

## *Curriculum Vitae*

### Biodata

**Name:** Joseph K.Ngei Kuria ( *BVM, MSc, PhD*)

**Address:** University of Nairobi, Department of Veterinary  
Pathology, Microbiology and Parasitology,  
P.O. Box 29053 (00625), Kangemi, Nairobi, Kenya.

Tel: 631340 ext 161; Mobile: 07222448313

E-mail:[jknkuria@uonbi.ac.ke](mailto:jknkuria@uonbi.ac.ke); [jknkuria@yahoo.com](mailto:jknkuria@yahoo.com)



**Nationality:** Kenyan

**Date of Birth:** 1956

### Academic qualifications.

<u>University education</u>			
<b>Year</b>	<b>Degree</b>	<b>Institution</b>	<b>Specialization</b>
1996	PhD	University of Nairobi	Microbiology
1985	M.Sc.	University of Nairobi	Immunology
1980	B.V.M.	University of Nairobi	Veterinary Medicine
<u>Primary, secondary and high school education</u>			
<b>Year</b>	<b>Certificate</b>	<b>School</b>	<b>Qualification</b>
1975	E.A.A.C.E	Thika High School	3 principal passes
1973	E.A.C.E	Kirangari High School	Division 1
1969	C.P.E	Kingeero Primary School	Passed

### Current employment and work experience

1996- to date. Senior lecturer in Veterinary Microbiology,  
Department of Veterinary Pathology and  
Microbiology, University of Nairobi

### Teaching responsibilities.

Programme	Courses taught
Bachelor of Veterinary Medicine	1. General Microbiology and Immunology 2. Pathogenic Microbiology 3. Pathology of animal diseases 4. Avian diseases
Bsc Biomedical Laboratory Technology	1. Microbiology 2. Immunology
Bsc Biochemistry	Microbial biochemistry
Bsc Wildlife Management	Microbiology
Postgraduate course work and research supervision	Microbiology and Immunology

### Research profile

Intracellular bacterial parasites are important pathogens in animals and human, causing chronic debilitating disease difficult to treat chemoprophylactically. One of these pathogens is *Corynebacterium pseudotuberculosis*. It is the causative agent of mainly caseous pseudotuberculosis in sheep and goats. In my master of science research I investigated serological tests for diagnosis of infections. *My scientific contribution was in working out the principle behind one test, the hemolysis inhibition test. I also established an ELISA test using the exotoxin of the bacterium as the antigen.* In my doctorate project, I experimentally investigated the dose of infection, the

incubation period and the possible pathogenesis for caseous lymphadenitis. *My scientific contribution was in documenting an eight day incubation period, and that the exotoxin and the surface lipid of the organism can individually cause caseous lesions.*

*Mycobacteria* are other important intracellular bacteria. *Mycobacterium bovis* causes zootic tuberculosis, afflicting many animal species as well as human. *In one of my current research projects, we have for the first time in Kenya identified bovine tuberculosis.* Research is underway to determine the correlation between disease in livestock and disease in human in selected parts of the country. The investigation will also determine the *Mycobacterium bovis* strains circulation in livestock, human and ruminant wildlife. *I have an extensive hands-on experience in isolation and molecular characterisation of Mycobacteria.*

Campylobacteriosis is an important emerging zoonosis and a major concern in food safety. About 80% of human campylobacteriosis originate from poultry, mainly commercial poultry. Another of my research projects have established that free-range indigenous chicken value chain is a potential source of *Campylobacter jejuni* and *Campylobacter coli*, the main agents of human campylobacteriosis. *The research has also for the first time established that the free-range chickens are potential sources of the highly pathogenic and zoonotic Escherichia coli 0157:H7, an organism previously associated with cattle dung. This finding is an indication that the organism multiplies in the chicken intestinal tract.*

Dimorphic fungi are agent of systemic mycoses, associated with lesions similar to those produced by *Mycobacteria*. Some dimorphic fungi such as *Paracoccidioides brasiliensis* are considered geographically restricted to South, Central and North America. Research has however identified this fungi in livestock in Kenya. Other dimorphic fungi identified are *Blastomyces dermatitidis* and *Histoplasma capsulatum*. *Identification of the dimorphic fungi in livestock in*

Kenya is highly significant in that native *Paracoccidioides brasiliensis* infections have not been reported outside the presumed geographically restricted region and *Blastomyces dermatitidis* infections have not been reported in a food animal. Further research will isolate and characterise the fungi.

### Publications in refereed journals

1. Kuria JKN and Gathogo SM. 2013. Concomitant dimorphic yeast fungi and *Mycobacteria* infections in beef cattle in Kenya. *Onderstepoort Journal of Veterinary Research* 80(1), Art. #585, 4 pages. <http://dx.doi.org/10.4102/ojvr.v80i1.585>
2. Gathogo S.M., Kuria, J.K.N and Ombui J.N. 2012. Prevalence of bovine tuberculosis in slaughter cattle in Kenya – A pathological, microbiological and molecular study. *Tropical Animal Health and Production* 44:1739-1744
3. Nkando, I., Ndinda, J., Kuria, J., Naessens, J., Mbithi, F., Schnier, C., Gicheru, M. McKeever, D., and Wesonga H. 2012. Efficacy of two vaccine formulations against contagious bovine pleuropneumonia (CBPP) in Kenyan indigenous cattle. *Research in Veterinary Science* 93: 568-573
4. Gacheri EN, Wesonga H, and JKN Kuria 2010. Assessing the effectiveness of intubation as a challenge model in Contagious Bovine pleuropneumonia vaccine experiments. *Tropical Animal Health and Production* 42:1743–1747
5. Syomiti, M., Wanyoike, M., Wahome, R.G. and Kuria J.K.N. 2010. *In Sacco* probiotic properties of effective microorganisms, (EM) in forage degradability. *Livestock research for Rural Development* 22:1-6
6. JKN Kuria, RG Wahome, M Jobalamin and SM Kariuki 2009. Profile of Bacteria and Fungi on Money Coins. *East African Medical Journal* 86, 151-155

7. E.N. wafula, P.W.N. Kanyari, J.N. Kuria, H. Wesonga, E.M. Njoroge and E.Zehyle 2008. A cross-sectional survey of mange infestation in goats in Turkana district, North-Western Kenya. *Bulletin of Animal Health and Production in Africa*. 56, 203-211
8. Kuria JKN, RG Wahome, TA Ngatia and AN Maina 2008 Toxicity of *Corynebacterium pseudotuberculosis* Surface Lipid To Skin and Regional Lymph Nodes in goats. *Journal of Commonwealth Veterinary Association* 24, 5-9
9. Njenga MN, Kuria JKN, Wahome RG, Gathura PB Thaiya AG, Maina CG and Mwangi J 2007. An Investigation into an outbreak of human anthrax in Maragua District, Central Kenya. *The Kenya Veterinarian*, 30:52-67
10. Wahome R.G and Kuria J.K.N. 2004. An Evaluation of the use of over-the-counter (OTC) feed supplements and additives. *Zambian Journal of Veterinary Science* (Special Issue) 56-57
11. Kuria J.K.N., Wahome R.G. and Gitau P.K., 2001. An account of a recent outbreak of Marek's disease in Kenya. *The Kenya Veterinarian* 21: 34-36.
12. Kuria, J.K.N., Mbuthia, P.G., Kang'ethe, E.K. and Wahome, R.G., 2001. Caseous lymphadenitis in goats: The pathogenesis, Incubation Period and Serological Response after Experimental Infection. *Veterinary Research communications* 25: 89-97.
13. Mbuthia, P.G., Karaba, W., Kuria J.K.N., and Kagunya D.K. 2000. Sarcosporidiosis in Domestic Chicken in Kenya. *The Kenya Veterinarian* 19: 25-26.
14. Kuria, J.K.N., Wahome, R.G. and Kang'ethe, E.K., 1998. Caseous lymphadenitis in goats: the dose of infection and the serological response. *Indian Journal of Animal Sciences* 68: 601-604.
15. Kuria, J.K.N., Wahome, R.G., Kang'ethe, E.K. and Nyaga, P.N., 1997. Clinical, serological and pathological response in goats infected with *Corynebacterium*

- pseudotuberculosis* through cutaneous and subcutaneous routes. *Bulletin of Animal Health and Production in Africa* 45: 73-78
16. Kuria, J.K.N. 1997. An outbreak of ulcerative enteritis in a flock of cockerels. *Bulletin of Animal Health and Production in Africa* 45: 137-138.
  17. Ngatia, T.A., Kuria, J.K.N. and Gathura, P.B. 1996. Causes of kidney condemnation in slaughtered cattle around Nairobi area, Kenya. *Bulletin of Animal Health and Production in Africa* 44: 189-191.
  18. Ngatia, T.A. and Kuria, J.K.N., 1991. Some diseases of donkeys in Kenya as seen during postmortem examination. *Bulletin of Animal Health and Production in Africa*, 39: 237-240.
  19. Kuria, J.K.N. and Ngatia, T.A. 1990. Caseous Lymphadenitis of sheep and goats in Kenya. *Bulletin of Animal Health and Production in Africa*, 38: 15-18.
  20. Kuria, J. K. N. I 990. Evaluation of the Bacterial agglutination test in serodiagnosis of caseous lymphadenitis in sheep and goats. *Indian Journal of Animal Science*, 60: 506-509.
  21. Kuria, J. K. N. 1990. Streptococcus zooepidemicus pneumonia in a donkey: A case report. *Bulletin of Animal Health and Production in Africa*, 38: 197.
  22. Ngatia, T.A., Mbiuki, S.M. and Kuria, J.K.N. 1990. The occurrence and treatment of skin lesions in a herd of dairy cattle in Kenya. *Bulletin of Animal Health and Production in Africa*, 38: 265-267.
  23. Kuria, J.K.N. and Holstad, G. 1989. Serological investigation of *Corynebacterium pseudotuberculosis* infection in sheep. Correlation between the Hemolysis Inhibition Test and the ELISA Test. *Acta. Veterinaria Scandinavica*. 30: 109-110.
  24. Kuria, J.K.N. and Holstad, G. 1989. A serological investigation of *Corynebacterium pseudotuberculosis* infection in sheep flocks in Southern Norway. *Acta. Veterinaria Scandinavica*, 30: 107-8.
  25. Ngatia, T.A., Mugeru, G.M., Njiro, S.M., Kuria, J.K.N. and Carles AB 1989. Arteriosclerosis and related lesions in Rabbits. *Journal of Comparative Pathology*, 101: 279-286.

26. Kuria, JKN 1989. Serodiagnosis of caseous lymphadenitis in sheep and goats: Comparison between two tests. Proceedings of the 1st Ann. Sci. Conf. of the Fac. of Vet. Med., University of Nairobi. *Bulletin of Animal Health and Production in Africa* (Special issue) pgs 177-179.
27. Munyua, SJM, Agumba, GJO, Njenga MN and Kuria, JKN 1989. Causes of pre-weaning mortality in small and medium scale intensive piggeries in central Kenya. *Indian Journal Animal Science*, 61: 126-128.
28. Njiro, SM, Ngatia TA and Kuria JKN 1988. Mucoïd enteritis of rabbits in Kabete area, Kenya. A review of post-mortem cases. *Bulletin of Animal Health and Production in Africa*, 36: 87-88.
29. Ngatia TA, Kiptoon JC, Njiro SM and Kuria JKN 1988. Some rabbits diseases around Kabete area of Kenya: A review of post-mortem cases *Bulletin of Animal Health and Production in Africa*, 36: 242-44.

#### Theses published

1. Kuria JKN 1985. Serodiagnosis of Caseous Lymphadenitis in Sheep. MSc thesis, University of Nairobi
2. Kuria JKN 1995. The Pathogenesis of Caseous Lymphadenitis in Goats. PhD thesis, University of Nairobi

#### Books Published.

Kuria, J.K.N. 1998. Diseases of poultry. A booklet for poultry farmers published by the Radio Listening Group.

#### Graduate Student Supervision and Examination

I have successfully supervised the following postgraduate research projects and writing of theses:-

1. Harriet Karimi Njeru. Effect of alloenzymes and yeast culture (Diamond V XPC) on performance, immune response, intestinal morphology and gut health in broiler chicken (*Gallus domesticus*). Msc thesis 2013
2. Gathogo J.M. Prevalence of bovine tuberculosis in slaughter cattle in Kenya – A pathological, microbiological and molecular study. Msc thesis 2011
3. Syomiti Margaret. Evaluation of effective microorganisms in improvement of the feeding value of maize stover. Msc thesis, 2009
4. Nkando Isabel Gacheri. Comparison of the stability, safety and efficacy of two Contagious Bovine Pleuropneumonia vaccine formulations. MSc thesis , 2008
5. Wafula Esther Nyongesa. Survey of mange infestation in goats and possible relationship with Caprine pleuropneumonia (CCPP) in Northern and Southern Turkana District, Kenya. MSc thesis, 2007
6. Andayi Nyamwata Fred . Phenotypic and genotypic characterization of antimicrobial resistance determinants in *Bacillus cereus* from foods. Msc thesis, 2008

#### Theses projects currently under supervision

1. Characterisation and evaluation of subunit vaccines against contagious bovine pleuropneumonia. PhD project, University of Nairobi
2. Organic production of biosecure indigenous chicken for enhanced food security in Makueni district, Kenya. PhD project, University of Nairobi
3. Prevalence of zoonotic microorganisms along indigenous chicken value chain in Makueni county, Kenya. MSc project, University of Nairobi
4. Assessing use of non-antibiotic growth promoters in chicken broiler production in Kenya. MSc project, University of Nairobi



5. Effects of Supplementation with Brachiaria, Cassava leaf meal and Azolla on beef cattle productivity and rumen microbiology in a semi arid area of Makueni, Kenya. PhD project, University of Nairobi
6. Zoonotic tuberculosis in laikipia county kenya- prevalence and economic impact in cattle. MSc project, University of Nairobi
7. Zoonotic tuberculosis in laikipia county kenya-epidemiology and socioeconomic impact in humans- PhD project , University of Nairobi
8. Zoonotic tuberculosis in laikipia county kenya- molecular epidemiology in livestock and humans- PhD project, University of Nairobi
9. Tuberculosis in sheep and goats-pathology and aetiology. MSC project, University of Nairobi

### Examination of Theses

I have examined or been part of examination pannel of the following theses:-

1. Gathogo J.M. Prevalence of bovine tuberculosis in slaughter cattle in Kenya – A pathological, microbiological and molecular study. Msc thesis 2011
2. Nkando Isabel. Safety and efficacy of two Contagious Bovine Pleuralpneumonia vaccine formulations. MSc thesis 2008.
3. Wafula Esther Nyongesa. Survey of mange infestation in goats and possible relationship with Caprine pleuropneumonia (CCPP) in Northen and Southern Turkana District, Kenya.MSc thesis 2007.
4. Githinji, Jane Wanjiru Kuria. Epidemiological, Genetic, Serological And Antimicrobial Susceptibility Characterization Of Non-Typhodal *Salmonella* Isolates From Hospitalised Children In Nairobi, Kenya. MSc thesis, 2005.
5. Mwenda Mbaka. An Assessment Of Bacteriological Quality, With Special Reference To The Presence Of Faecal *E.coli* In The Roof –Collected Rainwater

From Some Peri-Urban Areas Of Nairobi Kenya.- A Master of Veterinary Public Health Project Report, 2002.

6. Kipkorir, Reuben Koech. Epidemiology of Tuberculosis in humans in Narok District With special Interest on *Mycobacterium bovis*. MSc thesis, 2001. Examiners panel and supervision of thesis correction.
7. Nyaudi, Julia Klara. Viral Diarrhoea In Children Infected With Human Immunodeficiency Virus In Nairobi, Kenya. MSc thesis, 2001.
8. Karanja, Margaret Wanjiru. Isolation, Characterisation And Pathogenicity Testing Of *Escherichia coli* Occuring In Poultry In Some Parts Of Kenya. M.Sc., 1999.

### Curriculum development experience

I have been involved in the regular review of the Bachelor of Veterinary Medicine curriculum at the university of Nairobi. In addition, I have been involved in :-

1. Production of the Kenya veterinary Board's guidelines for training and practice of embryo transfer, 2009
2. Production Kenya Veterinary Board's benchmark for diploma training in animal health, 2006
3. Review of the Animal Health and Industry Training Institute (AHITI) , curriculum 2005

### Conferences, Courses, workshops and seminars attended

1. 2013. NACADA workshop on prevention of alcohol and drug abuse
2. 2011. Workshop on proposal writing organised by University of Nairobi Enterprise Services. November, 2011

3. 2010. PhD supervision training workshop. 2<sup>nd</sup> -4<sup>th</sup> March. University of Nairobi
4. 2009. Gender and Livestock. A workshop organised by FAO and IGA. Nairobi, Kenya, 28<sup>th</sup> -29<sup>th</sup> July Performance Enhancement Strategies course. Organised by Empowerment Resource Technologies LTD. 31<sup>st</sup> January 2009
5. 2009. Performance Enhancement Strategies course. Organised by Empowerment Resource Technologies LTD. 31<sup>st</sup> January 2009
6. 2008. Intergrated workshop on Highly pathogenic Avian Influenza (HPAI) . Safari park Hotel, Kenya.
7. 2007. The 4<sup>th</sup> Pancommonwealth Veterinary Conference, Barbados, 2<sup>nd</sup> to 8<sup>th</sup> Nov 2007
8. 2004. Commonwealth Veterinary Association conference, East, Central and South African Region, Lusaka, Zambia.
9. 2004. The XXIst International Congress if Hyadatodology, Nairobi, Kenya.
10. 2003. National Veterinary Research Center, Muguga, Centre Research Advisory Committee Meeting, KARI, Muguga
11. 2002. "Poultry as a tool for Alleviating Poverty"- A workshop organised by the Danish Poultry network in Kenya. Mombasa, Kenya.
12. 2002. EAC Workshop on Policy Harmonisation of Livestock Trade in The East African Region. Lake Manyara Hotel, Tanzania.
13. 2002. The Role of Agro-Vet Shops (Dukas) in the Delivery of Animal Health Services and Information. A workshop organised by KARI/CTVM. Hotel Kunste, Nakuru, Kenya. Presented a paper on "The Veterinary Profession And the Agrovet Shops:- Threats and Opportunities."
14. 2002. The Design of Vaccination Programmes- From Field Studies to Economics. A course held at International Livestock research Institute, Nairobi Kenya.

15. 2001. Delivery of Animal Health services in Arid and Semiarid Areas (ASAL) in Kenya. A workshop organised by the Kenya Veterinary Association, Nakuru, Kenya.
16. 2000. 15<sup>th</sup> Institute of Primate Research Annual Scientific Review. Nairobi Museums, Kenya.
17. 2000. Delivery of Animal Health services in Kenya:- A workshop organised by the Kenya Veterinary Board and the Department of Veterinary Services on Policy and Legislation, Kerogoya, Kenya
18. 2000. Dairy cattle Breeding in East Africa : Delivery of Sustainable Artificial Insemination Services, KARI, Nairobi. Presented a Paper on "Delivery of AI services : Legal, Policy, and Institutional Constraints.
19. 1991. The 9<sup>th</sup> Small Ruminant Collaborative Research Programme (SR-CRSP) Scientific Workshop, KETRI.-Muguga, Kenya. Presented a paper on "Serodiagnosis of caseous lymphadenitis in sheep and goats after natural and experimental infections".

#### [Service to the Profession](#)

1. **Executive Committee Member**, Kenya Veterinary Association, 1998-2004. Executive committee members help to run the affairs of the Association and its eight regional and national branches.
2. **Steering Committee Member**, Kenya Veterinary Association Privatisation Scheme. The committee is the management board for the loan guarantee scheme for veterinarians in Private practice.
3. **Editorial Committee Member**, the Kenya Veterinarian Journal. Performed pre-reviews, selected peer reviewers, and did general editorial work to produce the journal.

4. **Member**, Legal and Policy Subcommittee, KVA. Helped in assessing proposed policies and their effects to the animal industry and to the veterinary profession at large.
5. **Editor**, Kenya Veterinary Association Newsletter. A quarterly newsletter highlighting events and activities in the veterinary profession

### National Responsibilities

1. Former Country councillor, Commonwealth Veterinary Association
2. Member, National Taskforce on the review of the Veterinary Surgeons Act
3. Member, National Monitoring and Surveillance Subcommittee on Avian Influenza
4. Former member, Kenya Veterinary Board
5. Former Chairman, Kenya Veterinary Board

### Fellowship, research grants and consultancies

1. 1982-1983. Norwegian Agency For international development fellowship at the Norwegian College of Veterinary Medicine
2. 1996 . I was the principal investigator in a research project funded by the United states Agency for international development grant, through Kenya Agricultural Research fund. I received a grant of US\$ 125, 000 to undertake research on the pathogenesis of caseous lymphadenitis in goats
3. 2001. United states Agency for international development grant, through Kenya Agricultural Research fund. I jointly received a grant of US\$ 250, 000 to undertake research on nematophagous fungi from soils
4. I have received several University of Nairobi deans grants awards

5. 2007. Through Kenya Veterinary Board I was contracted by FAO Kenya in 2007 at a cost of US\$ 30,000 to identify and address gaps in laws and regulations in the poultry industry value chain to facilitate the implementation of strategies for the control and prevention of the highly pathogenic avian influenza and other important diseases of domestic birds by formulating and draft rules and regulations
6. 2006-2010. Training of veterinarians in the Republic of Somaliland and the Puntiland state of Somalia on the formation and operating of a veterinary board and assisting the boards to formulate the regulations and procedures needed to operate. I also reviewed and updated the veterinary code for the transitional federal government of Somalia
7. 2009. Member of a consultancy team in impact assessment of IFAD- funded small holder dairy commercialisation project in western Kenya
8. 2012. I am a corrobator in an indigenous chicken value chain enhancement project in makueni district, funded by Kenya agricultural and agribusiness productivity programme (KAPAP) to a sum of Ksh. 12 million. My part is to investigate health and biosafety concerns along the value chain
9. 2012. Member of consultants training veterinarians in the Republic of Somaliland and the Puntiland state of Somalia on meat hygiene
10. 2013. Principal investigator in a project funded by the National council for Science and Technology to a sum of Ksh 7 million on 'The epidemiology and economic impact of zoonotic tuberculosis in human and cattle populations in Laikipia County, Kenya'

### Community outreach

Member, development committee, St Peter's ACK church, Uthiru

## Refferees

Prof. Paul N. Mbugua

Department of Animal  
Production, University of  
Nairobi, P.O. Box 29053,  
Nairobi, Kenya.

Prof. Lucy W. Kabuage

Kenyatta University  
E-mail:- [lwkabuage@gmail.com](mailto:lwkabuage@gmail.com)