

CURRICULUM VITAE

NAME : Gilbert Julian Okwaro, Agumbah

DATE OF BIRTH: 23rd March 1946

NATIONALITY: Kenyan

EDUCATION: “O” and “A” Levels, Maseno National School, Kenya.

UNIVERSITIES: (1) University of Nairobi - 1969 - 1973, BVM
- 1974 - 1978, MSc

(2) Royal Veterinary and Agricultural University,
Copenhagen, Denmark, 1975 - 1976, DPVM.

(3) The University of Glasgow, U.K. 1978 - 1981, PhD.

PROFESSIONAL DEVELOPMENT

March 1973 - June 1973 - Veterinary Officer, Machakos District, Kenya.

June 1973 - Oct. 1973 - District Veterinary Officer, Kiambu, Kenya. Left Government Service to take Assistant Lectureship / Staff Development offer by the University of Nairobi, Clinical Studies Department, Faculty of Veterinary Medicine.

October 1973 - July 1977 - Assistant Lecturer, University of Nairobi, Department of Clinical Studies.

July 1977 - April 1985 - Lecturer, University of Nairobi, Department of Clinical Studies.

April 1985 - March 1990 - Senior Lecturer, University of Nairobi, Department of Clinical Studies.

March 1990 - August 1994 - Associate Professor, University of Nairobi, Department of Clinical Studies and University of Zimbabwe (1991-1999).

August 1994 - Present - Promoted to Professor of Veterinary Reproduction and Obstetrics at University of Nairobi.

SCHOLARSHIP AWARDS

1. FAO Fellowship award 1975 - 1976 - To study at the Royal Veterinary and Agricultural University, Denmark. (DPVM).
2. Association of Commonwealth University Fellowships, 1978 - 1981, to study for PhD at the University of Glasgow, U.K.

ACADEMIC EXCELLENCE

1. Best “O” level performance since 1906 at Maseno National School, 1966.
2. Best “A” level student Research Project in Chemistry, The Kenya Science Teachers Association awards 1968.

OTHER ACADEMIC EXPERIENCE

ACADEMIC

1. Supervision at Post graduate level.
 - (a) Dr. J. J. N. Ngeranwa, Vet. Res. Labs. Kabete, Nairobi Kenya.
 - (b) Dr. David Kitosi, ILRAD, Nairobi, Kenya.
 - (c) Dr. F. N. Masembe, Currently Lecturer, Faculty of Vet. Medicine, Makerere University, Uganda.
 - (d) Dr. L.T. Makoni - University of Zimbabwe, Dept. of veterinary Clinical Studies.
2. **Undergraduate dissertation projects (u.z.) for award of BVSc Degree**
 - (a) Dr. G. Tafirei - 1994 - awarded 1.1
 - (b) Dr. D. Mudenge - 1994 - awarded 1.1
 - (c) Dr. W. Shumba - 1994 - awarded 1.1
 - (d) Dr. P. Chengeta - 1995 - awarded 2.2
 - (e) Dr. A. Chapwanya - 1996 - distinction
 - (f) Ms. S. Sibanda - 1996 - distinction
 - (g) Ms. M. Kadange 1999 - credit award
 - (h) Three others - 1999 - award 2.2
3. **Examination at Other Universities**
 - (a) Internal examiner to several MSc and PhD students of the University of Nairobi 1982 - 1991 and 2001.
 - (a) External examiner to undergraduate 4th and final year examinations for BVM degree, Sokoine University of Agriculture, Tanzania (1995 - 1997).
 - (a) External examiner to MSc theses (Drs M. Shelimweri, Dr. CJS Mosha and Dr. M. Swai) of Sokoine University of Agriculture, 1992 - 1996.
4. **Collaborative Academic duties with other Departments at U.Z. (1991 - 1999).**
 - (a) Discipline adviser (Reproduction) to several students in the Department of Animal Science undertaking postgraduate studies (MSc and PhD); examples:-
 - (1) Mr. Tembani 1992 - 1994 (MSc in collaboration with Drs. C. Mutisi and Sibanda of Animal Science).

- (2) Mr. Masunda - with Dr. C. Mutisi.
 - (3) Mr. M. Chimonyo with Drs. Mutisi and Hamudi-Kuwenda.
 - (4) Two PhD students in collaboration with Dr. T. Ngongoni and Prof. Topps, Animal Science. (Marirangwe Dairy Project, Artificial insemination and oestrous synchronisation of indigenous cattle and reproduction in goats in Zimbabwe with particular reference to use of ultrasound in pregnancy diagnosis.
- (b) Planning and evaluation of possible introduction of A.I. and reproductive services at Makhole in Masvingo, Zimbabwe by Dept. of Animal Science (committee representative appointed by Dean of Veterinary Science together with Drs. K. Lander and M. Ndengu).
 - (c) Danida Project, Department of Animal Science with Drs. C. Mutisi and Sibanda on Reproductive performance on indigenous cattle, Sanyati, Zimbabwe. (Arid communal lands project).

5. Post-graduate academic duties at Department level

- (a) Teaching Reproduction courses for the MVSc (Small Animal Medicine) - 1993 - 1999.
- (b) Teaching of MVSc in Reproduction and Herd Health.
- (c) Teaching MSc. students at University of Nairobi Reproduction and obstetrics; Herd Health.

6. Under-graduate Teaching Experience

- (a) Taught Veterinary reproduction and Obstetrics to undergraduate students since October 1973 - to July 1991 at the University of Nairobi.
- (b) Has taught Veterinary Reproduction and Obstetrics to undergraduate students since July 1991 - to 1999 at the University of Zimbabwe, and translocated back to University of Nairobi where same discipline is taught to 3rd - 5th year BVM students, to date (2004).
- (c) Taught Animal Health causes to Agriculture students at University of Nairobi, 1975 - 1991 and the University of Zimbabwe, 1991 - 1999.

PROFESSIONAL AND ADMINISTRATIVE EXPERIENCES:

1. Consultant in the investigation of Livestock fertility/infertility problems to several large scale and small scale farms in Kenya between 1984 - 1991 namely:-
 - (a) Investigation into the causes and massive stillbirth syndrome at Uplands bacon factory, Kenya, and several Piggeries in Kiambu District, Kenya (1984 - 1985) (1986 - 1990).
 - (b) Cause of massive abortion syndrome in a Dairy at Nanga estates, Muranga district 1987.

- (c) Investigation into the outbreak of cattle abortion in Machakos district Kenya, 1988.
- (d) Investigation into the cause of epididymitis in breeding rams in Machakos District, Kenya, 1990. This work was latter used for an M.Sc project by one current staff member at Nairobi University, Clinical Studies.
- (e) Consulting on abortion syndrome in Agricultural Development Corporation (A.D.C. Kenya) farms in Trans-Nzoia District, 1990.
- (f) Investigations into the cause(s) of poor fertility of an imported stallion, Jockey Club of Kenya, 1990.
- (g) Consultant in the field of Veterinary Medicine for Coopers & Lybrand, Nairobi, on Overseas Development agency (U.K.) bilateral aid to the Government of the Republic of Uganda on Veterinary Drug distribution and Equipment, 1989 & 1990. Still listed as consultant with the Kenya firm, now combined with Price Waterhouse.
- (h) Consultant to Swedish International development Agency (SIDA) on the state artificial insemination Programme in the Republic of Kenya, 1991, for donor funded Veterinary Aid.
- (i) Consultant to AU/IBAR on the community based animal Health workers role in delivery of Animal Health services in the ASALS, 2002-2003 including veterinary drug supply in Mwingi District.
- (j) Currently consulting for the Catholic Relief services on CBAHW's standards on Animal Health delivery, training and veterinary drug supplies in Tana-River District, 2003-2004

7. Clinical Services Experience

- (a) Has, since 1973 October, provided in-patient care to admitted animals at the University of Nairobi Veterinary Teaching Hospital. The duties included treatment, using for teaching and provision of Welfare matters to all species of veterinary importance. Other duties included Ambulatory services during working and off-working hours to cases within a 25 km radius of the University Teaching Hospital. This culminated in 1987 - 1991, to being head of the Clinic for Reproduction and Obstetrics in which eight (8) Academicians and 3 support staff were employed. During this time (from 1982), introduced Artificial insemination field clinic in the Clinical Studies Department, which is functional todate (2004).
- (b) Provided Ambulatory services and Herd Health services to clients of the Department of Veterinary Clinical Studies, U.Z. since July 1991 - 1999. Also conducts field teaching clinics in Reproduction for 4th and 5th year students including in-hospital practical training for both 4th and 5th year students. Introduced a field Artificial Insemination Clinic to small scale dairy farmers in two settlement areas in Zimbabwe, the University Dairy farm and also to dog breeders in Zimbabwe.

- (c) Provided referral and first opinion services to the surrounding farmers and practising veterinary surgeons at UZVTH. In this respect, new clinical services have been introduced by me, viz, Ultrasound for pregnancy diagnosis for commercial sheep farmers and dogs and cats, examination of semen for breeding soundness of all males including infertility investigations and this led to the development of an Andrology laboratory for these purposes at U.Z. Local Technical staff was trained to provide the future back-bone for this work, both locally (Zimbabwe) and later sent to Denmark for more advanced training. This laboratory is now thriving.
- (d) Client education and field-day participation in the commercial sheep reproduction seminars, the Dorper sheep farmers of Zimbabwe, who were keen to introduce AI to their flocks.
- (e) Veterinarian in charge, University Dairy Teaching Unit, University of Zimbabwe, 1997 - 1999 and,
- (f) Attending and Advisory Veterinarian on breeding problems at the University of Zimbabwe Dairy Teaching and Beef commercial farms, 1997 - 1999. Both herds were brought from very poor productivity to target (commercial) requirements within one year of appointment for which the board wrote a highly praiseworthy letter to them and the department.

8. Membership of Professional Associations

1. Member of New York Academy of Sciences - nominated and elected to this prestigious society 1996.
2. Member of American Institute of Ultrasound in Medicine
3. Chairman and Convenor, Kenya Veterinary Association's rabies control Committee 1985 - 1986. Organized and successfully supervised a National vaccination Programme on behalf of Kenya Veterinary Association.
4. Member and Veterinary advisor Vice-Chancellor's committee for Kibwezi Dry Land farming master Plan, University of Nairobi, 1989. The institution has now been elevated to an Institute of Dryland Farming.
5. Committee member and representative of department in Clinical Studies, Faculty of Veterinary Medicine University of Nairobi) at the Annual Faculty Scientific Conference Organizing Committee, 1990.
6. Head of Veterinary Reproduction and Obstetrics, Faculty of Veterinary Medicine, University of Nairobi 1987 - 1991, July.
7. Acting Chairman on several occasions, Clinical Veterinarian Studies, University of Zimbabwe.
8. Representative of Faculty of Veterinary Science, University, University of Zimbabwe, to two senate / committee (1991 - 1998) viz:
 - (i) (a) Student travel and grant Committee (1991 - 1992)
 - (b) Library - 1991 - 1998
 - (c) Faculty of Agriculture Board member (Alternate)

- (d) Member, University Farm, Teaching and research Committee, UZ 1997 - 1999.
 - (ii) Co-ordinator of several course for the Faculty of Veterinary Science UZ., namely Animal Management course for BVSc I 1991 - 1995. Animal Science Course for BSc III (Agriculture) 1991 - 1992, Research Projects.
 - (iii) Co-ordinator, all Masters degree programmes and the Masters degree Programme in Reproduction and Herd Health, 1994 – 1999, Department of Veterinary Clinical Studies, UZ.
- 9. Faculty Representative, National Task force for the risk analysis on Bovine spongiform Encephalopathy (BSE), Republic of Kenya since 2000.
- 10. Appointed by International Atomic Energy Agency Vienna to the Task force for the Harmonization of Recommended procedures for Artificial Insemination of livestock in the African continent, a booklet on these to be published by end of 2001 (Task force meeting 7th - 11th April 2001) Tanzania. A practice guideline booklet co-authored by other participants has since been published (AEA, 2003).

CURRENT RESEARCH INTEREST

1. Anoestrus and general fertility problems in beef and dairy cattle.
2. Ultrasonography in animal reproductive physiology with particular reference to scrotal sonography and uterine sonography in ruminants, small animals and the equine species. (Two papers have been published on this topic and papers produced).
3. Infertility of infectious nature in the ruminant species, particularly that due to C. fetus and T. foetus in beef and dairy cattle (several papers published on these topics).
4. The spermogram of the male of the domestic ruminants and dogs. (Several papers published and three undergraduate dissertation produced).
5. The management organizational design, problems and solutions to field Artificial Insemination programmes under the African environment (Two papers delivered on this topic).
6. Animal Health Service delivery systems for ASALS in Kenya. The papers already published and a third one under preparation (2003-2004).

PUBLICATIONS

1. Agumbah, G.J.O. (1976): Control of infectious agents exclusively transmitted by the venereal route with particular reference to *Vibrio fetus*. Dissertation for Partial fulfilment of requirements for the award of D.P.V.M., Royal Veterinary and Agricultural University, Copenhagen, Denmark.
2. Agumbah, G.J.O. (1977). Bovine genital *Campylobacteriosis* in Kenya: A field study of Biotypes and an experimental evaluation of the genital tropism of the intestinal biotype: MSc thesis, University of Nairobi.
3. Agumbah, G.J.O. (1981) Field and Laboratory Studies of Bovine genital *Campylobacteriosis* with particular reference to diagnosis. PhD Thesis, The University of Glasgow, U.K.
4. Ogaa, J. S. Agumbah, G.J.O. and Waghela, S. (1978). Isolation and characterization of *Campylobacter* biotypes in Kenya. *Wld. Congr. Bint. Mexico* pg 166 - 173.
5. Agumbah G.J.O. and Ogaa, J.S. (1979). Genital tropism and coital transmission of *C. fetus* subsp *intestinalis*. *Br. Vet. J.* 135 83 - 91.
6. Mutiga, E. R., Ogaa, J.S. and Agumbah, G.J.O. (1980). Early pregnancy diagnosis in cattle. *E. Afr. Forest. J.* 42, 431 - 434.
7. Mutiga, E.R., Ogaa J.S. and Agumbah, (1981). Dystocia in Kenyan cattle. *Mod. Vet. Pract.* 80, 111 - 113.
8. Agumbah, G.J.O. Mac-Laren, A.P.C. and Boyd, H. (1983). Development and Application of the Counterimmunoelectrophoresis (CIE) test for the immunodiagnosis of *C. fetus* infection in cattle *Br. Vet. J.* 139, 528 - 36.
9. Agumbah G.J.O., Ogaa J.S. Mutiga E.R. and Muraguri, J. (1983). Coliform mastitis in the Nairobi area of Kenya: Bacteriological types, antimicrobial sensitivity patterns and clinical problems of treatment. *Ken. Vet.* 7(1) - 20.
10. Ogaa, J. S. Agumbah, G.J.O., Patel, J.H. Kiere, S.M. and Mwangi, L. (1985). Massive obstructive urothiasis in a bull used for Artificial Insemination. *Vet. Rec.* 117, 664 - 666.

11. Agumbah, G.J.O. and MacLaren, A.P.C. (1986): Demonstration and activity of Anodal antigens of C. fetus in the CIE system. *Irish Vet. J.* 40, 24 - 29.
12. Mitema, E.S. and Agumbah, G.J.O. (1987). Choosing an intramammary antibiotic. *Vet. Med.* 87, 930 - 932.
13. Munyua, S.J.M., Mutiga, E.R., Agumbah, G.J.O., Ogaa, J.S., Gitao, C.G., Njenga, M.J., Mbogo, D. Muhuni, L.M., Nguyo, C.N., and Okila, E. (1987). The veterinary profession versus inadequate subsidies that are a constraint to the improvement of the food situation in Africa. *Proc. Tan. Vet. Assoc. Congress Vol. 5.* p 47 - 57.
14. MacLaren A.P.C. and Agumbah, G.J.O. (1988). Infertility in cattle in South-West Scotland caused by an "intestinalis. *Br. Vet. J.* 144. 29 - 44.
15. Agumbah, G.J.O. and MacLaren, A.P.C. (1989). Specificity and immunoglobulin types reactive in the C.I.E. test for the diagnosis of C fetus infection in cattle. *Acta. Veterinaria Bograde.* 39 197 - 208.
16. Munyua, S.J.M. Agumbah, G.J.O., Njenga, M.J., Kuria, K.J.N. and Kamau, J.A. (1991). Preweaning mortality in small scale and medium scale intensive piggeries in central Kenya (including Nairobi). *Ind. J. Agric. Sciences.* 61, (2) 126 - 126.
17. Ngeranwa, J. J. N., Mutiga, E.R., Agumbah, G.J.O., Gathumbi, P.K. and Munyua, W.K. (1991). The effects of experimental *Trypanosoma (trypanozoon) (brucei) Evansi* infection on fertility of male goats. *Vet. Res. Communic.* 15.
18. Munyua, S.J.M., Wahome, R.G. Mitaru, B.M., Agumbah G.J.O. and Kiptoon, J.C. (1992). Reproductive performance and wastage in small scale piggeries in Kenya. *Ken. Vet.* 93 - 95.
19. Ngeranwa, J.J.N., Gathumbi, P.K., Mutiga, E.R. and Agumbah G.J.O. (1993). Pathogenesis of *Trypanosoma Brucei evansi* in small East African goats. *Res. Vet. Sci.* 54 283 - 89.
20. Agumbah, G.J.O., Masembe, F.N. and Maribei, J.M. (1993). Ovulatory rate, fetal loss and litter size as factors limiting porcine reproductive performance in some Kenyan piggeries. *Ind. Vet. J.* 70 page 817 - 822.
21. Makoni, L.T., Ogaa, J.S. and Agumbah, G.J.O. (1994). The efficiency of an Oestrone sulphate ELISA kit to detect pregnancy in sow in zimbabwe. *Zimbabwe Veterinary Journal* 25 92) 64 - 69.
22. Agumbah, G.J.O., Odiawo, G.O., Tyrrell, D. and Ogaa, J. S. (1995). Ultrasonography to diagnose testicular lesions in an infertile Angora buck. *Irish Vet. Journal* 48: 416 - 418.
23. Agumbah, G.J.O., Tafirei, G., Mudenge, D. and Shumba, W. (1995). Testicular Ultrasonography in bucks and rams. *Indian Vet. Journal, Vol. 72,* 829 - 834.
24. Agumbah, G.J.O. and Phillipa, Chengeta (1998). Loose sperm head defect in a dorper ram. *Zim. Vet.* 27, 105 - 118.
25. Agumbah, G.J.O. (1996). Knobbed acrosome and swollen in-piece defects associated with sub fertility in a ram. *Zim. Vet. J.* 28, 6 - 15.
26. Agumbah, G.J.O., Chapwanya, A. C. and Sibanda, S. (1997). Examination of spermatozoa abnormalities on the spermogram of some breeding rams in Zimbabwe. *In Press. Zim. Vet. J.*

27. MacLaren, A.P.C. and Agumbah, G.J.O. (1980). Biotypes/serotypes of *C. fetus* associated with infertility in S.W. Scotland. Proc. Soc. General Microbil. Gt. Brand Ireland. Veterinary Bulletin. 51. Abst. 2928.
28. Agumbah, G.J.O. (1982). Companion of CIE and VMAT methods for the immunodiagnosis of *C. fetus* infection in cattle. Wld. Congr. Dis. Cattle. Amsterdam, 7 - 10th Sept.
29. Agumbah, G.J.O. (1981). The counter-current immunoelectrophoresis method in the diagnosis of *C. fetus* infection in cattle. Proceedings of the Association of veterinary teachers and research workers of Great Britain Annual Scientific Conference, April 1981, Scarborough, England.
30. Agumbah, G.J.O. and Oгаа, J.S. (1977). Pathology of reproduction in the bovine. The Upjohn seminars in reproduction, Nairobi, Kenya.
31. Agumbah, G.J.O. (1983). Vibriosis: Current Diagnostic trends. Annual Conf. Ken. Vet. Assoc. April, 1983, Nairobi.
32. Agumbah, G.J.O. (1986). Clinical and serological diagnosis of infertility in cattle due to *C. fetus* infection. Dept. of Clinical Studies Academic staff seminars, Kabete, Nairobi.
33. Agumbah, G.J.O. (1987). The repeat-breeder syndrome in cattle: A functional approach to its causes, diagnosis and clinical management. Ken. Vet. Assoc. Scientific Seminars, April, 1987, Nyeri, Kenya.
34. Munyua, S.J.M., Mutiga, E.R., Agumbah, G.J.O., Oгаа, J.S. And Mwangi, W. M. (1997). Does the improved Bull have a place? Proc. Symp. Anim. Prod. Soc. Kenya, ILRAD, Nairobi (17th - 18th July).
35. Agumbah, G.J.O. (1995): Artificial Insemination in sheep (Paper delivered to the Dopper sheep farmers Association, Zimbabwe).
36. Bwangamoi, O., Otterson, P., Lander, K., Agumbah, G.J.O., Zanamwe, G.T. and Mlambo, P. (2001). Oxalate induced intravascular co-ogulopathy in four aborted bovine fuetuses in Zimbabwe. Submitted Kenya Veterinarian.
37. Mohan, K., Brudie, B., Agumbah, G.J.O., Oгаа, J.S. and Pawandiwa, A. (1997). Phenotypes of Zimbabwe isolates of campylobacter spp other than *C. fetus* processing of the Zimbabwe Veterinary Association Congress, Triangle, September 1997.
38. Masunda, B, C, Mutisi, C., Hamudikuwanda, H. and Agumbah, G.J.O. (1999). The concentration of Faecal Progesterin during the Oestrus cycle in Nkohe cows and the effect of duration of storage of faecal samples at room temperature on faecal progesterin levels. Tropical Animal Health and Production, 31, 373 - 381.
39. Kusina, N.T., F. Tarwirei, H. Hamudi Kuwanda, G. Agumbah and J. Mukwena (2000). A Comparison of the effects of Progesterone sponges and ear implants, PGP2 ∞ and their combination on efficacy of Oestrus synchronization and fertility of Mashona goat does. Theriogenology 53 (8) 1567 – 1580.
40. Masunda, B., C. C. Mutisi, H. Hamudikuwanda and J.G.O. Agumbah (2002). The use of faecal Progesteria measurements to monitor reproductive activity in Mashona cows in a small holder farminf area in Zimbabwe. Tropical Animal Health and Production 34 (4) 309 – 319.

41. Agumbah, G.J.O. and Kiere, S. M. (2000). Alternative viable sustainable forms of delivery of Artificial Insemination (AI) services room temperature semen (RTS), technical logistical scope for its use.
42. Ms. Turner, A., Ms. Isaacks, Kakuno, O, Humphrey C. and Agumbah, G.J.O. (1999). Methods of collection and evaluation of semen in the dog. Submitted The Kenya Veterinarian.
43. Mutisi, C. and Agumbah, G.J.O. (1991). Base line survey of the ovarian activity and blood metabolites of indigenous cows in Zimbabwe. Submitted Animal Production Science.
44. A study of the sustainability of privatised community-based animal Health workers. By Rubyogo, J. C, Murithii, P.M. Agumbah, G.J.O. and Obhai, G. (2003). Submitted Tropical Animal Health and Production.
45. Community-based Animal Health Workers in Kenya. A case study of Mwingi, District, Kenya. By Rubyogo, J.C., Murithi, P.M., Agumbah, G.J.O. and Obhai G. (2003) Submitted : Tropical Animal Health and Production.
46. B. Masunda, C. Mutisi, H. Hamudikuwanda and J.G.O. Agumbah, (2002). The use of Faecal Progesterin Measurements to Monitor Reproductive Activity in Mashona Cows in a Smallholder Farming Area of Zimbabwe. 34 (4) 309-318. Submitted: Tropical Animal Health and Production.