

Curriculum vitae

Personal information

Name: Dr. Daniel Mutiso Nthiwa
Address: P.O Box 650 Machakos 90100, Kenya
Language: English, Kiswahili
Religion: Christian
Email: nthiwa.daniel@embuni.ac.ke
Marital status: Married
Nationality: Kenyan
Date of birth: 10th September, 1986
Gender: Male

Research interests

1. Epidemiology and ecology of infectious diseases in marginalized and wildlife-livestock interface areas
2. Modelling of the transmission dynamics of infectious diseases

Education and training

Sept. 2015-2020: **Ph.D in Applied Microbiology (Epidemiology option)**
Thesis title: Epidemiology of foot-and-mouth disease (FMD), brucellosis and leptospirosis at a wildlife-livestock interface area in Maasai Mara, Kenya
Institution: International Livestock Research Institute (ILRI) and the University of Embu, Kenya

2010-2013: **M.Sc. in Applied Parasitology**
Thesis title: Trypanosoma infection rates in *Glossina* species in Mtito Andei Division, Makeni County, Kenya
Institution: University of Nairobi, Kenya

2006-2010: **B.Sc. Degree in Biology (First Class Honours)**
Institution: University of Nairobi, Kenya

2001-2004: **Kenya Certificate of Secondary Education (K.C.S.E)**
Institution: Kabaa High School (Mean grade of A- minus)

1993-2000: **Kenya Certificate of Primary Education (K.C.P.E)**
Institution: Kikata Primary School, Kenya (529/700 marks).

Short courses

1. Systematic literature review. Department of Animal and Human Health (AHH), ILRI, Kenya, 5 – 6th May, 2020.
2. Systematic reviews and Meta-analysis, and reference management using Mendeley, Department of Animal and Human Health (AHH), ILRI, Kenya, 24 – 26th July, 2019.
3. Dynamical modelling of infectious diseases by DST-NRF Centre for excellence in epidemiological modelling and analysis (SACEMA), Stellenbosch University, South Africa, 16th-22nd December, 2018.
4. Causal thinking, questionnaire design and epidemiological data analysis by Prof. Ian Dohoo (Prof. Emeritus, Prince Edward Island in Canada) at the Panviman Resort in Chiang Mai, Thailand, 1st - 3rd November, 2018.
5. Questionnaire design and measuring of scales course by Prof. Ian Dohoo at the Panviman Resort in Chiang Mai, Thailand, 5-10th November, 2018.
6. Introduction to R programming environment and network analysis, ILRI, 5th March, 2018.
7. Communicating Research findings to non-experts, ILRI, Kenya, 10th July, 2018.
8. Collecting and managing epidemiologic data, Department of Animal and Human Health (AHH), ILRI, trained by Prof. Ian Dohoo on 30th October – 1st November, 2017.
9. 1st International Interdisciplinary short course on ecological modelling using Agent-Based Models (ABMs) at the Nelson Mandela African Institution of Science and Technology, Arusha in Tanzania; organized by the Rhodes University, South Africa and Humburg University of Applied Sciences, Germany, 8 – 10th March, 2017.
10. Scientific communication and publishing by the Training Centre in Communication (TCC) and the German Academic Exchange Service (DAAD), Nairobi, 9 -14th October, 2016.
11. Pedagogy and Andragogy (teaching and learning in higher education), University of Embu, 1st-3rd September, 2014.

Work experience

11th Dec 2020 – present Lecturer, Department of Biological Sciences, University of Embu, Kenya.

Sept. 2014 – 11th Dec 2020 Tutorial fellow, Department of Biological Sciences, University of Embu, Kenya.

Sept. 2015 – April 2019: Ph.D. Graduate Fellow, Program - Animal and Human Health (AHH), ILRI, Kenya.

Personal skills and competencies

- Able to adapt to multicultural setups gained as a Ph.D graduate fellow at ILRI.
- Experience in research project management and implementation gained at ILRI.
- Able to carry out several activities and meet deadlines.

Technical skills

- Good knowledge of various laboratory diagnostic techniques including Enzyme-linked immune assays (ELISAs) and molecular tests.
- Good data analysis skills with good command of statistical software (R and SPSS).
- Skills in participatory epidemiology.
- Excellent skills in reference management using Endnote and Mendeley.

Awards

1. Awarded ZAR 15, 000 by the DST-NRF Centre for Excellence in Epidemiological Modelling and Analysis (SACEMA) as a partial scholarship to attend a course on dynamical modelling of infectious diseases at Stellenbosch University, South Africa, 16th -22nd Dec. 2018.
2. German Academic Exchange Services (DAAD) and the International Livestock Research Institute (ILRI) joint Ph.D Graduate fellowship, Sep. 2015-April 2019.
3. Staff development scholarship to pursue M.Sc. degree by the University of Nairobi, 2010-2012.
4. Gandhi Smarak Nidhi Trustee Fund Prize for being the best final year student in the School of Biological Sciences (class of 2006-2010), University of Nairobi.

Selected conferences/seminars

1. Njeru, J., **Nthiwa, D.**, Akoko, J., Oyas, H., and Bett, B. 2020. Incidence of *Brucella* spp. in various livestock species raised under the pastoral production system in Isiolo County, Kenya. **Oral presentation** at the 101st Conference of Research Workers in Animal Diseases (CRWAD). Virtual conference, 5-8th December, 2020.
2. **Nthiwa, D.**, Alonso, S., Odongo, D., Kenya, E. and Bett, B. 2019. Seroprevalence of zoonotic pathogens at the wildlife-livestock interface area in Maasai Mara, Kenya. **Oral presentation** at the 2nd annual postgraduate seminar, University of Embu, 20th June 2019. Book of abstracts page 15/56.
3. **Nthiwa, D.**, Alonso, S., Odongo, D., Kenya, E. and Bett, B. 2018. Sero-epidemiological investigation of foot and mouth disease in cattle at the livestock-wildlife interface in Maasai Mara, Kenya. **Poster presentation** at the 15th International Symposium of Veterinary Epidemiology and Ecology, Chiang Mai, Thailand, 12-16 November 2018.
4. **Nthiwa, D.**, Alonso, S., Odongo, D., Kenya, E. and Bett, B. 2017. Sero-epidemiological investigation of foot and mouth disease in cattle at the livestock-wildlife interface in Maasai Mara, Kenya. **Poster presentation** at the 5th Medical and Veterinary Virus Research Symposium (MVRS) at the Bomas Hotel, Nairobi, Kenya, 7-8th December 2017.
5. **Nthiwa, D.**, Alonso, S., Odongo, D., Kenya, E. and Bett, B. 2017. Participatory epidemiology of Foot and Mouth Disease amongst the Maasai pastoralists living in wildlife-livestock interfaces, Maasai Mara, Kenya. **Oral presentation** at the 1st annual postgraduate seminar, University of Embu, 25^h May 2017. Book of abstracts page 22/30.

Publications in peer reviewed journals

1. Akoko, J. M., Pelle, R., Lukumbagire, A. S., Machuka, E. M., **Nthiwa, D.**, Mathew, C., Fèvre, E. M., Bett, B., Cook, E. A. J., Othero, D., Bonfoh, B., Kazwala, R.R., Shirima, G., Schelling, E., Halliday, Jo.E.B., Ouma, C. (2021). Molecular epidemiology of *Brucella* species in mixed livestock-human ecosystems in Kenya. *Nature Scientific Reports*, 11(1), 1-11. <https://doi.org/10.1038/s41598-021-88327-z>
2. Muturi, M., Akoko, J., **Nthiwa, D.**, Chege, B., Nyamota, R., Mutiiria, M., Maina, J., Thumbi, S.M., Nyamai, M., Kahariri, S., Sitawa, R., Kimutai, J., Kuria, W., Mwatondo, A and Bett, B. (2021). Serological evidence of single and mixed infections of Rift Valley fever virus, *Brucella* spp. and *Coxiella burnetii* in dromedary camels in Kenya. *PLoS Neglected Tropical Diseases*, 15(3), p.e0009275. <https://doi.org/10.1371/journal.pntd.0009275>
3. **Nthiwa, D.**, Bett, B., Odongo, D., Kenya, E., Wainaina, M., Grazioli, S., Foglia, E., Brocchi, E. and Alonso, S. (2020). Seroprevalence of foot-and-mouth disease virus in cattle herds raised in Maasai Mara ecosystem in Kenya. *Preventive Veterinary Medicine*. <https://doi.org/10.1016/j.prevetmed.2020.104929>
4. **Nthiwa, D. (PhD Thesis - 2020):** Epidemiology of foot-and-mouth disease (FMD), brucellosis and leptospirosis at a wildlife-livestock interface area in Maasai Mara, Kenya. <http://repository.embuni.ac.ke/handle/embuni/3745>
5. **Nthiwa, D.**, Alonso, S., Odongo, D., Kenya, E. & Bett, B. (2019). Zoonotic Pathogen Seroprevalence in Cattle in a Wildlife–Livestock Interface, Kenya. *EcoHealth*, 16 (4); 712-725. <https://doi.org/10.1007/s10393-019-01453-z>
6. **Nthiwa, D.**, Alonso, S., Odongo, D., Kenya, E., and Bett, B. (2019). A participatory epidemiological study of major cattle diseases amongst Maasai pastoralists living in wildlife-livestock interfaces in Maasai Mara, Kenya. *Tropical Animal Health and Production*, 2019: 51 (5): 1097-1103). <https://doi.org/10.1007/s11250-018-01790-1>
7. Enström, S., **Nthiwa, D.**, Bett, B., Karlsson, A., Alonso, S., and Lindahl, J.F., (2017). *Brucella* seroprevalence in cattle near a wildlife reserve in Kenya. *BMC Research Notes* 10, 615. <https://doi.org/10.1186/s13104-017-2941-x>
8. **Nthiwa, D.M.**, Odongo, D.O., Ochanda, H., Khamadi, S., and Gichimu, B.M. (2015). Trypanosoma Infection Rates in Glossina Species in Mtito Andei Division, Makueni County, Kenya. *Journal of Parasitology Research*. <http://dx.doi.org/10.1155/2015/607432>

Book chapter(s)

9. Bett, B., Ngwili, N., **Nthiwa, D.**, and Alonso, S. (2019). Association between land use change and exposure to zoonotic pathogens - Evidence from selected case studies in Africa. Reference Module in Food Science. Encyclopedia of Food Security and Sustainability. Vol. 3, 2019. Pages 463-468. <https://doi.org/10.1016/B978-0-08-100596-5.21573-4>

Referees

1. Prof. Eucharia Kenya (Deputy Vice Chancellor, PAF)
University of Embu
P.O BOX 6-60,000, Embu, Kenya
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2. Dr. Bernard Bett
Senior epidemiologist, ILRI, Kenya
P. O. Box 30709-00100, Nairobi
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3. Dr. Silvia Alonso
Senior epidemiologist, ILRI, Ethiopia.
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4. Dr. David Odongo
University of Nairobi
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