

# **AARON THOMAS HARVEY**

# PhD Candidate | Molecular Genetics

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## **Education**

# PhD Genetics (In-progress), University of Pretoria, 2025 - Current

Thesis: Investigating the role of RNA plasticity in *Persea americana* rootstocks during *Phytophthora cinnamomi* infection.

Member of Hans Merensky Chair in Avocado Research and FABI.

## MSc Genetics with distinction, University of Pretoria, 2023 - 2024 (2 years)

Dissertation: Characterisation of the *WAK / WAKL* gene family with a focus on members in *Persea americana* implicated in defense against *Phytophthora cinnamomi*. Member of Hans Merensky Chair in Avocado Research and FABI.

## BScHons Genetics with distinction, University of Pretoria, 2022 (1 year)

Mini-dissertation: The complex architecture of avocado *callose synthase* genes and their role in defense against *Phytophthora cinnamomi*.

# BSc Human Physiology, Genetics and Psychology *with distinction*, University of Pretoria, 2019 – 2021 (3 years)

Member of The Golden Key Honour Society.

#### Grantleigh College (IEB), Richards Bay, KZN, 2018

Honours – Academics; Colours – Drama and Public Speaking; Chairperson of Academic Portfolio.

# **Research & Teaching Experience**

## University of Pretoria, Department of Biochemistry, Genetics and Microbiology

- 2025 GTS 251 (Molecular Genetics) & GTS 261 (Genetic Diversity and Evolution) Tutor; appointed Consultant Tutor.
- 2024 GTS 251 (Molecular Genetics) & MBY 261 (Mycology) Tutor.
- 2023 GTS 251 (Molecular Genetics) & GTS 354 (Genome Evolution and Phylogenetics) Tutor.
- 2022 GTS 161 (Introductory Genetics) Tutor.
- 2020 PHY 131 (Physics for Biology Students) Tutor.

#### **Teneo Online Education**

- 2021–2022 Online Tutor for Physical Sciences, Mathematics, Life Sciences & Dramatic Arts.
- 2022 External Marker for English and Natural Science.

## **Conference Presentations**

- 1. Harvey A., van den Berg N., Taylor, N., Swart V. Callose synthases fortifying avocado defence against *Phytophthora cinnamomi*. Poster presentation, 54th Biennial Congress of the Southern African Society for Plant Pathology, Jan 2026, Umhlanga, KZN.
- 2. Harvey A., van den Berg N., Swart V. This is your *WAK* up call: Keeping avocados healthy, one gene at a time. Oral presentation, BGM Postgraduate Symposium, Nov 2024, University of Pretoria.
- 3. Harvey A., van den Berg N., Swart V. *In silico* characterisation of the *WAK/WAKL* gene family in avocado. Oral presentation, XX International Plant Protection Congress, Jul 2024, Athens, Greece.
- 4. Harvey A., van den Berg N., Swart V. Genome-wide *in silico* characterisation of the avocado *WAK* and *WAKL* gene family. Oral presentation, 53rd Biennial Congress of the Southern African Society for Plant Pathology, Jan 2024, Golden Gate National Park.

#### **Publications**

- 1. Harvey A, van den Berg N, Swart V. Orchestrating RNA plasticity in plant immunity. (*In Review*), Plant Cell Reports. 2025.
- 2. Harvey A., van den Berg N., Swart V. (2025). *In silico* characterisation of the avocado *WAK/WAKL* gene family with a focus on genes involved in defence against *Phytophthora cinnamomi*. *Front. Plant Sci.* 15:1467148. doi: 10.3389/fpls.2024.1467148
- 3. Harvey A., van den Berg N., Swart V. (2024). Describing and characterizing the *WAK/WAKL* gene family across plant species: a systematic review. *Front. Plant Sci.* 15:1474781. doi: 10.3389/fpls.2024.1474781

# **Leadership & Service**

- 2025 FABI Social Club Group Leader.
- 2023–2024 Co-lead Facilitator, TREEhouse Initiative, FABI.
- 2023 Hans Merensky Chair in Avocado Research Social Club Co-chair.
- 2022-Present Active member, Forestry and Agricultural Biotechnology Institute (FABI).

# **Other Achievements, Awards & Training**

- 2025 Runner-up, National Three-Minute Thesis Competition (University of the Free State)
- 2025 Runner-up, University of Pretoria Three-Minute Thesis Competition.
- 2021 -Teneo Online Education Tutor Training (Microsoft Teams/Zoom experience).

- 2020 Tutor Training through the University of Pretoria (including online tutor training).
- 2020 Mentor, STARS Mentorship Programme, University of Pretoria.
- 2020 Became a Golden Key Honour Society Member.
- 2019 Placed 6th on the Top 10 Academics List, TuksEkhaya Residence, University of Pretoria
- $\bullet$  2018 Placed 1st in two categories and awarded Overall Top Performer, Zululand Eisteddfod.
- 2017 Placed 2nd, Zululand Schools Public Speaking.

# References

Dr Velushka Swart – Postgraduate Supervisor and MBY 261 & GTS 251 Lecturer welushka.swart@up.ac.za

Prof Noëlani van den Berg − Postgraduate Supervisor and MBY 261 Coordinator moelani.vandenberg@up.ac.za