

# Oomycete Molecular Genetics Network Meeting

Birnam, Perthshire, Scotland UK

6<sup>th</sup> – 8<sup>th</sup> May 2008

## SCIENTIFIC PROGRAMME

### 6<sup>th</sup> May

- 4.00 pm**      **Registration (Birnam Institute)**
- 6-7:00 pm**    **Pre-dinner drink (Birnam Institute)**
- 7.30 pm**      **Dinner (Birnam House Hotel)**

### 7<sup>th</sup> May

#### **Birnam Institute**

- 9.00 am      Welcome by Paul Birch
- 9.10 am      **Session 1:**  
Chair: Pieter van West
- 9.10 am      Frithjof Kuepper (SAMS Oban Scotland)  
Oomycete pathogens of marine brown algae
- 9.20 am      Claire Gachon (SAMS Oban Scotland)  
A conserved immune response of brown algae against the oomycete pathogen *Eurychasma dicksonii*?
- 9.30 am      Javier Dieguez-Uribeondo (CSIC Madrid Spain)  
Phylogenetic relationships among plant and animal parasitic species in *Aphanomyces* (Oomycetes)
- 9.40 am      Andrew Phillips (University of Aberdeen, Scotland)  
Molecular studies of the *Saprolegnia*-fish interaction
- 10.00 am     Vicky Anderson (University of Aberdeen)  
A *Saprolegnia parastica* cDNA library: mining ESTs for potential vaccine candidates
- 10.10 am     Krajaejun Theerapong (Mahidol University, Bangkok, Thailand)  
Do You Know Human Pythiosis?
- 10.20 am     **coffee/tea, posters**

- 10.50 am      **Session 2:**  
Chair: Laura Grenville-Briggs
- 10.50 am      David Cooke (SCRI, Dundee Scotland)  
Examining the drivers in a dramatic shift in *P. infestans* populations
- 11.10 am      Josiane Chuisseau Wandji (University of the West of England, Bristol)  
Differential Abundance of Proteins In Pre-invasion Stages Of The Downy Mildew Oomycete *Peronospora Viciae*
- 11.20 am      Alon Savidor (University of Tennessee, USA)  
The *Phytophthora capsici*-Tomato Interactome
- 11.30 am      Elodie Gaulin (CNRS-Université Paul Sabatier, France)  
Transcriptome of *Aphanomyces euteiches*: new oomycete pathogenicity factors and metabolic pathways
- 11.40 am      Ryan Anderson (Virginia Tech Blacksburg USA)  
Characterizing Conserved Effector Proteins from *Hyaloperonospora parasitica*
- 11.50 am      Liliana Cano (The Sainsbury Laboratory, Norwich, England)  
Exploiting transcriptome sequences to understand effector evolution in the *P. infestans* species cluster
- 12:00 pm      Rays Jiang (Broad Institute, MIT Boston)  
Genome plasticity revealed by comparative genomics of *Phytophthora* isolates, sibling species and distant relatives
- 12.10 pm      Eric Kemen (The Sainsbury Laboratory, Norwich)  
Identification of novel effectors from *Albugo candida* using Solexa cDNA sequencing techniques
- 12.30 pm      Walid Hamada (National Agronomic Institute of Tunisia)  
Monitoring *Phytophthora infestans* epidemics on potato and tomato in Tunisia using molecular tools
- 12.40 pm      **Close of session – Lunch (Birnam House Hotel)**

**1.30pm – 4.00pm free**

- 4.00 pm      **Session 3 (Birnam Institute):**  
Chair: Eleanor Gilroy
- 4.00 pm      Brett Tyler (VBI Virginia Tech, USA)  
RXLR-mediated entry of *Phytophthora sojae* effector *Avr1b* into soybean cells does not require pathogen encoded machinery

- 4.20 pm Miles Armstrong (SCRI, Dundee, Scotland)  
Identification of the host targets of *Phytophthora infestans* intracellular effector AVR3a
- 4.40 pm Jorunn Bos (The Sainsbury Laboratory, Norwich, England)  
Molecular basis of cell death suppression by the *P. infestans* RXLR effector AVR3a.
- 4.50 pm Ros Taylor (University of Glasgow, Scotland)  
The Possible Role of Avr3a in Ubiquitination
- 5.00 pm Shiv Kale (Virginia Tech Blacksburg USA)  
Conserved C-terminal motifs required for avirulence and suppression of cell death by *Phytophthora sojae* effector Avr1b
- 5.20 pm Sebastian Schornack (The Sainsbury Laboratory, Norwich, England)  
Regulation of host genes by Nuk10, a nuclear localised RXLR-effector of *P. infestans*.
- 5.30 pm Volkan Cevik (Warwick HRI, University of Warwick, England)  
Genetic analysis of the *RPP13/ATR13* interaction complex between downy mildew and Arabidopsis
- 5.40 pm **close of session**
- 6.00 pm **keynote lecture (Birnam Institute):** Gordon Beakes (Newcastle University)  
*NATURAL BORN KILLERS*: insights into oomycete origins and infection diversity gained from studies on pathogens of algae and animals.
- 7.00 pm **Dinner followed by ceilidh (Birnam House Hotel)**

## **8<sup>th</sup> May**

### **Birnam Institute**

- 9.00 am      **Session 5:**  
Chair: Edgar Huitema
- 9.00 am      Isabell Kuefner (University of Tuebingen, Germany)  
NLPs – Virulence Factors from Oomycetes, Fungi and Bacteria that Affect the Integrity of the Plasma Membrane of Dicots
- 9.20 am      Guido van den Ackerveken (Utrecht University, The Netherlands)  
Why are the Arabidopsis *dmr* mutants resistant to downy mildew?
- 9.40 am      Harold Meijer (Wageningen University, The Netherlands)  
*Phytophthora* phospholipase D genes and their role in plant cell degradation
- 10.00 am     Frederic Brunner (ZMBP-Eberhard Karls University, Tübingen, Germany)  
Toward the Identification of Oomycete Effectors suppressing PAMP-triggered Immunity in *Arabidopsis thaliana*
- 10.10 am     Patricia Manosalva (Boyce Thompson Institute for Plant Research, Ithaca, USA)  
Potato's SA-binding protein 2 ortholog (StSABP2) is required for SAR against *Phytophthora infestans* induced by prior treatment with arachidonic acid
- 10.30 am     Joe Win (The Sainsbury Laboratory, Norwich, England)  
Identification of plant proteins targeted by oomycete RXLR effectors using *in planta* co-immunoprecipitation.
- 10.40 am     coffee/tea, Posters**
- 11.10 am     **Session 6:**  
Chair: Elodie Gaulin
- 11.10 am     Nicholas Champouret (Wageningen University, The Netherlands)  
(A)virulence on *Rpi-blb1* expressing plants is determined by the *ipiO* effector family from *Phytophthora infestans*
- 11.20 am     Edgar Huitema (The Sainsbury Laboratory, Norwich, England)  
A multi-faceted approach towards understanding the function of the *Phytophthora infestans* Crinkler protein family, particularly the CRN16 class
- 11.40 am     Amin Madoui (CNRS-Université Paul Sabatier, France)

- Sterols biosynthesis In *Aphanomyces euteiches*, new target for pea root rot management.
- 11.50 am Hendrik Rietman (Wageningen University, The Netherlands)  
Avirulence mining in the secretome of *Phytophthora infestans*:  
Implications for durable resistance.
- 12.00 pm Paul Morris (Bowling Green State Univ., Ohio, USA)  
In Silico Identification of Regulatory Elements of the ABCA Gene Family  
and the Sulfate Assimilation Genes of Oomycete.
- 12.10 am Leighton Pritchard (SCRI, Dundee Scotland)  
Bioimaging of *P. infestans* stages and computational toolbox
- 12.20 am Close of session
- 12.30 pm Lunch (Birnam House Hotel)**
- 2.00 pm **Session 7 (Birnam Institute):**  
Chair: Dinah Qutob
- 2.00pm Ping Kong (HRAREC, Virginia Tech, USA)  
Quorum sensing controls zoospore behaviour of *Phytophthora*
- 2.20 pm Ilham Badreddine (CNRS-Université Paul Sabatier, France)  
Chitosaccharides are cell-wall structural components and exposed patterns  
of the phytopathogenic oomycete *Aphanomyces euteiches*
- 2.30 pm Howard Judelson (University of California, Riverside, USA)  
Dissecting transcriptional networks controlling the development of  
*Phytophthora infestans* through bioinformatic and functional approaches
- 2.50 pm Laura Grenville-Briggs (University of Aberdeen, Scotland)  
Appressorium formation in *Phytophthora infestans*.
- 3.10 pm Mireille van Damme (The Sainsbury Laboratory, Norwich, England)  
Deciphering the role of *Phytophthora* CRN8 effectors in pathogenicity
- 3.20pm Sucheta Tripathy (VBI Virginia Tech, USA)  
Pathogenicity islands and putative alien genes in the genomes of *P. sojae*  
and *P. ramorum*.
- 3.30 pm coffee/tea, Posters**
- 4.00 pm **Session 8:**  
Chair: Leighton Pritchard
- 4.00 pm Ramesh Vetukuri  
Components of gene silencing in *Phytophthora infestans*

- 4.10 pm Johnathan Hulvey (University of Tennessee, Knoxville, USA)  
ENU induced mitotic gene conversion in *Phytophthora capsici*.
- 4.20 pm Dinah Qutob (Agriculture Canada, London Canada)  
Copy number polymorphisms and transcriptional silencing of *Avr1a* and *Avr3a* effector genes in *Phytophthora sojae*
- 4.40 pm Guohong Cai (Cornell University, Ithaca, USA)  
Bioinformatic and experimental identification of microRNAs in *Phytophthora*
- 5.00 pm Joann Mudge (NCGR, Santa Fe, USA)  
*De novo* Hybrid 454/Sanger Genome Assembly of the eukaryotic pathogen, *Phytophthora capsici*
- 5.20 pm Laura Baxter (Warwick HRI, University of Warwick, England)  
*Hyaloperonospora* genome
- 5.40 pm Mike Zody (The Broad Institute MIT Boston USA)  
Progress on Analysis of the *Phytophthora Infestans* Genome
- 6.00 pm Close of session
- 6.00 pm Discussion Session
7. 00 pm Close of meeting
- 7.30 pm Conference Dinner (Birnam House Hotel)**