###### CURRICULUM VITAE

##### Pooja Singh

1. **BIOGRAPHICAL SKETCH**

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| GENERAL INFORMATION | | | | | |
| **Surname** | Singh | **Maiden Name** | | N/A | |
| **First Names** | Pooja | **passport Number** | | E9680403 | |
| **Citizenship** | India | **Title** | Ms. | **Female**  **x** | **Male** |
| **Residency** | Botswana | **Date of Birth** | | 10 March 1989 | |
| **Department and Group** | Department of Genetics, Forest Molecular Genetics (FMG) Laboratory, Forestry and Agricultural Biotechnology Institute (FABI), Genomics Research Institute (GRI) | **Position** | | MSc Student | |
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| **ACADEMIC QUALIFICATIONS OBTAINED** | | | | |
| **Degree/Diploma** | Field of study | **Higher education institution** | **Year** | **Distinctions** |
| BSc. | Molecular and Cell Biology | University of Cape Town | 2010 |  |
| B.Sc. Hons. | Biotechnology (Genetics) | University of Pretoria | 2011 | With Distinction |

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| **WORK EXPERIENCE TO DATE** | | |
| Name of employer | **Type of work** | Period |
| Department of Genetics,  University of Pretoria | 1st Year Genetics Tutor and Practical Demonstrator (GTS161) | 2011 |
| Department of Genetics,  University of Pretoria | 2nd Year Genetics Tutor and Practical Demonstrator (GTS251) | 2012 |
| Department of Genetics,  University of Pretoria | 2nd Year Genetics Tutor and Practical Demonstrator (GTS251) | 2013 |
| Department of Genetics,  University of Pretoria | 3rd Year Plant Genetics and Crop Biotechnology Tutor and Practical Demonstrator (BTC361) | 2013 |

**2. RESEARCH AND LABORATORY EXPERIENCE**

**2009 BSc research project on the phylogeography and conservation of Black rhinos**

Training in DNA amplification, purification and phylogenetic data analysis. Equipped with skills in recombinant DNA technology, Biological assays, PCR, Genomics, DNA purification and Proteomics. Karyotyping, Gene mapping.

**2010 Princess Marina Hospital Microbiology Laboratory Botswana**

Training in microbiological and pathological scientific procedures carried out in the Medical Laboratory.

**2011 BSc (honours) research project: Optimisation of heterologous expression of *Eg*rSND2, a *Eucalyptus grandis* transcription factor potentially involved in secondary cell wall biosynthesis*.***

Independent research carried out in the Forest Molecular Genetics (FMG) research group under the supervision of Prof. Zander Myburg. **Skills acquired:** Cloning, bacterial transformation, protein expression.

**2012-2013 MSc research project: Predicting the segregating proteome variation in a hybrid *Eucalyptus* population.**

Independent research carried out in the Forest Molecular Genetics (FMG) research group under the supervision of Prof. Zander Myburg. **Project focus:** population genetics, predictive proteomics and genome-wide evolutionary patterns. **Skills acquired:** RNA-sequencing data analysis (data preparation, quality control, mapping, variant calling); Variant analysis (transcriptome-wide SNP and INDEL calling, filtering, effect prediction, allele segregation and expression analysis, haplotype phasing analysis); Genomic analysis software (Tophat, Bowtie, SAMtools, SnpEff); Programming experience (python; basic shell scripting; awk; sed).

**3. SCHOLASTIC AND RESEARCH BASED CONTRIBUTIONS**

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| **4.13 PARTICIPATION IN CONFERENCES & SYMPOSIA** |

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| 4.1.1 **Nation national** |

**P. Singh, E. Mizrachi & A. A. Myburg. “**Predicting the segregating xylem proteome from a backcross population of hybrid eucalypts using next-generation RNA sequencing transcriptome data”. South African Genetics & Bioinformatics Society Conference, Stellenbosch, September 10 – 12, 2012.

(Poster Presentation)

**P. Singh, S. G. Hussey, E. Mizrachi, C. Maritz-Olivier & A. A. Myburg. “**Optimisation of heterologous expression of *Eg*rSND2, a *Eucalyptus grandis* transcription factor potentially involved in secondary cell wall biosynthesis”*.* South African Association of Botanists Conference, Pretoria, January 15 – 18, 2012.

(Poster presentation)

**P. Singh, S. G. Hussey, E. Mizrachi, C. Maritz-Olivier & A. A. Myburg. “**Optimisation of heterologous expression of *Egr*SND2, a *Eucalyptus grandis* transcription factor potentially involved in secondary cell wall biosynthesis”*.* Genetics Postgraduate Symposium, Department of Genetics, University of Pretoria, 2011.

(Poster Presentation)

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| 4.1.1 **Nation international** |

**P. Singh, E. Mizrachi, A. A. Myburg.** Genetic load and allelic imbalance estimated from transcriptome sequencing in *Eucalyptus* hybrids. Plant and Animal Genome XXII, San Diego, CA, USA, January 11-15, 2014.

(Scheduled for Oral Presentation)

**S. G. Hussey, P. Singh, E. Mizrachi, A. A. Myburg.** "Genome-wide analysis of Lysine 4-Trimethylated Histone H3 modification during Xylogenesis in *Eucalyptus*". Plant and Animal Genome XXII, San Diego, CA, USA, January 11-15, 2014.

(Scheduled Poster Presentation)

**4. SCIENTIFIC PUBLICATIONS**

**Co-author:** "Genome sequence of *Eucalyptus grandis*: A global tree crop for fiber and energy" (submitted to Nature, in review)

**Primary author:** “Transcriptome-wide analysis of predicted proteome variation segregating in a *Eucalyptus* hybrid family.” (in preparation)

**5. MANAGEMENT AND ADMINISTRATIVE DUTIES**

**University of Pretoria, Forestry and Agricultural Biotechnology Institute (FABI) Social Club:** Management and organisation of social activities for FABI.

**University of Cape Town, Varietas Residence, Secretary of House Committee:** We managed the residence as part of a closely knit team to provide a healthy environment for students to live in, 2007

**University of Cape Town, Vice President of Art and Culture Society:** Organized various events such as talent shows, cultural workshops and provided a platform for young African artists to showcase their talents, 2008.

**6. COMMUNITY SERVICE AND EXTRA-CURRICULAR ACTIVITIES**

**President of HIV/AIDS Awareness Club in Botswana:** We were a group of students seeking to inform ourselves and our community about HIV and AIDS. We aimed to decrease stigma against people infected with HIV and equip members of our society with information (such as ways of preventing the spread of HIV) as a tool for fighting the HIV epidemic in Botswana, 2004.

**Tutored underprivileged students through SHAWCO** (RAG University of Cape Town): This was part of the University's outreach program to assist children living in poor townships, 2006.

**Botswana Hindu Society Outreach program:** I brought together a group of dedicated women to raise funds in order to help AIDS orphans and help the poor and needy children in the villages of eastern Botswana, 2010.

**“UP with Science”:** School Holiday Workshop for School Pupils, Forestry and agricultural biotechnology institute (FABI), University of Pretoria, 2011.

**Korfbal**: Played at South African Provincial level – Limpopo province, 2004.

**Hockey:** Played for the University of Cape Town Internal League, 2006.

Played for the Resbank Blacks Hockey team in the Pretoria Internal League, 2013**.**

**7. AWARDS OBTAINED**

Best BSc (honours) Oral Presentation, 2011, Department of Genetics, University of Pretoria.

Second best BSc (honours) Poster Presentation, 2011, Department of Genetics, University of Pretoria.

**8. REFEREES**

**Prof. Alexander Myburg**

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