>th</sup> 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 10-13<sup>th</sup> Nov 2010

## 8.0 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**.

a successful 7<sup>th</sup> Biennial Scientific Conference Faculty of veterinary medicine and 4<sup>th</sup> Exhibition of College of Agriculture and Veterinary Sciences, 8<sup>th</sup> to 10<sup>th</sup> 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. Mbutia** received a certificate of attendance to the 7<sup>th</sup> Biennial scientific conference 8<sup>th</sup> to 10<sup>th</sup> 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 24<sup>th</sup> 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

**10. NUMBER OF STAFF**

TITLE	NO
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Lecturer	3
Tutorial Fellow	5
Chief Technologist	5
Senior Technologists	7
Secretary	2
Junior Technologists	1
Driver	10
Cleaner	1

### 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. PROF. P.G. MBUTHIA	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. R.M. WARUIRU	BVM, MSc., PhD	Senior Lecturer
13. DR. S.M. GITHIGIA	BVM, MSc., PhD	Senior Lecturer
14. DR. J.N. CHEGE	BVM, MSc., PhD	Lecturer
15. DR. J.K. GATHUMBI	BVM, MSc., 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.	Lecturer
19. DR. M.O. ODONGO	BVM, MSc.	Lecturer
20. DR. D.K. KAGUNYA	BVM, MSc.	Lecturer
21. DR. E.S. KILELU	BVM, MSc.	Tutorial Fellow
22. DR. P.O. OKUMU	BVM, MSc.	Tutorial Fellow
23. DR. I.R. MULEI	BVM	Chief Technologist
24. EZEKIEL H. WEDA	BVM, MSc. HND	

### 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. GUCEMA	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. EDITH A KEYA	HND	Junior Technologist IV
12. EPHANTUS M. NYAGA	HND	Junior Technologist IV
13. GEORGE DIMBU	HND	Junior Technologist IV

17. JOHN M. KINYORU	CPE	Secretary Grade A
18. MARY W. MURIAKIARA	KCE	Junior Technologist IV
19. PATRICK M. WAHOME	KCE.	Junior Technologist IV
20. SAMUEL INDECHE	KCSE	Junior Technologist IV
21. ADIEL K. MURATHI	KCSE	Junior Technologist III
22. GORDON OTIENO	KCSE	Junior Technologist III
		Driver Grade IV
		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 plantsqextracts for improved livelihoods: a case study of East Coast feverq Funded by World Bank grant through Kenya Agricultural Productivity (KAPP) led by Prof. P.K. Gathumbi, Department of Veterinary Pathology, Microbiology and Parasitology





...n of medicinal plants at CAVS field station established under  
...ommercialization of medicinal plantsqextracts for improved  
... Coast feverq 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





**UNIVERSITY OF NAIROBI**  
COLLEGE OF AGRICULTURE AND VETERINARY SCIENCES  
FACULTY OF VETERINARY MEDICINE

**DEPARTMENT OF CLINICAL STUDIES**

**ANNUAL REPORT**

**2011/2012**

**1. Academic staff**

List of academic staff and their qualifications

**Chairman of Department**

**Mulei, C.M.**, B.V.M. (Nairobi), Ph.D (Queensland)

**Professor:**

**Mbithi, P.M.F.**, B.V.M., M.Sc., (Nairobi), M.VSc, (Saskatchewan), Ph.D., (Nairobi)

**Mulei, C.M.**, B.V.M. (Nairobi), Ph.D (Queensland)

**Agumbah, G.J.O.**, B.V.M., M.Sc (Nairobi) D.P.V.M (Copenhagen) Ph.D. (Glasgow U.K.)

**Kiptoon, J.C.**, B.V.M., M.Sc., Ph.D (Nairobi)

**Mutiga, E.R.**, B.V.M., (Nairobi), M.Sc. (Colorado), Ph.D (Queensland).

**Associate Professor:**

**Kihurani, D.O.**, B.V.M., M.Sc., Ph.D, (Nairobi)

**Mbugua, Susan W.**, B.V.M. (Nairobi), M.Sc. (California), Ph.D (Nairobi)

**Njenga, M.J.**, B.V.M., M.Sc., Ph.D (Nairobi)

**Wabacha, J.K.**, B.V.M. (Nairobi), M.Sc. (VUB-Brussels.), Ph.D (Nairobi)(**On Leave of Absence**)

**Gitau, G.K.**, B.V.M. (Nairobi), M.Sc., (Guelph) Ph.D, (Nairobi)

**Senior Lecturer:**

**Mande, J.D.**, B.V.M., M.Sc., Ph.D (Nairobi)

**Mogoa, E.G.M.**, B.V.M., M.Sc. (Nairobi), Ph.D, (Pretoria)

**Tsuma, V.T.**, B.V.M., (Nairobi), Ph.D, (Uppsala)

**Munyua, S.J.M.**, B.V.M. (Nairobi), M.Phil. (Murdoch), Ph.D, (Nairobi) (**On Leave of Absence**)

**Thaiyah, A.G.**, B.V.M., M.Sc. (Nairobi) Ph.D (Nairobi)

**Gakuya, D.W.**, B.V.M., (Nairobi), M.Sc., (Edinburgh), Ph.D, (Nairobi)

robi) Ph.D, (Giessen)

ji), Ph.D. (Nairobi)

**Lecturer:**

**Bwanga, C. O.**, B.V.M. (Nairobi), M.VSc, (Uppsala), FRCVS (Uppsala)

**Kitaa, J.M.A.**, B.V.M., M.Sc. (Nairobi)

**Mbai, K.**, B.V.M., M.Sc. (Nairobi)

**Wasike, Nekesa.**, B.V.M., M.Sc., (Nairobi)

**Muthee, J.K.**, B.V.M., (Nairobi) MSc. (Nairobi)

**Clinicians/Tutorial Fellows:**

**Aleri J.W. B.V.M.** (Nairobi), MSc. (Nairobi)

**Abuom, T. O.**, B.V.M., (Nairobi), MSc. (Nairobi)

**Gitonga, P.N.**, B.V.M., (Nairobi), MSc. (Nairobi)

**Kipyegon A.N.** B.V.M.,(Nairobi) MSc. (Nairobi)

**Dr. G. Kirui**, B.V.M (Nairobi)

**Dr. Muraya Joan** B.V.M. (Nairobi)

**ACADEMIC PROGRAMS IN THE DEPARTMENT OF CLINICAL STUDIES**

<p><b>POSTGRADUATE DEGREE PROGRAMS</b> The Department trains students for Masters of Science (MSc.) and Doctor of Philosophy degrees in various fields of specialization.</p> <ul style="list-style-type: none"> <li>• Theriogenology</li> <li>• Veterinary Surgery</li> <li>• Veterinary Medicine</li> <li>• Wildlife Health and Management</li> </ul> <p><b><u>Postgraduate Certificate Courses</u></b></p> <ul style="list-style-type: none"> <li>• Epidemiology &amp; Disease Surveillance</li> </ul>	<p><b>ENROLLED STUDENTS</b></p> <p>BVM III - 76 Students BVM IV - 78 Students BVM V - 48 Students</p> <p><b>POST GRADUATE STUDENTS</b></p> <p>MVET. Medicine - 2 Mvet. Surgery - 2 Mvet. Therio - 0</p> <p><b>Ph.D</b> 4</p> <p><b>GRADUATES OF 2011</b> 1</p> <p><b>BVM V – 48 students</b></p>
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**2. Research**

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			PIPAL TIGATOR	OTHER SCIENTISTS	COLLABORATING INSTITUTION	STARTED	ENDING
Enhancing Dairy Goat Productivity in Kenya Using Better Breeding Strategies, Good Husbandry Practices and Stakeholder Capacity Building	East Africa Agricultural Productivity Project (EAAPP)	10 million Kenya Shillings	Dr. V.T. Tsuma, Dept. of Clinical Studies	Dr. Henry Mutembei, Dept. of Clinical Studies	A joint project between UoN, Kenya Agricultural Research Institute (KARI)-Naivasha and Kenya Animal Genetic center (KAGRC)	2012	2015
One Health East and Central Africa (OHCEA)	USAID-RESPOND	5 million Kenya Shillings	Dr. Andrew G. Thaiyah	Prof. Matuku Mwanthi Dr. Peter Koskei	University of Minnesota, Tufts University, Moi University School of Public Health and University of Nairobi, School of Public Health	2011	2015
Clinical Studies Department-Wildlife Society for protection of Animals(WSPA) Disaster Management	World Society for Protection of Animals (WSPA)	75 Million Kenya Shillings (5 million/year)	Dr. Henry Mutembei	Prof. Charles Mulei (Project Manager Dr. J.D. Mande Dr. E. Mogo	University of Nairobi, Ministry of Livestock Development, ANAW, National Disaster Centre, Donkey Sanctuary	2010	2015
A sero-epidemiological study of African Horse Sickness (AHS) in Donkeys.	The Donkey Sanctuary, UK.	Kshs 764,500/-	Prof. D. Kihurani	Dr. M. Gichure, Dr. P. Kitala, Dr. J.D. Mande and Prof. N. Munene.	University of Nairobi	2010	2012

## Publications

J.K. Muthee\*, D.W. Gakuya, J.M. Mbaria, P.G. Karer, **C.M. Mulei**, F.K. Njonge: Ethnobotanical study of anthelmintic and other medicinal plants traditionally used in Loitokitok district of Kenya Journal of Ethnopharmacology 135 (2011) 15. 21

J.W. Aleri, A.N. Kipyegon, J.D. Mande, **C.M. Mulei**, and D.N. Karanja: Acute Respiratory Distress Syndrome Due to Babesiosis in a Dog a case report. Research Journal of Animal Sciences 5(2): -16, 2011 ISSN: 1993-5269

**Thaiyah A G, Aleri J W, Abuom T O and Mulei CM** : A Typical Actinobacillosis In An Adult Friesian Cow: *Bull. Anim. Hlth. Prod. Afr* (2011) 59. 471-473

**J W Aleri, J Nguhiu-Mwangi, E M Mogoia and C M Mulei:** Welfare of dairy cattle in the smallholder (zero-grazing) production systems in Nairobi and its environs: *Livestock Research for Rural Development* 24 (9) 2012

**Abuom T.O.\*, Njenga M.J., Wabacha J.K., Tsuma V.T. and Gitau G.K.:** Incidence and risk factors of periparturient conditions in smallholder dairy cattle herds in Kikuyu Division of Kiambu District, Kenya *Ethiop. Vet. J.*, 2012, 16(2), 85-102

**Fredrick Maloba, J.M. Kagira, G.K. Gitau, J. Ombui, Jan Hau, Maina Ngotho:** Astrocytosis as a biomarker for late stage human African Trypanosomiasis in the vervet monkey model:: *Sci Parasitol* 12(2): 53-59, June 2011 ISSN 1582-1366

**G.K. Gitau, J.K. Wabacha, C.M. Mulei, S. Ndurumo and J.M. Nduhiu:** Isolation rates and antimicrobial sensitivity patterns of bovine mastitis pathogens in per-urban area of Nairobi: *Ethiop. Vet. J.*, 2011, 15(1), 1-13

**Abuom T.O., Njenga M.J., Wabacha J.K., Tsuma V.T. and Gitau G.K.:** Incidence and risk factors of periparturient conditions in smallholder dairy cattle herds in Kikuyu Division of Kiambu District, Kenya *Ethiop. Vet. J.*, 2012, 16(2), 85-102

Kabaka W, Gitau G K, Mariner J and Abudiku N: The Use Of Participatory Epidemiology To Determine The Prevalence Rate And Economic Impacts Of Ppr And Ccpp In Turkana County of Kenya. *Bull. Anim. Hlth. Prod. Afr* (2012) 60. 241 - 249

**A.G Thaiyah, P.N Nyaga, J.M Maribei, T.A Ngatia, J.P.M Kamau and JM Kinyuru:** Acute, sub-chronic and chronic toxicity of *Solanum incanum* L in sheep in Kenya: *The Kenya Veterinarian* Vol. 35 (1) 2011

J.M.Nguta, J.M.Mbaria, **D.W.Gakuya**, P.K.Gathumbi, J.D.Kabasa, S.G.Kiama: Biological Screeig Of Keya Medicial Plats Usig *Artemia Sali\_A* L. (Artemiidae). *Pharmacologyonline* 2: 458-478 (2011)

Stanley N. Wambugua, Peter M. Mathiua, **Daniel W. Gakuya**, Titus I. Kanuia, John D. Kabasac, Stephen G. Kiama: Medicinal Plants Used In The Management Of Chronic Joint Pains In Machakos and Makueni Counties, Kenya: *Journal of Ethnopharmacology* 137 (2011) 945– 955

JK Musau, JM Mbaria and **D.W. Gakuya:** The antibacterial activity of some medicinal plants used in Meru Central District, Kenya: *The Kenya Veterinarian* Vol. 35 (1) 2011

**Muthee J K**, Mbaria J M, Thaiyah A G, Karanja D N and **Gakuya D W:** Clinical, Haematological, Biochemical and Athological Manifestations Of Sub-Acute Toxicity Of *Nicandra Physaloides* (L) Gaertn In Calves: *Bull. Anim. Hith. Prod. Afr.* (2011). 59 17-24

Joseph Mwanzia Nguta, James Mucunu Mbaria, **Daniel Waweru Gakuya**, Peter Karuri Gathumbi, John David Kabasa, Stephen Gitahi Kiama: Cytotoxicity of antimalarial plant extracts from Kenyan biodiversity to the brine shrimp, *Artemia salina* L. (Artemiidae): *Drugs and Therapy Studies* 2012; 2:e12]

J.M. Nguta, J.M.Mbaria, **D.W.Gakuya**, P.K.Gathumbi, J.D.Kabasa and S.G.Kiama: Evaluation of Acute Toxicity of Crude Plant Extracts from Kenyan Biodiversity using Brine Shrimp, *Artemia salina* L. (Artemiidae): *The Open Conference Proceedings Journal*, 2012, 3, 30-34

**Mogoa:** Housing-design as a predisposing factor for injuries  
der units in periurban areas of Nairobi, Kenya: *Livestock  
Research for rural Development* 23(3) 2011

**J W Aleri, J Nguhiu-Mwangi, E M Mogoa And C M Mulei:** Welfare of Dairy Cattle in The  
Smallholder (Zero-Grazing) Production Systems In Nairobi And Its Environs: *Published 3 September  
2012*

**Wamalwa Kinyanjui, Castiello Massimo, Munyua Solomon John Muchina, Abdullahi Rabile  
Goad, Gathuma M. Joseph, Ombui N. Jackson and Mogoa M. Eddy:** Commercialization of meat  
trade: the potential role of private sector and capacity building in quality assurance in meat export  
trade from regions of Somalia: *International Research Journal of Microbiology (IRJM)* (ISSN: 2141-  
5463) Vol. 3(3) pp. 86-93, March 2012

Castiello Massimo, Innocente Sergio, Wamalwa Kinyanjui, **Munyua Solomon John Muchina**, Matete  
George and Njue Sophycate: Sustainable Livelihood: Potential Role and Quality Assurance of Camel  
Export Trade in Somalia:

Castiello M, Innocente S, Wamalwa K, **Munyua S J M**, Matete G and Njue S: Sustainable Livelihood:  
Potential Role and Quality Assurance of Camel Export Trade in Somalia: *International Research  
Journal of Microbiology (IRJM)* (ISSN: 2141-5463) Vol. 2(10) pp. xxx-xxx, November 2011.

**George K. Gitau**, Royford M. Bundi, John Vanleeuwen & **Charles M. Mulei:** Evaluation of  
Petrifilms<sup>TM</sup> as a diagnostic test to detect bovine mastitis organisms in Kenya: ISSN 0049-4747  
Volume 45 Number 3 *Trop Anim Health Prod* (2013) 45:883-886 DOI 10.1007/s11250-012-0286-y

Wamalwa Kinyanjui, Castiello Massimo and **Munyua Solomon J Muchina:** PPP: An Appraisal of  
efficiency, effectiveness and Success in the Meat Sector in States Recovering from Civil Instability: A  
Case Study of Somaliland: *Journal of Food Processing & Technology* ISSN:2157-7110 Volume 3 “  
Issue 1 ~ 1000139

**Kipyegon AN, HM Mutembei, VT Tsuma** and JA Oduma: Effects of Ripe *Carica Papaya* Seed  
Powder on Testicular Histology of Boars: *Inter J Vet Sci*, 2012, 1(1): 1-4.

**J.W. Aleri, J. Nguhiu-Mwangi and E.M. Mogoa:** Housing-desing as a predisposing factor for injuries  
and poor welfare in cattle within smallholder units in periurban areas of Nairobi, Kenya: *Livestock  
Research for rural Development* 23(3) 2011:

#### Conferences /Workshops attended

2. **Mosoti Mogoa** (2011): Promoting Animal and Human Welfare in Disasters: The Role of  
Veterinary Professionals. Proceedings of the 45th Annual Scientific Conference of the Kenya  
Veterinary Association, 27th . 29th April 2011, Kisumu, Kenya.
3. J.W. Aleri, J. Nguhiu-Mwangi, **E.M. Mogoa** and C.M. Mulei (2011): Risk factors associated  
with body injuries and poor welfare in cattle within smallholder units in peri-urban areas of  
Nairobi, Kenya. Proceedings of the 45th Annual Scientific conference of the Kenya Veterinary  
Association, 27th . 29th April 2011, Kisumu Kenya.

#### Scientific papers presented in Scientific Conferences

	B.V.M. , Ph.D	Professor / Chairman
	B.V.M., M.Sc., M.VSc, Ph.D.	Professor
Prof. Agumbah, G.J.O.	B.V.M., M.Sc , D.P.V.M , Ph.D.	Professor
Prof. Kiptoon, J.C.	B.V.M., M.Sc., Ph.D	Professor
Prof. Mutiga, E.R.	B.V.M., M.Sc, Ph.D	Professor
Prof. Wabacha, J.K.	B.V.M., M.Sc., Ph.D	Associate Professor
Prof Mbugua, Susan W.	B.V.M., M.Sc., Ph.D	Associate Professor
Prof. Kihurani, D.O.	B.V.M., M.Sc., Ph.D,	Associate Professor
Prof. Njenga, M.J.	B.V.M., M.Sc., Ph.D	Associate Professor
Prof. Gitau, G.K.,	B.V.M. , M.Sc., Ph.D,	Associate Professor
Dr. Mande, J.D.,	B.V.M., M.Sc., Ph.D	Senior Lecturer
Dr. Mogoa, E.G.M.,	B.V.M., M.Sc. , Ph.D,	Senior Lecturer
Dr. Tsuma, V.T.,	B.V.M., FRVCS, Ph.D,	Senior Lecturer
Dr. Munyua, S.J.M.,	B.V.M. , M.Phil., Ph.D,	Senior Lecturer/on leave of absence
Dr. Varma, V. S.,	B.V.Sc., M.Sc., Ph.D.	Senior Lecturer
Dr. Bwanga, C. O.,	B.V.M., M.VSc, FRCVS	Lecturer
Dr. Gakuya, D.W.,	B.V.M., , M.Sc., Ph.D,	Lecturer
Dr. Kitaa, J.M.A.	B.V.M., M.Sc.	Lecturer
Dr. Mbai, K.	B.V.M., M.Sc.	Lecturer
Dr. Makiugu, H.M.,	B.V.M. M.Sc., Ph.D,	Lecturer
Dr Mwangi, J.A.N.	B.V.M., M.Sc., Ph.D.	Lecturer
Dr. Wasike, Nekesa.	B.V.M., M.Sc.,	Lecturer
Dr. Thaiya, A.G.,	B.V.M., M.Sc.,Ph.D	Lecturer
Dr. Muthee, J.K.,	B.V.M., MSc.	Lecturer
Dr. Abuom, T. O.,	B.V.M., MSc.	Tutorial Fellow
Dr. Gitonga, P.N.,	B.V.M., Msc.	Tutorial Fellow
Dr. Aleri, J.W.	B.V.M, MSc.	Tutorial Fellow
Dr. Kipyegon A.N.	B.V.M, MSc.	Tutorial Fellow
Dr. Gilber Kirui	B.V.M.	Tutorial Fellow
Dr. Joan Muraya	B.V.M.	Tutorial Fellow
Mr. .M. Gitahi	HND	Chief Technologist
Ms. Caroline M. Huria	Bachelor of Commerce	Administrative Assistant
Mr. J.M. Nduhiu	HND	Senior Technologist
Mr. G.O. Ogola	HND	Radiographer
Mr. Richard W. Matheka	HND	Radiographer
Mrs. J. N. Onsongo	HND	Senior Technologist
Ms. J.M. Kamau	HND	Senior Technologist
Mr. P. Gitau	Dip. In Medical Lab.	Dip. In Medical Lab.
Hildah L. Nakweya	Diploma	Technologist ABC
Alice W. Kinyua	Diploma	Technologist ABC
Athumani H. Mwashando	Diploma	Technologist ABC
Mr. IsaacM. Kiragu	Certificate	Storekeeper - B
Ms Ruchia W. Ngila	Certificate - Range	Receptionist/Animal Health Technician - B
Ms Mary N. Mukiri	Certificates	Receptionist - A
Mr. Jacob O. Tolo	Certificate . Animal Health	Driver Guide/Animal Health Technician - A
Ms Rachel N. Gitau	Certificates - Secretarial	Assistant Secretary - A
Ms. Benardine O. Okola	Diploma-Secretarial	Assistant Secretary - A
Mr. Kefa O. Agutu	JLT, Certificate - AI	Theatre Assistant - A



ma	JLT	Theatre Assistant - IV
	Diploma	Theatre Assistant - IV
	Diploma	Junior Technologist - IV
	Diploma	Technical Assistant III
Mr. Peter N. Njenga	JLT, Certificate - AI	Driver - A
Mr. Charles K. Musyoka	KCE	Driver - III
Mr. Daniel M. Muriuki	Certificate - Mechanic	Driver - III
Mr. John M. Murimi	Certificates	Driver - III
Ms. Jane W. Muriithi	Certificates	Animal Attendant - III
Mr. Patrick N. Kimeu	KCSE	Animal Attendant - II
Mr. Gideon M. Karitu	KCE	Animal Attendant - II
Mr. Benson W. Nyongesa	Certificate . Range	Animal Attendant - II
Mr. Peter M. Mugo	Certificate - Range	Animal Attendant - II
Mr. Victor M. Njumba	KCSE, Certificate - AI	Animal Attendant - II
Mr. Robale M. Rajab	Certificates	Technical Assistant - II
Mr. Charles K. Asava	KCSE, Certificate- AI	Animal Attendant - I
Mr. Samuel N. Karanja	KCSE	Animal Attendant - I
Ms Sarah N. Kubue	KCE	Animal Attendant - II
Mr. John M. Mutua	KCSE	Cleaner II

**A. CONFERENCES ATTENDED**

**B. WORKSHOPS ATTENDED**

**C: CONSULTANCIES**

1. Prof. J.N. Ombui and Dr. Eddy G.M. Mogo. Analysis of Somaliland Livestock and Meat Value Chains (2011). A study commissioned by FAO-Somalia with financial support from DFID-UK (March . April, 2011).



**UNIVERSITY OF NAIROBI**  
COLLEGE OF AGRICULTURE AND VETERINARY SCIENCES  
FACULTY OF VETERINARY MEDICINE

**DEPARTMENT OF VETERINARY ANATOMY AND  
PHYSIOLOGY**

**ANNUAL REPORT**

**2011/2012**

### Peer Reviewed Publications

1. Hlushchuk, R., Ehrbar, M., Reichmuth, P., Heinemann, N., Styp-Rekowska, B., Escher, R., Baum, O., Lienemann, P., **Makanya, A.**, Keschet, E. and Djonov, V. (2011). Decrease in VEGF expression induces intussusceptive vascular pruning. *Arterioscler. Thromb. Vasc. Biol.*, 31(12):2836-2844.
2. Hlushchuk, R., **Makanya, A.N.** and Djonov, V. (2011). Escape mechanisms after antiangiogenic treatment, or why are the tumors growing again. *Int. J. Dev. Biol.* 55(3-5):563-567.
3. **Kavoi, B.** and Hassanali, J. (2011). Comparative Morphometry of the Olfactory Bulb, Tract and Stria in the Human, Dog and Goat. *Int. J. Morphol.*, 29(3):939-946.
4. **Makanya, A.N.**, El-Darawish, Y., Kavoi, B.M. and Djonov, V. (2011). Spatial and functional relationship between air conduits and blood capillaries in the pulmonary gas exchange tissue of adult and developing chickens. *Micr. Res. Tec.*, 74(2):159-69.
5. **Makanya, A.N.**, Hlushchuk, R. and Djonov, V. (2011). The pulmonary blood-gas In the avian embryo: inauguration, development and refinement. *Respr. Physiol. Neurobiol.*, 178(1):30-38.
6. Oyugi, D.O., Cucherousset, J. Ntiba, M.J., **Kisia, S.M.**, Harper, D.M. and Britton, J.R. (2011). Life history traits of an equatorial common carp *Cyprinus carpio* population in relation to thermal influences on invasive populations. *Fisheries Res.*, 110:92-97.
7. Oyugi, D.O., Harper, D.M., Ntiba, J.M., **Kisia, S.M.** and Britton, J.R. (2011).

Effects of the Response of Two Tilapia Cichlids to Long-Term  
Allodiversity and Exploitation in an Equatorial Lake. *AMBIO*  
(Journal of sciences), 40: 469-478.

8. **Wambugu, S.N., Mathiu, P.M.,** Gakuya, D.W., Kanui, T.I., Kabassa, J.D. and **Kiama, S.G.** (2011). Medicinal plants used in the management of chronic joint pains in Machakos and Makueni counties, Kenya. *J. Ethnopharmacol.*, 137(2): 945-955.
9. **Kimwele C.,** Duncan Matheka D., Ferdowsian H. (2011)  
A Kenyan perspective on the use of animals in science education and scientific research in Africa and prospects for improvement. *Pan African Medical Journal.* 2011; 9:45
10. Ferdowsian, H.R. , Durham D.L., Johnson C.M., Brüne M., **Kimwele C.,** Kranendonk G., Otali E., Akugizibwe T., Mulcahy J.B. , Ajarova, L (2012). Signs of generalized anxiety and compulsive disorders in chimpanzees. *J. Vet. Behavior: Clinical Applications and Research* 7(6)
11. Ferdowsian H.R., Durham D.L., **Kimwele C.,** Kranendonk, G, Otali E. , Akugizibwe T., Mulcahy J.B., Ajarova, L, Johnson C.M. (2011). Signs of Mood and Anxiety Disorders in Chimpanzees. *PLoS ONE* 6 (6 ) e19855
12. **Kimwele C. N.,** Karisa B. K., Stokes M., Junga J. O., Hanotte O., Skilton R. A. and McElroy D. (2012). DNA species surveillance: Monitoring bushmeat poaching and trading in Kenya using partial cytochrome b gene. *African Journal of Biotechnology:* 11(78) 14276-14286
13. Songpro E., Mungai A., **Kimwele C.,** Gatebe E., Mwaniki, M., Kinuthia J., Osiemo Z. (2012). Optimization of PCR conditions to amplify mitochondrial COI fragments of wildlife species in Kenya. *Asia. J. Biol and Life Sci.* 1 (3): 191-196.
14. Caleb O Orenge C.O., Leonard Munga L., **Kimwele C.N.,** Kemp S., Korol A., Gibson J.P., Hanotte O., Soller M. (2012)  
Trypanotolerance in Ndama x Boran crosses under natural trypanosome challenge: effect of test-year environment, gender, and breed composition. *BMC Genetics* 2012, 13:87

## Postgraduate programmes

### a). Masters programmes

#### Msc in Anatomy and Cell Biology

1. **Kimani J.M.** . Dermal wound healing and regeneration in mole rats (*Heterocephalus glaber* and *Tachyoryctes ibeanus*) and percival's spiny mouse (*Acomys percivalis*)
2. **Nasimolo J.** . Morphometric evaluation of cellular involvement in neuroinflammation and potential anti-inflammatory properties of *Erythrina abyssinica*.

**Physiology:**

Study of the role of cholinergic drugs in pain regulation in the  
Lactating rat (*Rattus norvegicus*)

**Msc in reproductive biology:**

4. Sylvia Kerubo Onchaga (2012)

**Msc project completed**

**Michael B. Papah** : The structure of the male reproductive organs in lake magadi tilapia  
(*Alcolapia grahami*)

**b). PhD programmes**

**Doctor of Science in comparative animal physiology:**

1. **Ochwangi, D.O.**: Pharmacophyiological anticancer potential of medicinal plants used in Kakamega County, Kenya.
2. Nyongesa A. W. : Mechanism of purified cathinone from khat (*Khat edulis*) on reproductive function in male vervet monkey (*Chlorocebus aethiops*)
3. **Wambugu S. N.** : Evaluation of painalleviating, anti-inflammatory and anti-rheumatoid properties of selected Kenyan medicinal plants.
4. **Kaluwa C.K.** : Evaluation of anti-fertility properties of medicinal plants traditionally used in Tana River county, Kenya.

**Doctor of Science in Anatomy:**

5. Kisipan M. L. : Heat shock proteins in thermal, salinity and toxicity stress tolerance in fish.

**PhD project completed**

**Kavoi B. Mwanzia** : The rabbit olfactory mucosa: Postnatal morphology and the effects of anticancer drugs vinblastine and docetaxel.

P.K. Towett.,

Ag. Chairman, DVAP

			QUALIFICATIONS
1.	Prof. Seth .M. Kisia	Ass. Professor	BVM, (Nairobi), PhD, (Bristol)
2.	Prof. Geoffrey .M. Maloiy	Professor	MBS, EBS, BSc, (British Colombia), PhD, DSc, (Aberdeen), DSc. (Duke), FAAS, F.Biol
3.	Prof. D. Oduor-Okelo	Professor	BVSc, DVM (Berne), MSc., PhD (Nairobi)
4.	Prof. Charles .N. Warui	Ass. Professor	BVM, (Nairobi), PhD, (Liverpool)
5.	Prof. Stephen G. Kiama	Ass. Professor	BVM, MSc, (Nairobi), PhD, (Berne)
6.	Prof. G. E. O. Owiti	Ass. Professor	BVM, MSc.(Nairobi), PhD (California)
7.	Dr. J O Miaron	Senior Lecturer	DVM, (Wro Claw) MSc, PhD (Alberta)
8.	Dr. Peter.M. Mathiu	Senior Lecturer	BVM (Nairobi), PhD (Hawaii)
9.	Dr.Jemima A. Oduma	Senior Lecturer	BSc. (Dar-es-salaam), MSc. PhD, (Nairobi)
10.	Dr. Charles N. Kimwele	Senior Lecturer	BVM, MSc. (Nairobi) PhD (St. Andrews, Scotland)
11.	Dr. Andrew N. Makanya	Senior Lecturer	BVM, MSc. (Nairobi) DVM (Berne), PhD (Nairobi)
12.	Dr. Daniel W. Onyango	Senior Lecturer	BVM, MSc, PhD (Nairobi)
13.	Dr. Deter K. Mwangi	Senior Lecturer	BVM, (Nairobi), DVM (Berne), PhD, (Liverpool)
14.	Dr. Philemon K. Towett	Senior Lecturer	BVM, MSc. PhD (Nairobi)
15.	Dr. Rodi O. Ojoo	Lecturer	BVM, MSc. PhD (Nairobi)
16.	Dr. Purity W. Macheru	Lecturer	BVM, MSc. (Nairobi)
17.	Dr. Allan N. Njogu	Lecturer	BVM, MSc. (Nairobi)
18.	Dr. Boniface M. Kavoi	Lecturer	BVM, MSc. PhD, (Nairobi)
19.	Dr. Albert W. Nyongesa	Lecturer	BVM, MSc. (Nairobi)
20.	Dr. Mosiany L. Kisipan	Tutorial Fellow	BVM, MSc. (Nairobi)
21.	Dr. Dominic O. Ochwang'i	Tutorial Fellow	BVM, MSc. (Nairobi)
22.	Dr. Catherine K. Kaluwa	Tutorial Fellow	BVM, MSc. (Nairobi)
23.	Dr. Stanley N. Wambugu	Tutorial Fellow	BVM, MSc. (Nairobi)
24.	Dr. John M. Kimani	Tutorial Fellow	BVM, (Nairobi)
25.	Dr. Johnson Nasimolo	Tutorial Fellow	BVM, (Nairobi)
26.	Dr. Michael B. Papah	Tutorial Fellow	BVM, MSc. (Nairobi)
27.	Mr. George K. Kariuki	Chief Technologist	Higher Diploma in Applied Biology (Kenya Polytechnic)
28.	Mr.Jackson Mugweru	Chief Technologist	Bachelor of Philosophy in Technology (Biotechnology) (Kenya Polytechnic University College)

#### TECHNICAL STAFF IN GRADE A – F

	MEMBER OF STAFF	GRADE	QUALIFICATIONS
1	Mr. S. W. Kamonde	E-F	Higher Diploma Medical Laboratory Technology (Kenya Polytechnic)
2	Mr. P. K. Kiguru	E-F	Higher Diploma Medical Laboratory Technology (Kenya Polytechnic)
3	Dr. C. G. Mukhwaya	D	BVM (Nairobi)
4	Ms. I. Osoro	D	Higher Diploma Biotechnology (Kenya Polytechnic)
6	Ms. M. M. Kagina	D	Higher Diploma Applied Biology (Kenya Polytechnic)

			Bachelor of Philosophy in Technology (Biotechnology) (Kenya Polytechnic University College)
8	Mr. A. T. Mwasela	C	Diploma in Computer Studies (KNEC)
9	Mr. R. Tsuma	A-B	Diploma Applied Biology (Kenya Polytechnic)
10	Ms. C. Ngaywa	A	Bachelor of Philosophy in Technology (Biotechnology) (Kenya Polytechnic University College)
11	Mr. J. K. Kiai	A	Diploma Medical Laboratory Technology (Kenya Polytechnic)
12	Mr. F. V. Okumu	A	Diploma Medical Laboratory Technology (Kenya Polytechnic)



**UNIVERSITY OF NAIROBI**  
COLLEGE OF AGRICULTURE AND VETERINARY SCIENCES  
FACULTY OF VETERINARY MEDICINE

**DEPARTMENT OF ANIMAL PRODUCTION**

**ANNUAL REPORT**

**2011/2012**



is one of the oldest departments of the University of Nairobi. Located at Upper Kabete Campus, Faculty of Veterinary Medicine, the department is also a full member of the Faculty of Agriculture. Since its inception, the department has participated in the production of several veterinarians, agriculture graduates, food technologists, range managers, agricultural engineers in addition to several Masters of Science in Animal Nutrition, Animal Genetics and Breeding and Management of Livestock production systems as well as many Ph.D.s in specific aspects of Animal science Academic Programmes. The department offers courses in animal production to undergraduates of the faculties of Agriculture and Veterinary Medicine.

### **List of Academic Programme:**

#### **Certificate Programmes**

- 1) Poultry Management
- 2) Dairy Management

#### **Postgraduate Programmes**

- 1) M.Sc. Livestock Production Systems
- 2) M.Sc. Animal Nutrition and Feed Science
- 3) M.Sc. Animal Genetics & Breeding
- 4) M.Sc. Poultry Science

#### **Number of New students admitted into each academic programme:**

Animal Science Major 3<sup>rd</sup> Year (2011/2012) = 9 students  
Animal Science Major 4<sup>th</sup> Year (2011/2012) = 2 students  
M.Sc. Animal Nutrition and Feed Science (2011/2012) = 3 students  
M.Sc. Animal Genetics & Breeding (2011/2012) = 3 students  
PhD Animal Nutrition and Feed Science (2011/2012) = 1

#### **Number of students who graduated from each programme**

Animal Science Major 4<sup>th</sup> Year (2011/2012) = 6 students  
  
PhD Animal Genetics & Breeding = 1 student

#### **External Examiners appointed in 2011/2012 Academic Year:**

- (1) Prof. B.O. Bebe, Dept. of Animal Science, Egerton University.
- (2) Prof. George W. Oduho Oliech, Dept. of Animal Science, Chepkoilel University College.
- (3) Prof. Alexander K. Kahi, Dept. of Animal Science, Egerton University

### **Research Activities:**

#### **Dr. Joyce Maina**

##### **Research Activities:**

1. Promoting a sustainable aquaculture sector using a value chain approach: Funded by National Council of science and Technology . 7 million

at Mwea Irrigation Scheme in Kenya . validation of models . Kariuki of Kenyatta University as the Principal Investigator .

**Dr. J.O. Jung’a Research Activities**

Antibiotic resistant Escherichia coli fecal samples of captive baboons not normally exposed to antibiotic. Dominic K. Mureithi, Jung’a J.OI, Mitema E.S.; Mapenay L.M., and Ozwara H.S.

Submitted to Journal of Microbial Resistance.

**Prof. Mitaru’s Funded Projects:**

Sustainable Intensification of Sorghum . Legume System to Improve Livelihood and Adaptation to Climate Change in Semi Arid Areas.

Period: October 1, 2011 to December 31, 12 2012.

Funding by ASARECA . USD 153,935.00, Sub-Grant Agreement No. ASARECA/SC/011/01.

Pearl Millet Innovations for improved livelihoods in drought prone areas of East and Central Africa Sustainable Intensification of Sorghum.- Legume System to Improve Livelihood and Adaptation to Climate Change in Semi Arid Areas.

Period: September 1, 2011 to December 31, 2013.

Funding by ASARECA . USD 90,000.

**BY Joel W. Ochieng, PhD, Department of Animal Production, CAVS**

**1. RESEARCH GRANTS: AWARDS AND NEW APPLICATIONS**

DATE	AMOUNT (USD)	AGENCY/DONOR	COLLABORATOR	STATUS	PROJECT
October 2011	4.0 M (40 M KES)	WELLCOME TRUST	ECSAAG (Africa Multi-institutional grant under UoN DVC-RPE)	First round review successful	Population genetics for improved health Mgmt
November 2011	12000 (1M KES)	NCST	Sole applicant for Innovation award	Awarded Letter attached	Tilapia genetics at Lake Baringo,
November 2011	1,200,000 (120 M KES) 18 M to UoN	NSF	University of Melbourne (Australia) Aururn University (US), University of Zagreb (Croatia)	Application under review	Mitochondrial Genetics and Enhanced Metabolic Traits in Swine
November 2011	100,000 (10 M KES)	Bill & Melinda Gates Foundation	Sole applicant	Application under review	LAMP Technique for diagnosis in animal health
December 2011	1,250,000 (125 M KES)	NIH	Baylor College of Medicine, Columbia Medical School	Application under review	Population genomics for improved health Mgmt

**Dr. J.O. Jung’a**

valley depauperately fragmented roan antelope populations.

DNA Based Interbreeding Resource Databases for Goats in  
ASAL Regions . Grants by National Council of Science and Technology.

### **Publications by members of the Department of Animal Production**

Socio-economic characteristics and perceptions of cattle keeper and constraints of cattle production in Western Kenya.

J.O. Amimo, S. Thumbi, B.O. Inyangala, J.O. Junga and R.O. Mosi

Livestock Research for Rural Development 23 (6) 2011.

J.O. Amimo, S. Thumbi, **B.O. Inyangala**, J.O. Junga and R.O. Mosi. Socio-economic characteristics and perceptions of cattle keepers and constraints to cattle production in Western Kenya. Livestock Research for Rural Development. 23 (6) 2011.

J. Oluka<sup>1</sup>, E. Ssewanyanna<sup>1</sup> and A. Nakiganda<sup>1</sup> Amimo JO<sup>2</sup>, S. Thumbi<sup>3</sup>, B.O Inyangala<sup>2</sup>, J.O Junga<sup>2</sup> and R.O Mosi<sup>2</sup> <sup>1</sup>National Livestock Resources Research Institute (NaLIRRI), P. O. Box 96, Tororo, Uganda <sup>2</sup> Department of Animal Production University of Nairobi International Livestock Research Institute (ILRI). Socio-economic characteristics and perceptions of cattle keepers and constraints to cattle production in Central Uganda and Western Kenya. Asareca Publication. 2011

Socio-economic characteristics and perceptions of cattle keepers and constraints to cattle production in Western Kenya.

J.O. Amimo, S.M. Thumbi, B.O. Inyangala, J.O. Junga and R.O. Mosi.

Journal: Livestock Research for Rural Development (LRRD) 23(6) 2011

Muia J M K, Kariuki J N, Mbugua P N, **Gachuri C K**, Lukibisi L B, Ayako W O and Ngunjiri W V 2011: Smallholder dairy production in high altitude Nyandarua milk-shed in Kenya: Status, challenges and opportunities. Livestock Research for Rural Development. Volume 23, Article #108. <http://www.lrrd.org/lrrd23/5/muia23108.htm>

*Katiku P N, **Gachuri C K** and Mbugua P N 2011 Characterization of dairy cattle farming in Mbeere District of Eastern Kenya. Livestock Research for Rural Development. Volume 23, Article #236. <http://www.lrrd.org/lrrd23/11/kati23236.htm>*

M.I. Lengarite, P.N. Mbugua<sup>2</sup>, **C.K. Gachuri** and L.W. Kabuage. 2011. Mineral Status of Sheep and Goats Grazing in the Arid Rangelands of Northern Kenya. Paper accepted. Pakistan Journal of Nutrition.

Antibiotic resistant Escherichia coli faecal samples of captive baboons not normally exposed to antibiotic. Dominic K. Mureithi, **Jung'a J.O**, Mitema E.S.; Mapenay L.M., and Ozwara H.S.

Climate variability and dry season ruminant livestock feeding strategies in South Eastern Kenya Aphasard J.N. Ndathi, Moses M. Nyangito, Nashon K.R. Musimba and **Barnabas N. Mitaru**.

Livestock Research for Rural Development 23(9) 2011.

Published 1, September 2011.

Krastanova, Safira Sutton, **Joel W. Ochieng**, Stephen Leong, *ne expression at chalcone synthase (CHS) enzyme suggests skin and synchronized red cell cultures of North American native grape berries.* **DNA and Cell Biology**, In press (DOI: 10.1089/dna.2011.1589)

Anthony Ananga, Ernst Cebert, **Joel W. Ochieng**, Suresh Kumar, Devaiah Kambiranda, Hemanth Vasanthaiah, Violetka Tsoleva, Zachary Senwo, Koffi Konan and Felicia N. Anike (2011). *Prospects for Transgenic and Molecular Breeding for Cold Tolerance in Canola (Brassica napus)* **Biotechnology** (3) Ed. Agbo, E.C. Intech, ISBN 979-953-307-671-3. In press

**Ochieng, Joel W.** (2011) *Gene mapping in plant species complexes*. In: **Biotechnology** (2) Ed. Agbo, E.C. Intech, ISBN 979-953-307-671-2. In press

Ouma C, Roca AL, Were T, Raballah EO, Oguge NO, Jura WZO, **Ochieng JW**, Hanotte O, Georgiadis N (2011) *Genetic structure of hartebeest populations Straddling a transition zone between Morphotypes*. **J. Basic & Applied Science Research**, 1(3) 131-149.

#### **WORKSHOP/CONFERENCES/SYMPOSIUM ATTENDED BY MEMBERS OF DEPT. OF ANIMAL PRODUCTION:**

##### **PROF. P.N. MBUGUA**

###### **Attended KARI Seminar on Arid lands.**

1. Presented paper on mineral nutrition in Northern rangelands of Kenya.
2. Faculty Biennial conference (28<sup>th</sup> September, 2011) presented 3 papers:
  - (a) Climate change on animal production in Kenya . review.
  - (b) Role of poultry in smallholder livelihood.
  - (c) Mineral Nutrition in sheep and goats.
3. Assessment of climate in Kajiado District.

##### **DR. L.W. KABUAGE**

Papers presented at aGRO 2011 Biennial Conference . 28<sup>th</sup> September, 2011.

1. Evaluation of smallholder poultry production and its contribution to household income and nutrition in Kiambu West District, Kenya.
2. Effects of substituting maize with rice milling by products in commercial layer chicken diets by Njuguna, W; Kabuage, L.W. and Maina, J.G.
3. Mineral status of sheep and goats grazing in the rangelands of Northern Kenya.

##### **Workshops attended:**

1. Kenya Agricultural Productivity and Agribusiness Project (KAPAP).
2. KAPAP CGS Collaborative Research Projects Launch workshop, 24<sup>th</sup> . 26<sup>th</sup> August 2011 at KARI Headquarters.

##### **B.O. INYANGALA**

ASARECA end of the year project meeting in Kigali, Rwanda 21-25<sup>th</sup> March 2011.

Held at Kenya School of Law . Karen 12 . 16 September 2011.

**Prof. Gachuri attended:**

Conference attended: aGRO 2011 . Inaugural Biennial Conference: September 26-28, 2011.

**Prof. C.K. Gachuri**

1. (a) Papers presented: Mineral status of sheep and goats grazing in the rangelands of Northern Kenya.

Longarite M.I.<sup>a</sup>, P.M. Mbugua<sup>b</sup>, C.K. Gachuri<sup>b</sup>, and L.W. Kabuage<sup>b</sup>

- (b) Response of sweet potato dual purpose varieties to harvesting regime.

Manoa Lonita<sup>1</sup>, Charles Gachuri<sup>1</sup>, Ben Lukuyu<sup>2</sup>, Jane Wamatu<sup>1</sup>, Sammy Agili<sup>3</sup>, Joyce Maina<sup>1</sup>

**WORKSHOPS HELD BY PROF. R.G. WAHOME**

Dates	Activity	Presentation
6-9 July 2011	Deriving higher value from donor funds. Enhancing efficiency in research grants management workshop	
13-15 July 2011	Training in supervision workshop	1..Introduction to PREPARE PhD Project 2.Negotiating student/contracts 3.Developing PhD study plan 4.Judging quality of theses
8-10 August 2011	Proposal writing workshop	Introduction to proposal writing Research problems analysis and statement Developing research questions Converting questions to hypotheses Defining and refining research objectives Explaining the theoretical and conceptual frame work; milestones, expected results amount. Work plan and PhD plan Explaining the key budget items (budget notes). Writing project summary Follow-up on proposal writing; concluding EAAPP proposals applications
11-13 August 2011	Computer and statistics applications in research workshop	1.Introduction to data analysis and presentation. 2.Concluding the workshop and way forward.
27-29 September 2011	aGRO 2011-Biennial Scientific conference, Faculty of Agriculture	1.Addressing factors that affect efficiency of training at PhD level: a study on achievements of initiatives targeting PhD level training.

		<p>2 Nutritional evaluation of the suitability of proposals pods for livestock feed in Kenya.</p> <p>3. Assessment of the effect of feeding proposes pod flour based rations to layer chickens on laying and egg quality.</p>
	Workshop to develop a PhD Programme for Wangari Maathai Institute for Peace and Environmental Studies	Facilitator

Activity	Date and Title	Mode of participation
Conferences and workshops	Development of MSc. Programmes for WMI. Workshop held at the GBM Centre, Karen, Nairobi 2 <sup>nd</sup> -3 <sup>rd</sup> December,2011.	Resource person
	Regional Dissemination Workshop held on 28-30 November, 2011 at the Olasit Gardens, Arusha, Tanzania.	Workshop organizer and presenter of three presentations.
	The Agricultural Alternative for Africa, Conference held at the UNEP Headquarters, Gigiri, Nairobi, Kenya on 15-16 November 2011.	ProGroV team leader and participant
	Joint Stakeholders Confeence of the ACP-EU Edulink and Science and Technology programmes October 26-28, 2011, held at the ACP House, Brussels, Belgium.	Invited paper on %improving efficiency of PhD training in the East African Region.
Grants Application	DRYLAND MILK PRODUCTION: GENERATING IFNORMATION AND BUILDING CAPACITY FOR ANCHORING CAMELS IN THE MILK VALUE CHAINS IN KENYA (proCaMilk). Project proposal presented to the EAAP Secretariat.	Principal Investigator
	Potential for producing green energy using water Hycinth. Proposal presented to the Danish FFU, December 14, 2011	Collaborator

**PROF. M.S. BADAMANA ATTENDED:**

Regional Dissemination Workshop held on 28-30 November, 2011 at the Olasit Gardens, Arusha, Tanzania.

approaches that promote the development of sustainable agricultural value chains.

Maina, J.G., Ambuko, J.L., Lopokoiyit M. and Chemining'ya G.N. (2011)  
Proceedings of aGRO-2011 conference, Faculty of Agriculture, University of Nairobi (26-28<sup>th</sup> September 2011).

1. A paradigm shift in curriculum development processes in public universities . towards a responsive and participatory multi-stakeholder approach..  
Ambuko, J., Maina, J.G., Chemining'ya, G.N., and Lopokoiyit M., (2011).  
Proceedings of aGRO-2011 Biennial Conference, Faculty of Agriculture, University of Nairobi, Kenya (26<sup>th</sup> -28<sup>th</sup> September, 2011).
2. Strengthening capacity of local universities to promote and teach rural innovation processes.  
Chemining'ya, G.N., Ambuko, J., Maina, J.G., Muiru, M.W. and Magomere, T. (2011).  
Proceedings of aGRO-2011 Biennial Conference, Faculty of Agriculture, University of Nairobi, Kenya (26<sup>th</sup> -28<sup>th</sup> September, 2011).
3. Application of enzyme technology to improve the nutritive value of high-fibre feedstuffs for non-ruminants.  
Waititu, S.M., Nyachoti, Maina, J.G., Slominski, B.A. and Ochada, J.O. (2011).  
Proceedings of aGRO-2011 Biennial Conference, Faculty of Agriculture, University of Nairobi, Kenya (26<sup>th</sup> -28<sup>th</sup> September, 2011).
4. Effects of substituting maize with rice-milling by-products in commercial layer chickens.  
Njuguna, K., Kabuage, L.W., and Maina, J.G. (2011).  
Proceedings of aGRO-2011 Biennial Conference, Faculty of Agriculture, University of Nairobi, Kenya (26<sup>th</sup> -28<sup>th</sup> September, 2011).
5. Effects of enzymes and probiotics on growth performance and gastro-intestinal morphology in broiler chicken.  
Karimi, H.N., Wahome, R., Maina, J, and Kuria P. (2011).  
Proceedings of aGRO-2011 Biennial Conference, Faculty of Agriculture, University of Nairobi, Kenya (26<sup>th</sup> -28<sup>th</sup> September, 2011).
6. Response of sweetpotato dual purpose varieties to harvesting regimes.  
Manoa, L., Gachuri, C. Lukuyu, B., Wamatu, J., Agili, S. and Maina, J.G.  
Proceedings of aGRO-2011 Biennial Conference, Faculty of Agriculture, University of Nairobi, Kenya (26<sup>th</sup> -28<sup>th</sup> September, 2011).

#### **Outreach and Community Services:**

1. P.N. Mbugua and C.K. Gachuri . Outreach Programme in Makuyu
2. Prof. Gachuri - Outreach: Training of dairy farmers group in Punda Milia Location of Makuyu Division, Maragwa District. 30<sup>th</sup> September 2011.
3. Guest of honor at Forest view academy on the occasion of meeting parents and students of Form 3 on 17<sup>th</sup> November, 2011.

#### **Doctor of Philosophy thesis published:**

**Exhibitions the department participated in:**

- (1) The ACK Nairobi International Trade Fare 2011

**Awards the Department won:**

Prizes won at NITF ( Nairobi International Trade Fare)

1. Received two trophies:
  - Pirrie cup
  - Kenya Poultry Development Company Ltd.
2. Received a participation certificate in Nairobi International Trade Fare Year 2012.
3. Rabbits Prizes
  - 4 prizes won (3 first prizes and 1 second prize)

1<sup>st</sup> Prize:

- Adult Buck New Zealand White
- Champion Buck
- Best Doe and Litter less than 8 weeks
- Adult Doe Newzealand

2<sup>nd</sup> Prize

- Buck and Doe 5 months
- 4. Poultry & Egg won:
  - 6 matched Normal Hen Eggs Brown

**List of Members Staff members**

Name	Qualifications	Title
Prof. M.S. Badamana	BVM, M.Sc., PhD	Associate Professor
Prof. B.N. Mitaru	B.Sc. M.Sc., PhD	Professor
Prof. P.N. Mbugua	B.Sc. M.Sc., PhD	Associate Professor
Prof. M.M. Wanyoike	B.Sc. M.Sc., PhD	Associate Professor
Prof. R.G. Wahome	BVM, M.Sc., PhD	Associate Professor
Prof. C.K. Gachuri	BVM, M.Sc., PhD	Associate Professor
Dr. Okeyo Mwai	B.Sc. M.Sc., PhD	Senior Lecturer
Dr. J.O. Jungu	B.Sc. M.Sc., PhD	Senior Lecturer
Dr. J.W. Ochieng	B.Sc. M.Sc., PhD	Lecturer
Dr. J. G. Maina	B.Sc. M.Sc., PhD	Lecturer
Mr. B. O. Inyangala	B.Sc. M.Sc.	Lecturer
Dr. J.O.Amimo	BVM, MSc	Tutorial Fellow
Anne Njuguna	Dip, HND, DBM, BBM, MBA	Chief Technologist
Sebastian A. Itenya	SLT, B.Sc.	Senior Technologist DEF
John M. Kanyi	Dip, HND	Senior Technologist DEF
Anne Kimende	Dip, HND	Senior Technologist DEF
Elizabeth Wainaina	Diploma	Computer Technologist ABC
Catherine T. Muhandick	Certificate	Secretary Grade B





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na		Technologist ABC
ND		Technologist ABC
		Lab Assistant Grade IV
Leonard Imbugua	KCE	Lab Assistant Grade II
Mercy Niiri	Certificate	Assistant Technologist Grade III
Wilson M. Mwaura	Certificate	Assistant Technologist Grade III
Charles K. Ndungu	KCE	Lab. Assistant Grade II
Eric J.O. Odhiambo	KCSE	Lab. Assistant Grade I