



RHODES UNIVERSITY



Plant Induced Resistance for Pest and Disease Control (PIRAC)

Preliminary program



Cape Town
26 - 29 October 2008



INTERNATIONAL
FOUNDATION FOR
SCIENCE

MISTRA

THE FOUNDATION FOR STRATEGIC ENVIRONMENTAL RESEARCH

Program

Sunday October 26th,

Registration Cocktail party 6.30 p.m.
Two Oceans Aquarium

Monday October 27th

Session 1. Plant breeding for insect resistance

- 45.45 - 45.45 dr. Inger Åhman, Sweden
Plant breeding for inducible resistance against insects
- 9.45 - 10.30 prof. Owain Edwards, Australia
New strategies to achieve aphid resistance by manipulating effector-induced signalling pathways

10.30 - 11.00 **Coffee Brake**

- 45.45 - 45.45 prof. Lisbeth Jonsson, Sweden
Microarray analysis of gene expression reveals large differences in genes induced by *Rhopalosiphum padi* in four barley lines with different aphid resistance

Session 2. Structural and Molecular plant responses to insect stress

- 11.45-12.30 prof. Ted Botha, SA
Loss of vascular functionality during aphid infestation: Causes and effects
- 30.30 - 30.30 **Lunch**
- 15.15 - 15.15 prof. Amie van der Westhuizen, SA
A review on the biochemical resistance response in wheat to the Russian wheat aphid
- 15.15 - 15.00 prof. Graeme Bradley, SA
Wheat stress responses during Russian wheat aphid infestation: An analysis of differential protein regulation during plant stress responses
- 30.30 - 30.30 **Tea brake**
- 16.16 - 16.00 dr. Botma Visser, SA
Characterization of some early defence responses of wheat infected with *Puccinia* spp.
- 30.30 - 30.30 dr. Ms. Lintle Mohase, SA
Eliciting activity in wheat-aphid interaction
- 16.30 - 17.00 dr. Saheed Sefiu Adekilekun, SA/Sweden
Aphid-induced regulation of *N*-methyltransferase involved in gramine biosynthesis in different barley cultivars: effects on transcriptional, protein and metabolites levels
- 19.00 **Dinner at Moyo, Spier Estate** (bus from Breakwater Lodge at 18.15 parked in Portswood Road)

Tuesday October 28th

Session 2. Structural and Molecular plant responses to insect stress

- 30.30 - 30.30 dr. Vicky Tolmay
Constitutive and Induced Host Plant Resistance: EPG measurement of Russian wheat aphid, *Diuraphis noxia*, probing behaviour on noninfested and preinfested plants
- 50.50 - 50.50 Mr Ibraheem Omodele (student Bradley)
The effect of aphid phloem-feeding on expressional levels of sucrose transporter genes in rice (*Oryza sativa* L. cv Nipponbare)
- 10.10 - 10.10 Ms Runyararo M. Hove (student Bradley)
Evolutionary development and functional role of PNP (Plant Natriuretic Peptide)-B
- 30.30 - 30.30 Ms Thulile Ndlovu (student Bradley)
Cereal stress responses during Russian wheat aphid and Bird cherry-oat aphid infestation: An analysis of the temporal and spatial expression and regulation of callose synthases
- 11.11 - 11.00 **Coffee brake**
- 11.00 - 11.20 **Jimoh Mahboob** (student Botha)
- 11.20 - 11.40 Shaun Walton (student Botha)
- 11.40 - 12.30 Opportunities for collaboration
Presentations of programs (*Linnaeus-Palme, SIDA, STINT, IFS stipendier*)
- 12.30 - 13.30 **Lunch**
- Afternoon Excursion- Robben Island tour***
- 13.15 Tour guide to accompany group from BWL to the Nelson Mandela Gateway, V&A Waterfront Clock Tower Precinct. View museum before ferry
departure at 14.00
- 18.00 Return to Gateway
- 19.00 Dinner at OYO at the V&A Hotel**, walking distance from Breakwater Lodge

Wednesday October 29th

Managing pathogen and insect stress through cropping systems and treatments

45.45 - 45.45 Ass. prof. Ms. Wafaa Mohamed Haggag, Egypt
Biotechnology and Plant Disease Management

30.30 - 30.30 dr. Velemir Ninkovic, Sweden
Plant-plant interaction - a multitrophic phenomenon?
Studies in a barley crop system

1.1 - 1.00 **Coffee**

45.45 - 45.45 dr. Robert Glinwood, Sweden
Chemical interactions between plants, pests and predators: leads for sustainable crop protection?

30.45 - 30.30 prof. Ms. Afaf Hamada, Egypt
Thiamine as a possible bio-control agent to bird-cherry-oat aphid for use instead of chemical insecticides

30.30 - 30.30 **Lunch**

14.14 - 14.00 dr. Goddy Prinsloo, South Africa
Interaction of aphid repellent semiochemicals with parasitoids of the Russian wheat and aphid resistant cultivars

30.30 - 30.30 Khalid A Hussein, Egypt
Relative virulence of two isolates of *Beauveria bassiana* (Balsamo) Vuillemin and one isolate of *Metarhizium anisopliae* (Metsch.) (Fungi: Hyphomycetes) on the bean aphid, *Aphis craccivora* (Koch) (Homoptera: Aphididae)

15.15 - 15.00 Rasha M.S. El-Shazoly, Egypt
Wheat aphids in Egypt, their current status and options for management

30.30 - 30.30 **Tea brake**

15.30 - 17.00 Collaboration opportunities. Discussions

18.00 **Closing Dinner at Venue**