

# *Curriculum Vitae*

## **Personal Information**

Surname: Mohase  
First names: Lintle  
Marital Status: Married  
Title: Dr  
Citizenship: South African  
Work Address: University of the Free State  
Faculty of Agricultural and Natural Sciences  
Department of Plant Sciences-Botany  
P.O. Box 339  
Bloemfontein, 9300.

## **Educational Background**

<b>Institution</b>	<b>Qualification</b>	<b>Year Obtained</b>
University of the Free State	M A (Higher Education)	2009
University of the Free State	Ph D	2004
University of the Orange Free State	M Sc (with Distinction)	1999
University of the Orange Free State	B Sc (Hons)	1996
National University of Lesotho	B Sc	1994

M A (Higher Education): Structured with a mini dissertation

Modules completed:

- i. Management/Leadership and Governance
- ii. Learning Facilitation & Assessment/Evaluation
- iii. Student Learning and Development
- iv. Postgraduate Supervision
- v. Programme planning and development/design of Study Material

- vi. Research methodology & comprehensive mini dissertation: Quality assurance in postgraduate studies: Student-related Factors Influencing Completion rates

### **Research Visits**

- i. Postdoctoral study on “Plant resistance responses to aphids”, Södertöns University College, Sweden (Nov 2005 to August 2006).
- ii. Six weeks research at Forschungszentrum, Jülich, Germany. (1999)

### **Theses/Dissertation completed**

- i. Quality assurance in postgraduate studies: student-related factors influencing completion rates (2009). MA Higher Education, University of the Free State.
- ii. Biochemical events associated with rust resistance in sunflower (2004). PhD Botany, University of the Free State.
- iii. Eliciting and signal transduction events of the Russian wheat aphid resistance response in wheat (1998). MSc Botany, University of the Free State.

### **Awards**

- i. Professor E. M van Zinderen Bakker price for an outstanding Ph D study at the department of Plant Sciences, offered at the University of the Free State (2005).
- ii. South African Association of Botanists’ Bronze medal for the best Ph D thesis (2005).
- iii. Professor E. M van Zinderen Bakker price for an outstanding M Sc study at the department of Plant Sciences, offered at the University of the Free State (2000).

## Research

Plant resistance mechanisms (biochemical) against pests and pathogens are investigated. A project dealing with the isolation and characterisation of biological molecules (elicitors/effectors) in Russian wheat aphid (*Diuraphis noxia*, Kurdjumov)–wheat interaction is running. The effect of commercial plant activators in protecting plants against pests (and drought) is also investigated.

## Scientific Presentations

- i. Mohase, L. Taiwe, B.M. & van der Westhuizen A.J. 2013. Eliciting activity of Russian wheat aphid derived elicitors in wheat. Departmental seminar. Westphalian Wilhelm's University of Münster, Department of Plant Biology and Biotechnology, Münster, Germany. 19 March.
- ii. Mohase, L. Taiwe, B.M. & van der Westhuizen A.J. 2013. Aphid derived elicitors of the Russian wheat aphid resistance response in wheat. Meeting of the German phyto-medical society: Mycology and Host Parasite Interactions (Poster). Georg-August Universität Göttingen, Germany. 21- 22 March.
- iii. Mohase, L. & Taiwe, B.M. 2012. Elicitors in Russian wheat aphid saliva induce defence responses in wheat. Geo-Future, Inkaba yeAfrica and Beyond, 9<sup>th</sup> Annual Workshop. Potsdam, Germany. 26-30 November.
- iv. Taiwe, B.M. & Mohase, L. 2011. Aphid saliva induces defence responses in different wheat cultivars. 37<sup>th</sup> Annual conference of the South African Association of Botanists. Grahamstown, South Africa. 17-19 January.
- v. Mohase, L. & Taiwe, B.M. 2010. Elucidation of defence responses induced by aphid saliva. 36<sup>th</sup> Annual conference of the South African Association of Botanists (Poster). Potchefstroom, South Africa. 11-14 January.

- vi. Mohase, L. 2008. Eliciting activity in wheat-aphid interaction. Plant Induced Resistance for Pest and Disease Control (PIRAC). Breakwater Lodge, Cape Town, South Africa. 26-29 October.
- vii. Kgatisho, M.A., Mohase, L. & Van der Westhuizen, A.J. 2008. Biochemical components of DN 1 and DN 5 resistance to a new Russian wheat aphid biotype. Joint Conference of the South African Association of Botanists and Southern African Society for Systematic Biology (poster). Drakensville Mountain Resort, South Africa, 14-18 January.

### **List of Publications**

- i. Mohase L, A.J. van der Westhuizen, Pretorius ZA (2011). Involvement of reactive oxygen species generating enzymes and hydrogen peroxide in the rust resistance response of sunflower (*Helianthus annuus* L.) South African Journal of Plant and Soil 28(1):64-68
- ii. Mohase, L. 2008. Plant activators in disease management. Navors. nas. Mus., Bloemfontein 24(4): 29-36
- iii. Mohase L, A.J. van der Westhuizen, Pretorius ZA (2006). Induced defence responses and rust development in sunflower. South African Journal of Science 102: 144-150
- iv. Mohase L., A.J. van der Westhuizen (2002). Salicylic acid is involved in resistance responses in the Russian wheat aphid-wheat interaction. Journal of Plant Physiology 159 (6): 585-590
- v. Mohase L., A.J. van der Westhuizen (2002). Glycoproteins from Russian wheat aphid infested wheat induce defence responses. Z. Naturforsch. 57c: 867-873

### **Membership of research bodies**

- i. South African Association of Botanists (SAAB)
- ii. American Society of Plant Biologists (ASPB)

- iii. South African Council for Natural Scientific Professions (SACNASP)

### **Work Experience**

- i. Plant physiology lecturer, University of the Free State (2003 – present)
- ii. Plant physiology junior lecturer, University of the Free State (2001-2002)
- iii. Practical Demonstrator (Plant physiology and anatomy), University of the Free State (1996-2000).
- iv. Biology high school teacher (1994-1995).

### ***Courses Offered***

- i. The Interdependence of Plants and Life on earth (Practical)
- ii. Introductory Plant Development and Biotechnology
- iii. Plant Defence and Biotechnology ( Practical)
- iv. Plant Defence and Applications

### ***Student Supervision***

- i. Adendorff J (2014-cont). Commercial plant activators and aphid resistance in wheat. PhD
- ii. Taiwe, B.M. Isolation and eliciting activity of the Russian wheat aphid saliva in the resistance response of wheat, 2008-2011. MSc.
- iii. Mthimkhulu, BK. Identification and characterization of eliciting activity of aphid (*Diuraphis noxia*) saliva in wheat cultivars, 2012. MSc.
- iv. Achilonu, C. 2012. Plant responses to South African Russian wheat aphid biotypes. BSc Hons
- v. Taiwe, B.M. 2008. Effect of Russian wheat aphid (biotype 2) infestation on pathogenesis related proteins in different wheat cultivars. BSc Hons
- vi. Kgatisho, M.A. 2007. Biochemical components of DN 1 and DN 5 resistance to a new Russian wheat aphid biotype. BSc Hons

- vii. Mokoena, T. 2005. Effect of wounding and Russian wheat aphid infestation on the defence mechanism of wheat. BSc Hons

### **Assessment**

- i. External assessment of Ms S. Lindique's MSc dissertation: "Influence of SO<sub>2</sub> fumigation on growth, photosynthesis, lipoxygenase and peroxidase activities of soybean (*Glycine max*), in open-top chambers", 2013.
- ii. Internal assessment of Ms B.M. Taiwe's MSc dissertation: "Isolation and eliciting activity of the Russian wheat aphid saliva in the resistance response of wheat", 2012.
- iii. Internal assessment of M.J. Moloi's PhD thesis: "Involvement of reactive nitrogen species in the Russian wheat aphid resistance response of wheat", 2010.
- iv. Internal assessment of M.E. Cawood's PhD thesis: "Induction of defence responses and resistance to wheat leaf rust by plant extracts", 2008.
- v. External moderator of the following modules offered at the Central University of Technology, Bloemfontein:
  - BLE10AS (Biology); 2007 – 2012
  - BLE20AS (Biology); 2006 – 2009
  - BLE30AS (Biology); 2006 - 2009
- vi. External examiner of the module PLG 753 (Molecular Plant pathology, NQF8) offered at the University of Pretoria; 2009 – 2011