

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

**1.30pm – 4.00pm free**

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

4.20 pm	Miles Armstrong (SCRI, Dundee, Scotland) Identification of the host targets of <i>Phytophthora infestans</i> intracellular effector AVR3a
4.40 pm	Jorunn Bos (The Sainsbury Laboratory, Norwich, England) Molecular basis of cell death suppression by the <i>P. infestans</i> 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 <i>Phytophthora sojae</i> effector Avr1b
5.20 pm	Sebastian Schornack (The Sainsbury Laboratory, Norwich, England) Regulation of host genes by Nuk10, a nuclear localised RXLR-effector of <i>P. infestans</i> .
5.30 pm	Volkan Cevik (Warwick HRI, University of Warwick, England) Genetic analysis of the <i>RPP13/ATR13</i> interaction complex between downy mildew and <i>Arabidopsis</i>
5.40 pm	<b>close of session</b>
6.00 pm	<b>keynote lecture (Birnam Institute):</b> Gordon Beakes (Newcastle University) <i>NATURAL BORN KILLERS:</i> insights into oomycete origins and infection diversity gained from studies on pathogens of algae and animals.
<b>7.00 pm</b>	<b>Dinner followed by ceilidh (Birnam House Hotel)</b>

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

### **Birnam Institute**

9.00 am	<b>Session 5:</b> 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 <i>Arabidopsis dmr</i> mutants resistant to downy mildew?
9.40 am	Harold Meijer (Wageningen University, The Netherlands) <i>Phytophthora</i> 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 <i>Arabidopsis thaliana</i>
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 <i>Phytophthora infestans</i> 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 <i>in planta</i> co-immunoprecipitation.
<b>10.40 am</b>	<b>coffee/tea, Posters</b>
11.10 am	<b>Session 6:</b> Chair: Elodie Gaulin
11.10 am	Nicholas Champouret (Wageningen University, The Netherlands) (A)virulence on <i>Rpi-blb1</i> expressing plants is determined by the <i>ipiO</i> effector family from <i>Phytophthora infestans</i>
11.20 am	Edgar Huitema (The Sainsbury Laboratory, Norwich, England) A multi-faceted approach towards understanding the function of the <i>Phytophthora infestans</i> Crinkler protein family, particularly the CRN16 class
11.40 am	Amin Madoui (CNRS-Université Paul Sabatier, France)

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

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