



CURRICULUM VITAE

Sharon Melissa Reynolds

MSC GENETICS

CONTACT:

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📍 Pretoria, South Africa

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:

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*