



# MARJA MOSTERT-O'NEILL

## POSTDOCTORAL FELLOW

### SUMMARY

Passionate about finding solutions to complex problems and the pursuit of knowledge. Over ten years of experience in academic research projects. Recently obtained a Ph.D. in Genetics. Balancing a part-time position as Project Coordinator and a full-time Ph.D. study required efficiency, accuracy and exceptional time-management skills. Enjoy working in an academic environment as it allows continuous personal growth and ample opportunity to share knowledge and experiences with others.

### WORK EXPERIENCE (2012-2021)

#### Project Coordinator (part-time)

Forest Molecular Genetics Programme | Apr. 2017 - Mar. 2021

- Project management of and reporting on multiple population genetics and genomics research activities
- Technical support to postgraduate students and postdoctoral fellows on high-throughput genotyping data generation and analysis
- Liaison between the Forest Molecular Genetics Program, academic- and industry collaborators, and genomics service providers

#### Project Coordinator (full-time)

Forest Molecular Genetics Programme | Jan. 2014 - Mar. 2017

- Same as above with the addition of marketing, communication and organizing annual research symposia

#### Senior Research & Administrative Assistant (part-time)

Forest Molecular Genetics Programme | Nov. 2012 - Dec. 2013

- Implementation of a new platform for single nucleotide polymorphism (SNP) data analysis
- Liaison between the Forest Molecular Genetics Program, academic- and industry collaborators, and genomics service providers
- Organizing research-related conference and travel arrangements for students and academic staff
- Marketing, communication and organizing annual research symposia

### EDUCATION

#### Ph.D. Genetics

University of Pretoria (2021)

Thesis title: Genomic consequences of natural and artificial selection in wild and advanced breeding populations of *Eucalyptus grandis*

#### M.Sc. Genetics

University of Pretoria (2009)

Dissertation title: Functional analysis of the secondary cell wall associated cellulose synthase genes of *Eucalyptus* trees in *Arabidopsis thaliana*

#### B.Sc. (Hons.) Genetics

University of Pretoria (2005)

#### B.Sc. Genetics

University of Pretoria (2004)

### CONTACT



Marja Mostert-O'Neill Profile  
Forestry & Agricultural  
Biotechnology Institute (FABI)

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📍 Pretoria, South Africa

### SKILLS

- Project Management
- Verbal & Written Communication
- Microsoft Office & Google Drive
- R Programming Language
- SNP Genotypic Data Analysis
- Molecular Laboratory Techniques

### ONLINE

[linkedin.com/in/marja-oneill/](https://www.linkedin.com/in/marja-oneill/)

[researchgate.net/profile/Marja\\_Mostert-O'Neill](https://www.researchgate.net/profile/Marja_Mostert-O'Neill)

[@MarjaONEill](https://twitter.com/MarjaONEill)

[orcid.org/0000-0002-6318-3508](https://orcid.org/0000-0002-6318-3508)

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### RECENT AWARDS

Best Oral Presentation at the Southern African Plant Breeding Symposium (2020)

Best Ph.D. Student Presentation at the Department of Biochemistry, Genetics & Microbiology Symposium (2019)

National Research Foundation Doctoral Bursary (2017-2020)

University of Pretoria Doctoral Bursary (2017-2019)

### EXPERTISE & INTERESTS

Population Genetics

Landscape Genomics

Selection & Adaptation

Cytonuclear Coordination

Hybrid Compatibility

Marker-Assisted Breeding

Science Communication

### REFERENCES

**Prof. Alexander A. Myburg**  
Director of Forest Molecular Genetics Programme, University of Pretoria  
(Current Line-Manager & Ph.D. Supervisor)

**Prof. Sanushka Naidoo**  
Head of Department Biochemistry, Genetics & Microbiology, University of Pretoria  
(Master's Degree Co-Supervisor)

**Dr Juan J. Acosta**  
Camcore, Department of Forestry & Environmental Resources, NC State University  
(Ph.D. Co-Supervisor)

(Contact details available upon request)

### PUBLICATIONS (2019-2021)

**Mostert-O'Neill MM, Reynolds SM, Acosta JJ, Lee DJ, Borevitz JO, Myburg AA. 2021.** Genomic evidence of introgression and adaptation in a model subtropical tree species, *Eucalyptus grandis*. *Molecular Ecology* (doi:10.1111/mec.15615)

**Mhoswa L, O'Neill MM, Mphahlele MM, Oates CN, Payn KG, Slippers B, Myburg AA, Naidoo S. 2020.** A genome-wide association study for resistance to the insect pest *Leptocybe invasa* in *Eucalyptus grandis* reveals genomic regions and positional candidate defence genes. *Plant and Cell Physiology* (doi:10.1093/pcp/pcaa057)

**Mphahlele MM, Isik F, Mostert-O'Neill MM, Reynolds SM, Hodge GR, Myburg AA. 2020.** Expected benefits of genomic selection for growth and wood quality traits in *Eucalyptus grandis*. *Tree Genetics & Genomes* (doi:10.1007/s11295-020-01443-1)

**Brown K, Takawira LT, O'Neill MM, Mizrachi E, Myburg AA, Hussey SG. 2019.** Identification and functional evaluation of accessible chromatin associated with wood formation in *Eucalyptus grandis*. *New Phytologist* (doi.org/10.1111/nph.15897)

### CONFERENCE PRESENTATIONS (2019-2021)

**Mostert-O'Neill MM, Reynolds SM, Acosta JJ, Borevitz JO, Myburg AA. 2021.** Domestication in progress: How a century of artificial selection has changed the genomes of a wood fibre crop, *Eucalyptus grandis*. American Society of Plant Biologists (ASPB) Plant Biology Worldwide Summit, 19 -23 July, Virtual Conference, USA (oral & poster)

**Mostert-O'Neill MM, Borevitz JO, Acosta JJ, Reynolds SM, Mphahlele MM, Van den Berg G, Verryn SD, Myburg AA. 2020.** Domesticating *Eucalyptus grandis* for changing climates using landscape genomics. Southern African Plant Breeding Symposium, 8 -11 March, Pretoria, South Africa (oral)

**O'Neill MM, Reynolds SM, Lee DJ, Acosta JJ, Borevitz JO and Myburg AA. 2019.** Genomic evidence of introgression and adaptation in *Eucalyptus grandis*, a model subtropical species. IUFRO Tree Biotechnology Meeting, 23 - 28 June, Raleigh, NC, USA (oral)

**O'Neill MM, Reynolds SM, Lee DJ, Acosta JJ, Borevitz JO and Myburg AA. 2019.** The genetic landscape of adaptive variation in native *Eucalyptus grandis*. Eucalypt Genetics Conference, 18 - 21 February, Hobart, Australia (oral)

### TEACHING & MENTORSHIP

#### Postgraduate level

- Co-supervisor on two M.Sc. and four B.Sc. (Hons.) projects
- Student advisory committee member on one Ph.D., three M.Sc. and one B.Sc. (Hons.) projects
- Developed and presented five workshops related to scientific communication and time management
- Developed and presented two invited lectures for Tree Breeding Course presented to forest tree breeders and postgraduate students

#### Undergraduate level

- Acted as research and academic mentor to one final year undergraduate student
- Tutor, teaching assistant and laboratory instructor for five first- and second year Genetics undergraduate modules