



## CURRICULUM VITAE

# Sharon Melissa Reynolds

MSC GENETICS

### CONTACT:

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📍 Pretoria, South Africa

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### AREAS OF EXPERTISE:

Microsatellites  
(Data Generation & Analysis)  
SNPs  
(Data Generation & Analysis)  
Project Management  
Verbal and Written Communication  
Laboratory Management

### SOFTWARE PROFICIENCY:

- Microsoft Office
- GeneMarker v1.95
- PowerMarker v3.25
- CERVUS v3.0.7
- STRUCTURE v2.3.3
- GenomeStudio v1.6.3
- Monday.com
- JoinMap v4.1
- MapChart v2.2
- MEGA v5.0
- ELabJournal
- Golden Helix SNP and Variation Suite v7
- Axiom Analysis Suite v5.1.1.1
- Colony v2.0.6.1
- PeopleSoft Financial Services Management
- R Programming Language

### SUMMARY:

My two greatest passions are growing and mentoring people, and finding innovative solutions to a diverse range of problems. I love working in an academic environment where there is continuous exposure to new and exciting things, and many opportunities for development. I like to be challenged and tend to pursue opportunities for continued personal and professional growth. I genuinely care for the people I work with and love contributing to their success. I have been described by my colleagues as approachable, reliable, self-sufficient and resourceful.

In my current position, I have had the benefit of gaining insight into the operational aspects of the forestry industry and play the role of liaison between breeders within South African forestry companies and the Forest Molecular Genetics Programme(FMG), in addition to my responsibilities within FMG.

### WORK EXPERIENCE:

#### PRECISION TREE BREEDING PLATFORM MANAGER

*Forest Molecular Genetics Programme (University of Pretoria)*  
August 2012 - Present

- Operational management of the Precision Tree Breeding Platform consisting of six technical staff members
- Microsatellite and SNP marker data analysis, interpretation and reporting (written and verbal)
- Development and application of new DNA marker technologies, resources and standard operating procedures
- Funding applications and reports
- Training of technical staff and students
- Project co-ordination
- Financial oversight (quotations and invoicing)
- Liaising with platform users and academic collaborators

#### RESEARCH ASSISTANT

*Forest Molecular Genetics Programme (University of Pretoria)*  
February 2008 - July 2012

- Sample preparation for DNA isolation
- High-throughput DNA isolations
- Microsatellite data generation (multiplex PCR)
- SNP genotyping (Illumina)
- Primary and secondary analysis of microsatellite and SNP data
- Data interpretation and reporting (written and verbal)
- Laboratory management
- Training junior technicians and students in standard operating procedures
- Establishing new standard operating procedures

### ACADEMIC BACKGROUND:

#### MSC GENETICS (2017)

*University of Pretoria*

"SNP-based genetic linkage mapping and whole-genome diversity assessment in Cassava (*Manihot esculenta* Crantz) accessions from Africa and Latin America"

#### BSC HONS GENETICS (2007)

*University of Pretoria*

#### BSC HUMAN GENETICS (2006)

*University of Pretoria*

## ADDITIONAL COURSES:

### SNP GENOTYPING USING ILLUMINA GOLDEN GATE TECHNOLOGY

*Presented by: Whitehead Scientific*  
Pretoria  
2009 (1 week)

### INTRODUCTORY MICROSATELLITE WORKSHOP

*Presented by: University of Pretoria Sequencing Facility/Department of Genetics*  
Pretoria  
2010 (1 week)

### ADVANCED PHYLOGENETICS WORKSHOP

*Presented by: University of Pretoria (Forestry and Agricultural Biotechnology Institute)*  
Pretoria  
2011 (1 week)

### AN INTRODUCTION TO MODERN TREE BREEDING

*Presented by: Creation Breeding Innovations*  
Pretoria  
2015 (1 week)

### R BASICS, QUANTITATIVE GENETICS & GENOMIC SELECTION WORKSHOP

*Presented by: Dr Fikrit Isik and Dr JJ Acosta*  
Pietermaritzburg  
2016 (1 week)

## AWARDS & MEMBERSHIPS:

**She is Forestry**  
2023 (Winner)

Significant contribution of a staff member to the operations of the Forest Molecular Genetics Programme  
2018 (Winner)

Golden Key International Honour Society  
Membership number: 16578896  
2018 - present

Significant contribution of a staff member to the operations of the Forest Molecular Genetics Programme  
2017 (Runner-up)

## REFERENCES:

Prof. Zander Myburg  
*Forest Molecular Genetics Programme Director*  
University of Pretoria  
Role: Current line manager, MSc supervisor

Dr Daleen van Dyk  
*Senior Research Associate at Corteva Agriscience*  
Johnston, Iowa, United States  
Role: Former manager at the Forest Molecular Genetics Programme, MSc advisor

Contact details available upon request

## TEACHING AND STUDENT MENTORSHIP:

### TEACHING ASSISTANT

**GTS161 – Introductory Genetics**  
*University of Pretoria - Department of Genetics*  
July 2007 - November 2007  
Teaching assistance in weekly tutorial sessions

### COURSES

**An Introduction to Modern Tree Breeding**  
Pretoria  
September 2015, August 2017, October 2019, May 2020, September 2022  
Module: Molecular Markers

**Introductory Microsatellite Workshop**  
Pretoria  
May 2020, June 2021  
Module: data analysis in diploids, SNPs as markers

### POSTGRADUATE STUDENT CO-SUPERVISION

**Mr James Smith (19013583) - Current**  
*BSc Hons. Genetics (2023)*  
*University of Pretoria, Department of Biochemistry, Genetics and Microbiology*  
Title: DNA fingerprinting and genome-wide genotyping of South African Macadamia germplasm

**Ms Anneri Lötter (14014442) - Cum laude**  
*BSc Hons. Genetics (2018)*  
*University of Pretoria, Department of Biochemistry, Genetics and Microbiology*  
Title: Admixture mapping using genome-wide SNP marker analysis in *Eucalyptus grandis* x *E. urophylla* backcross progeny

**Ms Julia Candotti (14010560) - Cum laude**  
*BSc Hons. Genetics (2017)*  
*University of Pretoria, Department of Biochemistry, Genetics and Microbiology*  
Title: Nested Association Mapping (NAM) in *Eucalyptus* hybrids

**Mr Johannes Stephanus Henning (13091752)**  
*BSc Hons. Genetics (2016)*  
*University of Pretoria, Department of Biochemistry, Genetics and Microbiology*  
Title: SNP markers for genome-wide tracking of interspecific introgression in *Eucalyptus*

**Mr Stephanus Engelbrecht (12016642) - Cum laude**  
*BSc Hons. Genetics (2015)*  
*University of Pretoria, Department of Biochemistry, Genetics and Microbiology*  
Title: High-throughput multiplexed SNP genotyping for DNA fingerprinting of *Eucalyptus* species and hybrids

### POSTGRADUATE STUDENT ADVISORY COMMITTEE

Served on the advisory committee of four postgraduate students\*

## SUMMARY OF RESEARCH OUTPUTS:

- Co-author on five ISI-rated peer-reviewed publications\*
- 19 International conference contributions\*
- 18 Local conference contributions\*

\*Full details available upon request