

CARRICULUM VITAE

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BIODATA

Dr. Lawrence Mugisha is an expert in Wildlife Health and Biodiversity Conservation, EcoHealth Assessments and Livestock research, molecular diagnostics, disease management and Surveillance. He was born in Mbarara, 1975. He holds a Bachelor of Veterinary Medicine (2000), Masters of Science in Wildlife Health and Management (2004), PhD (2011) focusing molecular diagnostics of infectious diseases in great apes and Partial Research Fellow with University of Mennisota, College of Veterinary Medicine: EcoHealth Research Initiative.

He worked as Operations Director (2008-2010) and Sanctuary Manager/Veterinarian (2003-2008) for Chimpanzee Sanctuary & Wildlife Conservation Trust (CSWCT) that manages Ngamba Island Chimpanzee Sanctuary. He also worked as a veterinary extension worker for Ntungamo Local Government (2000-2003) working with Livestock programs including Plan for Modernisation of Agriculture.

He is involved in EcoHealth scientific research with major emphasis on infectious diseases at wildlife-human-Livestock interface (One Health Concept) and has published scientific papers in this field. For his scientific contribution, he won award a highly prestigious award for young scientists in 2010: **Rudolph Ippen Young Scientist Award, 2010.**

Dr Mugisha Lawrence is a Honorary Lecturer, College of Veterinary Medicine, Animal Resources and Biosecurity, Makerere University, Adjunct Lecturer, College of Veterinary Medicine, University of Mennisota, USA, Part-time Lecturer, Nelson Mandela Institute of Science and Technology, Arusha, Tanzania, Team leader for AHHESConsult (Animal-Human Health and Ecosystem Services Consult), Expert Consultant for Pan African Sanctuaries Alliance (PASA), current President of the professional body: Uganda Wildlife Veterinary Network Limited(UWVN) and Founder and Executive Director for Non-Governmental Organisation: Conservation & Ecosystem Health Alliance (CEHA) implementing EcoHealth Research, Training and Conservation in Albertine Ecosystem as well as Team Leader EcoHealth Research Group.

Details

Education:

May/2011: Doctor of Philosophy (PhD), Makerere University in collaboration with Robert Koch Institute, Germany: Molecular diagnostics of Infectious diseases of captive chimpanzees.

2005: Masters of Science of Science in Wildlife Health and Management (MSc. WHM), Makerere University

2000: Bachelor of Veterinary Medicine (BVM), Makerere University

Additional Trainings with Certificates:

15-17th Sept, 2011: Ist International Congress on Pathogens at the human-animal interface (ICOPHAI): Impact, Limitations and needs in Developing Countries, Addis Ababa, Ethiopia.

1st to 7th August, 2011: One Health: Understanding human and veterinary diseases from molecular cell biology to successful interventions. Young Biomedical/Veterinary Scientists in East Africa International Workshop, organized by Oxford University and Sokoine University.

11th to 21st Jan, 2011: University of Manitoba-Makerere University CIDA project GIS training workshop under Enhancing Rural Livelihoods through Sustainable Community Tourism

20th to 21st July, 2010: Refresher Training in Wildlife Disease Surveillance and Basic Pathology Organised by USAID-PREDICT Pillar for Emerging Pandemic Threats Program

1st May to 30th Oct, 2007 and June—August, 2009: Laboratory training in molecular and serological diagnostics of infectious diseases at Robert Koch Institute, Germany working in BSL 2.

6-10 June, 2005: Training in Spatial Analysis of GIS Data for Applied Statistics in Public Health, Nairobi, Kenya. Sponsored by the U.S. National Aeronautics and Space Administration (NASA) and National Institute of Allergy and Infectious Diseases (NIAID) and National Institute of Health.

16 June-1st August 2004: Wildlife and Ecosystem Health. Envirovet Summer Course Institute, Frolida, USA and South Africa. Sponsored by World Wildlife Fund.

Awards:

- a. International Conference Scholarship (ICS) to attend the AAZV annual meeting, USA, Kansas City Missouri Oct 23-28th 2011.
- b. ICOPHAI_VPH Biotect Travel Grant award, 15-17th Sept, 2011: 1st International Congress on Pathogens at the human-animal interface (ICOPHAI): Impact, Limitations and needs in Developing Countries
- c. ASCB SOKOINE Course Travel award: “**One Health**: understanding human and veterinary diseases from molecular cell biology to successful interventions”. 1st to 7th August, 2011
- d. **Rudolph Ippen Young Scientist Award, 2010** named after Dr. Ippen, a German researcher who helped establish disease investigation as an important discipline within the European zoo community before passing away in 2009
- e. Global Health Travel Award for Public Health in Africa (E1-2008)
- f. World Wildlife Fund to attend Envirovet Summer Course, 2004
- g. Wildlife Conservation Society, Small Grant Field Program for Veterinarians
- h. Daad In-Country Scholarship Award for MSc and PhD
- i. Compton Fellowship Award

Work experience:

- 2011 to Date: Partial Fellow and Adjunct Lecturer, College of Veterinary Medicine, University of Minnesota, Part-time Lecturer, Nelson Mandela Institute of Science and Technology, Arusha, Tanzania, Honorary Lecturer, College of Veterinary Medicine, Animal Resources and Biosecurity, Makerere University.
- 2011 To date: **Founder & Executive Director
Conservation & Ecosystem Health Alliance (CEHA)**
- Nov, 2010 to Feb, 2011: **Veterinary and Research Consultant Conservation through Public Health (CTPH)**
- April 2008 to July, 2010: **Operations Director/Veterinarian:
Chimpanzee Sanctuary & Wildlife Conservation Trust (CSWCT). www.ngambaisland.org**
- Oct 2003 – April, 2008: **Sanctuary Manager/Veterinarian, Ngamba Island Chimpanzee Sanctuary**

2000-Sept 2003:

**Veterinarian/ Community Extension advisor
Ntungamo District Local Government.**

Consultancy:

- a. Establishment of a Veterinary Health Monitoring System for Sweetwaters Chimpanzee Sanctuary 2011 part of Ol Pejeta Conservancy, Laikipia District, Kenya
- b. Wildlife health Surveillance and Research with Conservation Through Public Health 2010-2011.
- c. Involved in Current and future emerging infectious disease risks in Uganda – an expert opinion survey using modified delphi approach, 2009
- d. Assessment of primate sanctuary facilities and operations in DRC leading to recommendations for the Incorporation into PASA sanctuary membership, 2010

Expertise Service:

- a. Establishment of a breeding control program and Veterinary Health Care program for Chimfushi Wildlife Orphanage, Zambia, one of the Pan African Sanctuaries Alliance (PASA) members and facilitating at PASA workshops.
- b. Inspection of PASA Sanctuaries for Incorporation
- c. Establishment of Employee Health program in Sanctuaries.
- d. Member of National Anthrax Task Force
- e. Established and implemented an Environmental Management System (EMS) with ISO 14000:2004 certification.

Conference Presentations

- a. Presentation: Pan African Sanctuaries Alliance (PASA) Veterinary Healthcare Workshop, 14-16th Nov, 2011, Entebbe, Uganda
- b. Manuscript publication and Presentation: International Conference Scholarship (ICS) to attend the AAZV annual meeting, USA, Kansas City Missouri Oct 23-28th 2011.
- c. Abstract and presentation: 1st International Congress on Pathogens at the human-animal interface (ICOPHAI): Impact, Limitations and needs in Developing Countries, 15-17th Sept, 2011
- d. Two Scientific Presentations at International Primatological Society Congress, 2006
- e. Wildlife Disease Conference, 2007: Abstract Acceptance
- f. Compton Fellows Workshop (Environment and Sustainable Development. Influencing Policy decisions and presentation to policy makers Policy simulation: scenarios. Research findings and presentation)

Workshop organization

- a. Chairperson Scientific Committee for Uganda Veterinary Association Scientific Symposium: 'One Health' for Better Disease Control and Improved Livelihoods: 1 -2nd Dec, 2011
- b. Population, Health and Environment (PHE) advocacy workshop organized by Conservation Through Public Health at Serena Hotel, Kampala on 3rd November 2010
- c. Inception Workshop for *Developing an Experimental Methodology for Testing the Effectiveness of Payments for Ecosystem Services to Enhance Conservation in Productive Landscapes in Uganda*. GEF/UNEPI grant
Project number: GFL: 2328-2716PMS: T.B.D
- d. Chimpanzee Conservation Workshop held in July, 2007 in Uganda.
- e. Co-organiser of the Great Ape Health Workshop, 2009 held in Uganda.

Media Presentation

Featured on several international / national documentaries in different countries conveying conservation messages to save endangered chimpanzees and other great apes. I have video clip on care of chimpanzees and conservation on Envirovet Networking Webumentary (www.envirovet.org), WWF: EFN-Network (<http://www.efn-grantee-network.blogspot.com>), www.youtube.com and Links that has been viewed and signed by more than 2000 people in one year. Featuring in a recent documentary with BBC and Worldwide Veterinary Services in on animal welfare. Several TV presentations of Local TV networks especially in 2010 campaign to plant 5 million trees. Initiated a National media Campaign of Tree Planting to restore degraded habitats 2010 featuring on both Radio and Tv talk shows.

Membership of professional bodies

- Founder Member, and President Uganda Wildlife Veterinary Network Limited
- Member of Uganda Veterinary Association
- Member American Association of Zoo Veterinarians
- Member of Poverty and Conservation Learning Group
- African PHE Network

Publications

1. Frieder Schaumburg¹, **Lawrence Mugisha**², Bruce Peck⁴, Karsten Becker¹, Thomas R Gillespie^{5,6}, Georg Peters¹, Fabian H. Leendertz⁷ (2012). Drug-Resistant Human *Staphylococcus aureus* in Sanctuary Apes Pose a Threat to Endangered Wild Ape Populations. *Submitted to Science*.
2. Javier Millán^{1*}, Andrea D. Chirife¹, Gladys Kalema-Zikusoka², Oscar Cabezón¹, Jesús Muro^{2, 3}, Ignasi Marco¹, Florence Cliquet⁴, Luis León-Vizcaíno⁵, Marine Wasniewski⁴, Sonia Almería^{6,7}, **Lawrence Mugisha**^{8,9} (2012). Pathogens Threatening Human, Domestic Animal, and Wildlife Health in Three National Parks of South Western Uganda: a Serological Survey in Dogs. *PLoS Pathogen*, *Submitted*.
3. Howell^a, **L. Mugisha**^b, J. E. Davies^a, E. J. LaCourse^a, J. Claridge^d, D.J.L. Williams^d, L. Kelly-Hope^a, M. Betson^a, N.B. Kabatereine^e, J.R. Stothard^{a,*} (2012). Epidemiology of bovine fasciolosis on Mount Elgon Conservation Area, Uganda: parasitological and malacological surveys conducted at increasing altitude. *Trends in Parasitology*, *Submitted*.
4. Nizeyi, J.B.^{1,2*}, Nabambejja, S², Mugisha, L^{2,3} (2012). Risk assessment of human behaviours that may impact on the health of the Mountain Gorillas around Bwindi Impenetrable National Park, Western Uganda. *Ajabs*, *Submitted*.
5. Gustafsson, E.; Saint Jalme, M.; Kamoga, D.; **Mugisha, L.**; Snounou, G.; Bomsel, M.-C.; Krief, S.(2012) “Evidence for genetic and social influence on discrimination towards palatability of novel natural foods in chimpanzees.” *In review in PloS On*
6. Standley CJ, Mugisha L, Dobson AP, Stothard JR. (2012). Zoonotic schistosomiasis in non-human primates: past, present and future activities at the human–wildlife interface in Africa. *J Helminthol.* : 1-10
7. Wevers, D; Metzger, S; Babweteera, F; Bieberbach, M; Boesch, C; Cameron, K; Couacy-Hymann, E; Cranfield, M; Gray, K; Harris, L; e Head, J; Jeffery, K; KnauF, S; Lankester, F; Siv Aina, L; Lonsdorf, E; **Mugisha, L**; Nitsche, A; Reed P; Robbins, M; Travis, D; Zommers, Z; Leendertz, F; Ehlers, B. (2011): Novel adenoviruses in wild primates: high genetic diversity and evidence for zoonotic transmissions. *Journal of Virology*, 85: 10774-10784
8. **Lawrence Mugisha**, BVM, MSc^{1,2*}, Claudia Kücherer, PhD³, Heinz Ellerbrok, PhD³, Sandra Junglen, PhD³, John Opuda-Asibo, PhD², Olobo O. Joseph, PhD², Georg Pauli, PhD³, Bernhard Ehlers, PhD³, Fabian H. Leendertz, DVM, PhD³ (2011). **Multiple Viral Infections in Confiscated Wild Born Semi-Captive Chimpanzees (*Pan Troglodytes Schweinfurthii*) in a Sanctuary in Uganda: Implications for Sanctuary Management and Conservation.** *Proceedings American Association of Zoo Veterinarians Conference 2011*: 190-195.

9. **Mugisha, L.**, Kaiser, M., C., Ellerbrok, H., Opunda-Asibo, J., Joseph, O.O., Pauli, G., Leendertz, H.F (2011). The "original" Hepatitis B Virus of Eastern chimpanzees (*Pan troglodytes schweinfurthii*). *Virus Res*, 155(1): 372-375.
10. Anne Fischer; Kay Pruefer; Jeffrey M. Good; Michel Halbwax; Victor Wiebe; Claudine André; Rebeca Atencia; **Lawrence Mugisha**; Susan E. Ptak; Svante Paabo. 2011. "Bonobos Fall within the Genomic Variation of Chimpanzees". PLoS ONE 6(6)e21605.doi:10.1371/journal.pone.0021605
11. Standley, C.J., **Mugisha, L.**, Verweij, J.J., Adriko, M., Arainitwe, M., Rowel, C., Atuhaire, A., Betson, M., Hobbs, E., van Tulleken, CR., Kane, RA., van Leishout, L., Ajarova, L., Kabatereine, NB., Stothard, JR. (2011). Confirmed infection with intestinal schistosomiasis in semi-captive wild born chimpanzees on Ngamba island, Uganda. *Vector-borne and zoonotic diseases,II*: DOI: 10.1089/vbz.2010.0156
12. Anna Preis; **Lawrence Mugisha**; Barbara Hauser; Anja Weltring; Tobias Deschner. 2011. Androgen and androgen metabolite levels in serum and urine of east African chimpanzees (*Pan troglodytes schweinfurthii*). Comparison of EIA and LC-MS analyses. *General & Comparative Endocrinology* 170 (1): 92-98.
13. Hauser, B., **Mugisha, L.**, Preis, A., Deschner (2011). LC-MS analysis of androgen metabolites in serum and urine from east African chimpanzees (*Pan troglodytes schweinfurthii*). *General and Comparative Endocrinology* 170: 92-98.
14. **Mugisha, L.**, Leendertz, H.F., Opunda-Asibo, J., Ehlers, B. (2010). A novel herpesvirus in the sanctuary chimpanzees on Ngamba Island in Uganda. *J med Primatol* 39, 71-74.
15. **Mugisha, L.**, Pauli, G., Opunda-Asibo, J., Joseph, O.O., Leendertz, H.F., Diedrich, S. (2010). Evaluation of poliovirus antibody titers in orally vaccinated semi-captive chimpanzees in Uganda. *J Med Primatol*.39, 123-128.
16. **Mugisha, L.**, Kucherer, C., Ellerbrok, H., Opunda-Asibo, J., Joseph, O.O., Pauli, G., Leendertz, H.F (2010). Retroviruses in wild-born semi-captive East African sanctuary chimpanzees (*Pan troglodytes schweinfurthii*). *The Open Veterinary Science Journal*, 4, 6-10.
17. Krief S, Escalante AA, Pacheco MA, **Mugisha L**, Andre´ C, et al. (2010). Diversity of Malaria parasites in African Apes and the Origin of plasmodium falciparum from bonobos. *PLoS Pathog* 6(2): e1000765. doi:10.1371/journal.ppat.1000765
18. Hauser, B., **Mugisha, L.**, Preis, A., Deschner, T. (2010). LC-MS analysis of androgen metabolites in serum and urine from east African chimpanzees (*Pan troglodytes schweinfurthii*). *Gen. Comp. Endocrinol.* doi:10.1016/j.ygcen.2010.09.012
19. Leendertz FH; Deckers M; Schempp W; Lankester F; Boesch C; **Mugisha L**; Dolan A.; Gatherer D; McGeoch DJ; Ehlers B. 2009: Novel cytomegaloviruses in free-ranging and captive great apes: phylogenetic

evidence of bidirectional horizontal transmission. *J.General Virology* **90**: 2386-2394.

20. **Mugisha, L.**, Unwin, S., Van Zijll Langhout , M. 2009. Tuberculosis and its Control. In: PASA Primate Veterinary Healthcare Manual 2nd Edition, 2009
21. Lynne Gaffikin (MPH, DrPH); Felicia Nutter (PhD, DVM) and Lawrence **Mugisha** (BVM, MSc.WHM), 2010: Employee health programs for conservation field and sanctuary workers as a great ape preventive health strategy. IUCN guidelines under draft.
22. Yoshan Moodley, Bodo Linz , Robert Bond , Martin Nieuwoudt , Himla Soodyall , Carina Schlebusch , Steffi Bernhöft , James Hale , Sebastian Suerbaum , **Lawrence Mugisha** , Schalk van der Merwe , Mark Achtman. Age of the association between *Helicobacter pylori* and man. Submitted to PNAS, 2010
23. **Mugisha, L.**, Bwangamoi-Okot., Cranfield, M.R., Graczyk, T.K., Dranzoa C, Gaffikin, C. (2010). Cross-transmission of gastrointestinal helminths and protozoan parasites between habituated chimpanzees (*Pan troglodytes schweinfurthii*) with humans in Budongo Forest Reserve, Uganda. *Afri.J.Anim.Biomed.Sci.* **5**(3): 60-65.
24. Nizeyi, JB., Mbabazi, R., Cranfield, R.M., Byarugaba, D.K., Ssebide, B., Gilard, K., **Mugisha, L.** (2010). Tourists willingness to update vaccination status as a prerequisite for visiting free-ranging habituated great apes in Uganda. *Afri.J.Anim.Biomed.Sci.* **5**(3): 66-78.
25. **L., Mugisha.**^{1*}, Bwangamoi-Okot.², M.R. Cranfield^{3,4}, T.K. Graczyk⁵, C. Dranzoa ¹, L. Gaffikin⁶ *Angiostrongylus cantonesis* and other parasites infections of Rodents of Budongo Forest Reserve, Uganda. Submitted AJABS 2010

REFEREES

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