

## Micky M. Mwamuye - CV

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	(Work) <a href="mailto:mmwamuye@anu.ac.ke">mmwamuye@anu.ac.ke</a>	
PROFILE	<b>Date of Birth:</b> 24 <sup>th</sup> January, 1988	
	<b>Marital Status:</b> Married, Father to one son.	
	<b>Religion:</b> Christian.	
ACADEMIC TRAINING	<b>Freie Universität-Berlin, Germany.</b>	April 2018 – May 2021.
	<b>Dahlem Research School of Biomedical Sciences,</b>	
	Doctor of Philosophy (PhD) – Biomedical Sciences.	
	<b>Thesis: Delimiting <i>Theileria parva</i> strain diversity towards targeted and unified approaches in the control of <i>T. parva</i> cattle infections.</b>	
	<b>Advisors:</b> Prof. Dr. Ard Nijhof and Prof. Dr. Peter-Henning Clausen.	
	<b>University of Nairobi, Kenya.</b>	October 2012 – September 2015.
	School of Biological Sciences,	
	Master of Science (MSc) – Genetics.	
	<b>Thesis: A Surveillance Study on Tick and Tick-Borne Pathogen diversity in Shimba Hills National Reserve, Kenya.</b>	
	<b>Supervisors:</b> Dr. David Odongo and Dr. Jandowe Villinger.	
	<b>University of Nairobi, Kenya.</b>	October 2007 – September 2011.
	School of Biological Sciences,	
	Bachelor of Science (Microbiology & Biotechnology – 1st Class Honours).	
	<b>Dissertation:</b> Screening for Antifungal and antibacterial activities of soil bacteria isolates from a Kenyan Subtropical forest soil.	
	<b>Supervisor:</b> Dr. Maina Wagacha.	
OTHER TRAINING	<b>Yokohama National University, Japan.</b>	October 2010 – February 2011.
	Graduate School of Environmental and Information Sciences,	
	Certificate of International Environmental Leadership.	
	<b>Project: Sustainable Marine and Coastal Resource utilization for Economic Development and Biodiversity Conservation on the Kenyan Coast</b>	

WORK  
EXPERIENCE

**Mabati Technical Training Institute, Mariakani.** January 2006 - July 2006.  
Certificates in Microsoft Packages, Computer Maintenance & Networking.

**Africa Nazarene University, Nairobi, Kenya.**

**Adjunct Lecturer** September 2021 – Current

Teaching in the department of Environment and Natural Resources Management.

**Institute of Parasitology & Tropical Veterinary Medicine (FU-Berlin),  
Germany.**

**Doctoral researcher** April 2018 – September 2021

My research focused on vaccine ‘breakthroughs’ against cattle East Coast fever in wildlife-livestock interface areas of Kenya and Tanzania. My project is embedded within a Germany research foundation (DFG) funded collaborative research project between the University of Nairobi and the Freie Universitaet-Berlin on ‘Molecular Epidemiology network for promotion and support of delivery of live vaccines against *Theileria parva* and *Theileria annulata* infection in Eastern and Northern Africa’. Apart from my laboratory research, I was actively engaged with the project partners and different livestock stakeholders in different settings including pastoralists and small-scale farmers on several field research excursions in both Kenya and Tanzania.

**Pwani University, Kilifi, Kenya**

**Part-time Lecturer** January 2016 – September 2017.

Taught and examined Zoology, Botany and Biochemistry students on Microbiology, Molecular Biology and Genetics courses as well as other assigned departmental duties.

**International Centre of insect physiology and Ecology (icipe), Nairobi,  
Kenya.**

**Graduate research student** September 2013 – December 2015.

Worked on my M. Sc thesis project entitled “A surveillance study on Tick Biodiversity and Tick-borne pathogens in Shimba Hills National Reserve, Kenya”. I was able to systematically describe the tick biodiversity and the

diversity of tick-borne pathogens circulating within Kenya's Shimba hills national reserve ecosystem. Key outcomes of this study are discovery of novel tick-borne pathogens and tick-pathogen relationships.

**International Centre of insect physiology and Ecology (icipe), Nairobi, Kenya.**

**Research trainee**

February 2012 – August 2012.

Worked in a biodiversity program in which I investigated the diversity of bacterial endosymbionts in sugarcane stem-borers with implications for the control of the sugarcane pest.

**Kenya Marine and Fisheries Research Institute, Mombasa, Kenya.**

**Research trainee**

August 2009 – October 2009.

I worked on a Western Indian Ocean Marine Science Association (WIOMSA) funded project, 'Distribution of pathogenic *Vibrio cholerae* strains in aquatic environments in coastal areas of East Africa: Implication to cholera outbreaks and control'. I was tasked with sample and data analyses to determine microbiological quality of ground and sea water in relation to public health and safety.

**Veterinary Investigation Laboratories (VIL), Mariakani, Kenya.**

**Laboratory trainee**

September 2008 – October 2008.

I carried out routine parasitological, microbiological and serological diagnostic tests as directed by the Veterinary officer in-charge.

## SHORT COURSES

**Ethical and legal aspects of animal experimentation and 3R approaches|**

Berlin-Brandenburg 3R Spring School. March 24 - March 26, 2021.

**Project Management Tools for Complex Research Projects|** Dahlem Research School, FU-Berlin. June 18 – June 25, 2020.

**Introduction to Biorisk management training course |** icipe, Duduville campus, Nairobi-Kenya. 23rd – 25th September, 2013.

**Ecological Niche Modelling training |** icipe, Duduville campus, Nairobi-Kenya. 23 – 26 July 2013.

## AWARDS & RECOGNITION

1. The Sinnecker-Kunz Award for early career researchers (ECRs) – Awarded during the 14th International Symposium on Ticks and Tick-borne Diseases, 24–26 March 2021.

2. Kenya-Germany Scholarship Award (DAAD-NRF) to pursue doctoral research in Germany- 2017
3. ProMED emerging infectious disease award to attend and present in the 17th International Congress on Infectious Diseases, Hyderabad – India, March – 2016.
4. Young Researcher Award - Emerging Research Talent, Awarded during the 2015 UNESCO-Merck African Research Summit, Geneva – Switzerland.
5. UNESCO-Merck African Research Summit travel fellowship to attend 2015 research summit, Geneva – Switzerland.
6. Dissertation Research Internship Program scholarship – Awarded by the International Centre of Insect Physiology & Ecology (icipe) to undertake Msc thesis research (2013-2015).
7. University of Nairobi MSc scholarship to cover tuition fee (2012-2014).
8. A six months scholarship internship grant by the Consortium of National Health Research, Kenya, tenable at the International centre of insect physiology & ecology – icipe (February – August 2012).

## PUBLICATIONS

1. **Mwamuye M M**, Obara I, Elati K, Odongo D, Bakheit M A, Jongejan F Nijhof A M (2020): Unique Mitochondrial Single Nucleotide Polymorphisms Demonstrate Resolution Potential to Discriminate *Theileria parva* Vaccine and Buffalo-Derived Strains. *Life*, 10(12):334. <https://doi.org/3390/life10120334>
2. **Mwamuye M M**, Odongo D, Kazungu Y, Kindoro F, Gwakisa P, Bishop R P, Nijhof A M, Obara I (2020): Variant analysis of the sporozoite surface antigen gene reveals that asymptomatic cattle from wildlife-livestock interface areas in northern Tanzania harbour buffalo-derived *T. parva*. *Parasitol Res*, 119, 3817–3828. <https://doi.org/10.1007/s00436-020-06902-1>
3. Bishop R P, Odongo D, Ahmed J, **Mwamuye M**, Fry L M, Knowles D P, Nanteza A, Lubega G, Gwakisa P, Clausen P H, Obara I (2020): A review of recent research on *Theileria parva*: Implications for the infection and treatment vaccination method for control of East Coast fever. *Transbound Emerg Dis*, 67 (S1): 56– 67. <https://doi.org/10.1111/tbed.13325>
4. **Mwamuye M M**, Kariuki E, Omondi D, Kabii J, Masiga D Villinger J (2017): Novel Rickettsia and emergent tick-borne pathogens: A molecular

survey of ticks and tick-borne pathogens in Shimba Hills National Reserve, Kenya. Ticks Tick Borne Dis, 8(2) 208-218.  
<https://doi.org/10.1016/j.ttbdis.2016.09.002>

5. Omondi D, Masiga D, Fielding B C, Kariuki E, Ajamma Y, **Mwamuye M M**, Ouso D O Villinger J (2017): Molecular detection of tick-borne pathogens in ticks from livestock and reptiles along the shores and adjacent islands of Lakes Baringo and Victoria, Kenya. Front vet sci, 4, 73.  
<https://doi.org/10.3389/fvets.2017.00073>

## PRESENTATIONS

1. **Mwamuye M M**, Obara I, Elati K, Odongo D, Bakheit M A, Jongejan F Nijhof A M (2020): Mitogenome Single Nucleotide Polymorphisms distinguish between buffalo and cattle transmissible *Theileria parva* strains. 14th International Symposium on Ticks and Tick-borne Diseases, 24–26 March 2021. Recorded video presentation abstract.
2. **Mwamuye M M**, Odongo D, Kazungu Y, Kindoro F, Gwakisa P, Bishop R P, Nijhof AM, Obara I (2021): Sporozoite surface antigen (*p67*) gene analysis reveals a rare buffalo-derived *T. parva* allele in asymptomatic cattle from wildlife-livestock interface areas in northern Tanzania. 29th Annual Meeting of the German Society for Parasitology, 15-17 March 2021. Oral presentation abstract 0234.
3. **Mwamuye M M**, I Obara, Odongo D, Gwakisa P, Clausen P H, Nijhof A M, (2020): Evidence for diversifying selection within CD8+ T cell epitopes of the *Theileria parva* Tp2 antigen gene: Implications for the development of *T. parva* subunit vaccines. Süddeutscher Zeckenkongress, 02-04 März 2020. Oral presentation abstract 19.
4. 1st Infectious disease symposium on Antimicrobial Use and Resistance in Eastern Africa: 18th -19th June 2015, Nairobi Kenya. Oral presentation abstract.

## REVIEWER

Elsevier Ticks and Tick-borne diseases journal 2016

South African Medical Research Council grant proposals 2016

## LEADERSHIP & SERVICE

- Berlin University Alliance Career day Organizing Team – Member (2021).
- CrossWay International Baptist Church, Berlin – Leader of Security team.

- Independent Elections and Boundary Commission (IEBC) – Presiding Officer Gotani Polling Station, Kilifi County (2017).
- ACK St’ Peter’s Mariakani, Kilifi. Youth Chairman, 2016-17
- ACK St’ Gertrude’s Kasarani, Nairobi. Youth Chairman, 2012-2014
- Chiromo Campus Christian Union - Chairman 2010/11
- Chiromo Campus Christian Union – Chief Instrumentalist 2009/10
- Kenya National Population Census – Enumerator (2008).

## REFEREES

1. Prof. Dr. Ard Nijhof,  
Freie Universität-Berlin,  
Institute of Parasitology and Tropical Veterinary Medicine,  
Robert-von-Ostertag-Str. 7-13,  
14163 Berlin, Germany.  
[ArdMenzo.Nijhof@fu-berlin.de](mailto:ArdMenzo.Nijhof@fu-berlin.de)
2. Dr. David Odongo,  
School of Biological Sciences,  
University of Nairobi,  
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Nairobi.  
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3. Pastor Martin Schmill,  
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