



## Dr. MARIO KOLLENBERG

born 24<sup>th</sup> August 1981 in Neindorf,  
Germany,  
married, one child

*"Natural scientist with  
ambitious, reliable  
and multilateral  
characteristics."*

## PROFESSIONAL EXPERIENCE

06/2025 – TO DATE

**Member** of the team to revise the Examination Rules and Regulations of MMUST

10/2024 – TO DATE

**Development and Execution** of the Workshop and Short Course Evolution and Biodiversity, SONAS, MMUST

01/2024 – TO DATE

**Senior Lecturer** at Masinde Muliro University of Science and Technology (MMUST) in the Department of Biological Sciences in Kakamega, Kenya

09/2016 – TO DATE

**Examination Coordinator** of the Department of Biological Sciences, MMUST

08/2013 – TO DATE

**Tuition** of Education Science students and Science students in the School of Education and School of Agriculture, Veterinary Sciences & Technology, MMUST

**Development and review** of academic / scientific programmes for the Department of Biological Sciences, MMUST

**Supervisor and Examiner** of MSc and PhD students

**Acting Chairman** of the Department of Biological Sciences, occasionally starting at 02/2021, MMUST

06/2022 – 08/2025

**Developer and Producer** of MMUST YOGHURT and MMUST CHEESE

**Mediator** for the development of cooperation between MMUST, the Kenyan NGO Agrokenya, the Technische Fachhochschule Brandenburg (FH Brandenburg, Germany) and the Magdeburg-Stendal University of Applied Sciences (HS Magdeburg, Germany)

**Member of the Steering Committee** to spearhead the applications for loans from French African Development Agency (AFD)

05/2014 – 08/2014

**Scientific Docent** - Guest lectures and part time appointment as scientific lecturer at Jaramogi Oginga Odinga University of Science and Technology (JOOUST, Department of Biological Sciences) in Bondo, Kenya

08/2013 – 12/2023

**Lecturer** at Masinde Muliro University of Science and Technology (MMUST) in the Department of Biological Sciences in Kakamega, Kenya

05/2013 – 07/2013

**Scientific employee** at Helmholtz Center for Infection Research (HZI), Department Microbial Communication

# WORKSHOPS AND SEMINARS

08/2025

Workshop: Development of University Short Courses

06/2023

Workshop: Grant Proposal Writing

06/2022

Seminar: Advantages and Challenges of Real-time PCR, MMUST, Kenya

09/2021

Workshop: Embracing multidisciplinary research and innovation in the intervention of societal problems, MMUST, Kenya

05/2020

Seminar: The Ordovician–Silurian Extinction Events, MMUST, Kenya

01/2020

Workshop: Catalysis, Biomass Gasification and Bio-oils Production, Technische Hochschule Brandenburg, Germany; MMUST, Kenya

06/2019

Workshop: ABNO Unisol - ERP advanced software training, MMUST, Kenya

08/2018

Workshop: Introduction to 3-D Printing and Application, provided by Prof. Dr. Martin Kraska and Mrs. Lisa Jakobi, FH Brandenburg University of Applied Sciences as part of the DAAD funded project ProUniEdu-WeK (Practice-oriented University Education in Western Kenya), FH Brandenburg, Germany

06/2018

Workshop: 3-D Design and 3-D-Modelling, FH Brandenburg, Germany

05/2018

Workshop: ARDUINO – An Introduction to Physical Computing for Everybody useful for Experiments and Teaching, provided by Prof. T. Schrader, FH Brandenburg, as part of the DAAD funded project ProUniEdu-WeK, MMUST, Kenya

03/2018

MMUST-VENDA Proposal Writing Workshop: Composition of Scientific Applications, MMUST, Kenya and VENDA, South Afrika

04/2017

Seminar: Diversity of Ichthyosauridae - Neither Fish nor Whale, MMUST, Kenya

09/2016

Foundation, development and coordination of the workshop "Evolution of Reptiles", including the design of scientific posters

Seminar 1: Diversity of Ceratopsidae – A Journey through Prehistory, MMUST

Seminar 2: The Significance of Amphibian and Reptile Diversity to Farming, Busia County, Kenya

08/2016

Summer School Seminar: Basics of Polymerase Chain Reaction (PCR) and Agarose Gel Electrophoresis, Introduction to principles of plant disease diagnosis and laboratory equipment operations training, Cooperation DSMZ – MMUST, Kenya

07/2014

Seminar: Differential transmission of the begomoviruses *Watermelon chlorotic stunt virus* and *Tomato yellow leaf curl virus* by populations of whitefly (*Bemisia tabaci*), Jaramogi Oginga Odinga University of Science & Technology, Bondo, Kenya

"Archiving of modern  
japanese art and riding  
a bicycle belong to my  
leisure activities."

## EDUCATION

05/2018 – 12/2019

Study of Postgraduate Diploma in Education for secondary education standard 1 and 2, MMUST, Kenya

07/2008 – 05/2013

**Doctoral thesis** project at Technische Universität Braunschweig in Germany  
Execution at German Collection of Microorganisms and Cell Cultures (DSMZ);  
Department Plant Viruses, Germany

Topic: Differential transmission of the Begomoviruses *Watermelon chlorotic stunt virus* and *Tomato yellow leaf curl virus* by populations of whitefly (*Bemisia tabaci*).

Mark: very good

10/2007 – 07/2008

**Master thesis** at DSMZ; Department Plant Viruses, Braunschweig, Germany

Topic: Characterization of the eukaryotic translation initiation factor 4E gene (eIF4E) from susceptible and resistant *Manihot esculenta* related to infections with *Cassava brown streak virus*.

Mark: very good

09/2003 – 09/2007

**Academic studies of Biology** at Technische Universität Braunschweig in Braunschweig, Germany

Main subject: Microbiology

Minor subjects: Molecular plant biology

Cell biology

Genetics

07/2002 – 05/2003

Basic military service in German Bundeswehr

08/1998 – 05/2002

University-Entrance Diploma

Grammar school Gymnasium Oschersleben

08/1992 – 07/1998

Extended Secondary School Certificate

Secondary school Johann Wolfgang von Goethe

## FURTHER QUALIFICATIONS

**Language abilities:** German, fluent in speech and writing  
English, fluent in speech and writing

**Computer literacy:** Microsoft Office, SigmaPlot, Reference manager, Vector NTI, Primer3 and Beacon designer, realplex<sup>4</sup> for Real-time PCR analysis, ABNO Unisol - ERP

## UNIVERSITY COURSES TAUGHT

### Bachelor of Science Courses:

- 1 Applied Microbiology and Biotechnology
- 2 Biomembranes and Subcellular Organelles
- 3 General Microbiology
- 4 Genetics
- 5 Immunochemistry
- 6 Microbial Ecology
- 7 Microbial Genetics
- 8 Molecular Genetics
- 9 Plant Biochemistry
- 10 Plant Cell, Tissue and Organ Culture
- 11 Plant Ecophysiology
- 12 Plant Evolution
- 13 Plant Physiology
- 14 Plant Structure & Function
- 15 Plant Taxonomy
- 16 Structure of Biomolecules

### Master of Science Courses:

- 1 Advanced Bacteriology
- 2 Advanced Microbial Ecology
- 3 Advanced Virology
- 4 Advances and Techniques in Cell & Molecular Biology
- 5 Microbial Biochemistry
- 6 Microbial Biotechnology

*"Apart from biology  
I have interest in  
other natural sciences  
like Astronomy."*

- 7 Microbial Genetics
- 8 Microbial Physiology
- 9 Microbial Processes in Environmental Management
- 10 Plant Cell, Tissue and Organ Culture
- 11 Plant Mycology and Bacteriology
- 12 Plant Nematology and Virology
- 13 Population Ecology

## SUPERVISION OF POSTGRADUATE STUDENTS

### To Completion

Lubao Wanyonyi Murere (PhD Crop Protection, MSc Crop Protection)  
Sarah Kindiki (MSc Microbiology)  
Milton Wanyama (MSc Microbiology)  
Georg Onunga Ochieng (MSc Environmental Science)  
Mark Asamba Luvutse (MSc Microbiology)  
Sharon Sigei (MSc Microbiology)

### On-Going

Audrey Mulama (PhD Biology)  
Mark Ebei Arus (MSc Environmental Science)  
Stella Nekesa (MSc Molecular Biology)  
Clarice Akini Ogol (MSc Medical Microbiology)  
Hilary Otiato (MSc Microbiology)  
Moses A. Shavanga (MSc Microbiology)

## PUBLICATIONS

M A Obuya, T Abalo and **M Kollenberg** (2026): Application of AI-driven Phylogenetics; Scientific Poster; Department of Biological Sciences Workshop – Evolution and Biodiversity, Masinde Muliro University of Science and Technology (MMUST), 50100 Kakamega, Kenya

W O Mogoia and **M Kollenberg** (2026): Co-Evolution – Pollinators and Flowers; Scientific Poster; Department of Biological Sciences Workshop – Evolution and Biodiversity, Masinde Muliro University of Science and Technology (MMUST), 50100 Kakamega, Kenya

L W Murere, B Mukoye, **M Kollenberg** (2026): Alternative host plants (crops and weeds) for Groundnut ringspot virus (GRSV) in Kenya; International Journal of Academic and Applied Research (IJAAR), Vol. 10, Issue 1, Pages: 60-71, ISSN: 2643-9603

S Sigei, S Khatiebi, C Wekesa, **M Kollenberg**, P Okoth (2025): Functional Potential of Microbial Communities and Their Roles in Degrading Microplastics and Other Compounds in The Winam Gulf of Lake Victoria, Kenya; *J. Appl. Sci. Environ. Manage*, Vol. 29 (11) 3377-3382, eISSN 2659-1499

M Asamba, D Omayio, **M Kollenberg**, G. Omoto, G. Riungu and R. Simiyu (2025): Characterisation of *Leuconostoc* spp. Isolates causing sugar cane juice quality deterioration in Kenya; African Crop Science Journal, Vol. 33, No. 4, pp. 451 – 461, eISSN: 2072-6589/2025

S Kindiki, D Siamba, J Tomasch, A Sifuna and **M Kollenberg** (2025): Assessing Microbial Diversity at Watering Points Along the Isiukhu River, Kenya Using 16S rRNA Sequencing; Journal of Advances in Microbiology, Volume 25, Issue 4, Page 8-23 , 2025; Article no.JAMB.132010, ISSN: 2456-7116

**M Kollenberg**, J Mwangi and A K Koech (2024): Development of New Varieties of MMUST YOGHURT; Scientific Poster; Department of Biological Sciences, Masinde Muliro University of Science and Technology (MMUST), 50100 Kakamega, Kenya

G O Ochieng, M F O Ndonga and **M Kollenberg** (2022): Parasitological and Microbiological Characteristics of Wastes Generated and Impact on Water Sources Next to Abattoir Facilities in Lurambi Sub County. Kakamega County; Adv. Anim. Vet. Sci., Vol.10, Iss. 8, pp. 1797-1809

L W Murere, B Mukoye, **M Kollenberg** and H K Were (2022): Occurrence and Molecular Characterization of Groundnut Ringspot Virus (GRSV) Infecting Groundnuts in Western Kenya; IJAAR, Vol.6, Issue 4, 307-320

**M Kollenberg** (2022): Innovative Project – MMUST Yoghurt; Commercialization Poster; Department of Biological Sciences, Masinde Muliro University of Science and Technology, 50100 Kakamega, Kenya

**M Kollenberg** (2022): Innovative Project – MMUST Cheese; Scientific Poster; Department of Biological Sciences, Masinde Muliro University of Science and Technology, 50100 Kakamega, Kenya

L W Murere, B Mukoye, H K Were and **M Kollenberg** (2021): Epidemiology And Occurrence Of Groundnut Ringspot Virus (GRSV) Infecting Groundnuts In Western Kenya; IJAAR, Vol.5, Issue 6, 13-25

L W Murere, B Mukoye, H K Were and **M Kollenberg** (2021): Response Of Groundnut Varieties To Groundnut Ringspot Virus (GRSV) In Western Kenya; IJAAR, Vol.5, Issue 6, 93-101

M Wanyama, **M Kollenberg**, D N Siamba, P Nyongesa, (2021): Antibiotic susceptibility patterns of pathogenic bacteria recovered from unprocessed bovine milk produced in Ndivisi Ward, Bungoma County; Emer Life Sci Res, 7(1): 28-35

M Wanyama, **M Kollenberg**, D N Siamba and P Nyongesa, (2019): Bacterial Counts of Unprocessed Bovine Milk Produced by Small Scale Farmers in Ndivisi Ward, Bungoma County, Kenya; Journal of Advances in Microbiology, 14(1): 1-11

B Mukoye, H Were, **M Kollenberg** and L W Murere (2018): Distribution of BCMD and Response of Common Bean Varieties to Bean Common Mosaic Virus in Western Kenya; [researchgate.net/publication/328096044](https://www.researchgate.net/publication/328096044)

L W Murere, H W Were, B Mukoye and **M Kollenberg** (2018): Occurrence of BCMD and resistance of common bean cultivars to bean common mosaic virus in Western Kenya; The Sixth African Higher Education Week and RUFORUM Biennial Conference, 21 – 26th October 2018, Nairobi, Kenya (Poster)

L W Murere, B Mukoye, **M Kollenberg**, and HW Were (2018): Effect of Seed Quality and Legume Diversification on Management of Bean Common Mosaic and Bean Common Mosaic Necrosis Viruses in Western Kenya; International Journal of Academic and Applied Research (IJAAR) ISSN: 2000-005X, Vol. 2 Issue 8, August –2018, Pages: 1-6

Sarah Kindiki, **Mario Kollenberg**, Donald Siamba, Anthony Sifuna and Clabe Wekesa (2018): Analysis of Fecal Coliform Levels at Watering Points along the Upper Reaches of River Isiukhu in Kakamega County, Kenya. Journal of Advances in Microbiology: 10(1): 1-7, Article no.JAMB.39522

Clabe Wekesa, John Muoma, Omwoyo Ombori, John Maingi, Daniel Okun, Kelvin Juma, Patrick Okoth, Emily Wamalwa, **Mario Kollenberg** and Eliakim Mauti (2017): Genetic Characterization of Rhizosphere Bacteria that Inhabit Common Bean Nodules in Western Kenya Soils. *Appl Micro Open Access* 3: 128. doi:10.4172/2471-9315.1000128

Opiyo JO and **Kollenberg M** (2016): The significance of amphibian and reptile diversity to farming, Biodiversity and Agriculture in Busia County, Masinde Muliro University of Science and Technology, 50100 Kakamega, Kenya (Poster)

**Kollenberg M** (2016): Diversity of Ceratopsidae – A Journey though Prehistory, Masinde Muliro University of Science and Technology, 50100 Kakamega, Kenya (Poster)

**Kollenberg M**, Winter S, Götz M (2014): Quantification and localization of Watermelon chlorotic stunt virus and Tomato yellow leaf curl virus (Geminiviridae) in populations of *Bemisia tabaci* (Hemiptera, Aleyrodidae) with differential virus transmission characteristics. *PLoS One*. 2014 Nov 3;9(11):e111968

Götz M, Popovski S, **Kollenberg M**, Gorovits R, Brown JK, Cicero JM, Czosnek H, Winter S, Ghanim M (2012): Implication of *Bemisia tabaci* Heat Shock Protein 70 in Begomovirus-Whitefly Interactions. *J Virol* 86(24): 13241-13252

T Riedel, J Tomasch, I Buchholz, J Jacobs, **M Kollenberg**, G Gerdts, A Wichels, T Brinkhoff, H Cypionka, and I Wagner-Doebler (2010): Constitutive Expression of the Proteorhodopsin Gene by a Flavobacterium Strain Representative of the Proteorhodopsin-Producing Microbial Community in the North Sea. *Appl. Environm. Microbiol.* 76(10): 3187-3197

## REFEREES

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