**Ngema Makhosazana Ayanda**

Master of Science – Plant Pathology

enegertic, disciplened, detail-oriented, punctual

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**Professional profile**

A motivated, highly organized, and passionate University of KwaZulu-Natal Master of Science graduate, with a plant pathology specialty mostly focused on biological control. Able to act as an intrinsic member of a scientific team. I have 3 years of experience, a one-year internship at the National Research Foundation two year at the Forestry and Agricultural Biotechnology Institute (FABI), under the Avocado Research Program (ARP). I’ve gained exposure to different aspects of plant pathology research. These included disease diagnostics, pathogen isolation and identification, field trials, and laboratory duties. I am also assisting on advanced molecular biology projects that focus on fungal gene editing using Caspr Cas9 and looking at the gene functionality.

I have a practical understanding of plant pathology aspects from sampling diseased plant material, isolation, and DNA extraction to pathogen identification. I am proficient in time-sensitive situations and high-pressure and fast-paced environments. I am trustworthy with personal and sensitive information requiring confidentiality. And keen to learn and adapt.

**Education Year of graduation**

**Master of Science Plant Pathology\* April 2020**

***Project: The use of Trichoderma to ameliorate drought stress on selected crops.***

*\*the certificate is on hold due to outstanding fees, however the university can be contacted on my behalf for the confirmation of the degree completion.*

**BSc Hons (Plant Pathology) April 2016**

***Project: The efficacy of seed treatment with Trichoderma in alleviating drought stress in Maize and Wheat***

**BSc degree April 2014**

**Majors:**Microbiology ad Plant Pathology

**Matriculation Certificate December 2008**

IsiZulu (HL), English (FAL), Mathematics, Life Orientation, Business Studies, Life Sciences and Physical Sciences.

**Key Skills**

Plant disease diagnostic skills

Developed skills in plant pathology laboratory (isolation, ELISA, PCR, qPCR)

Highly developed field research methodologies in plant pathology

Scientific writing

Excellent communication and presentation skills

Strong ability to work under pressure and deliver quality work

Strong team player

Practical leadership skills

Well-developed ability to prioritize task-based activities

Proficient in the use MS Applications – Word, Excel, PowerPoint, Outlook

**Work Experience Duration**

**Research Assistant at Forestry and Agricultural Biotechnology Institute Feb 2023 – March 2024**

Taking the lead on the project focusing on latent pathogens of avocado.

* Inspection, isolation, and species identification (phylogenetic analysis).
* Understanding the relationship between the pathogens and abiotic factors.

Providing assistance on gene editing and functionality projects.

**Intern at Forestry and Agricultural Biotechnology Institute Feb 2022 – Jan 2022**

Avocado plant pathology diagnostic clinic laboratory duties – from sampling to pathogen identification using different protocols and equipment. And Extraction of DNA for PCR’s and sequencing.

Laboratory maintenance – day-to-day care of laboratory equipment

Scientific write-up – reporting back the diagnostic findings to the farmer who sent samples,

Field trials – planning and laying of a trial and the scientific write-up.

**Educator’s Assistant at Mavuso High School Dec 2020 – Jul 2021**

Tutoring – Language and physical science studies

Teaching – Physical Science and Mathematics

**Examination Assistant at University of Kwa-Zulu Natal, Exams Office June – Nov 2019**

Invigilating – ensuring adherence to procedures

Scribing for students – support, and guidance

**Student Assistant at Student Disability Support (UKZN, PMB) Jan – Dec 2017**

Reception duties – leading and coordinating

Scribing for exams and tests – support and guidance

Document management - using MS Applications and Acrobat

**Intern at National Research Foundation (UKZN) 2015/2016**

Greenhouse and Fields Trials planning, execution and monitoring

Disease diagnostic skills – isolation, detection, ELISA, PCR, light, and electron microscope analysis

Data collection

Results analysis (Excel and Genstat)

Scientific writing

**Key Achievements and Extra-Curricular Activities Year**

Completed an online scientific writing course **2022**

Completed a phytosanitary introduction course **2022**

Completed training on how to use Autoclave **2022**

Completed a training course on R-Programming **2018**

An oral presenter at Faculty of Science and Agriculture Research Day (UKZN-PMB) **2018**

A poster presenter at Faculty of Science and Agriculture Research Day (UKZN-PMB) **2016**

Achieved 3rd Best Speaker at the Plant Pathology Day (UKZN-PMB) **2015**

Founder and Organizer of Nibela Youth Club **2012 to date**

Participant in yearly career guidance at NaTeSA organization **2008 to date**

**References**

Available upon request