



**ACPF**G

AUSTRALIAN  
CENTRE FOR PLANT  
FUNCTIONAL GENOMICS  
PTY LTD



**ITMI Workshop /  
ACPF Genomics Symposium**



**2006 Program**

McCracken Country Club, Victor Harbor  
South Australia  
27th – 31st August 2006

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## 2006 ITMI workshop & ACPFG Genomics Symposium

### Sunday, 27th August

- 9:00 am** Transfer departs Plant Genomics Centre, Waite Campus *Arrive approx. 10.00 am*  
**10:00** International Wheat Genome Sequencing Consortium (IWGSC) business meeting  
**1:00** Lunch  
**2:00** ITMI Business meeting and discussion of the ITMI Vision and Mission  
**4:00** Transfer departs Plant Genomics Centre, Waite Campus *Arrive approx. 5.00 pm*  
**6:30** Informal BBQ

### Monday 28th August

- 7:45 am** Transfer departs Plant Genomics Centre, Waite Campus *Arrive approx. 9.00 am*  
 Towards a full Triticeae genome sequence - Chair: Rachel Burton  
**9:00 - 9:40** Bikram Gill, Kansas State University, USA  
 Laying the foundation for wheat genome and trait analysis: A sequence-ready physical map of hexaploid wheat  
**9:40 - 10:20** Catherine Feuillet, INRA, France  
 Analysis of 11Mb of BAC-end sequences from chromosome 3B of hexaploid wheat reveals features of the B-genome and leads to the efficient development of chromosome-specific markers in wheat  
**10:20 - 10:50** Rudi Appels, MPBCRC, WA  
 Update on the sequence analysis of MTP BACs in the Sr2 region of 3BS  
**10:50 - 11:10** Morning tea  
**11:10 - 11:40** Nabila Yahiaoui, University of Zurich, Switzerland  
 Comparative genomics of disease resistance loci in grasses.  
**11:40 - 12:20** Andreas Graner, IPK, Germany  
 Towards sequencing the barley genome  
**12:20 - 12:50** Jan Svensson, University of California, USA  
 Coupling the barley physical and genetic maps in relation to 1000 abiotic stress-regulated genes  
**12:50 - 2:00** Lunch  
**2:00 - 2:40** John Snape, John Innes Centre, UK  
 Brachypodium as a 'stepping-stone' for genome analysis in small-grained cereals  
**2:40 - 3:20** Olin Anderson, Western Regional Research Centre, University of California  
 Progress on understanding the structure of the Brachypodium genome  
**3:20 - 3:40** Afternoon tea



## Monday 28th August *(cont)*

Genetics to varieties - Chair: Jason Able

**3:40 - 4:10** Helen O'Sullivan, Bristol University, UK

Towards high throughput genotyping in wheat using mapped SNPs: the second step

**4:10 - 4:40** Jan Dvorak, UC Davis, USA

SNPs, new generation high-throughput markers for wheat genetics and breeding

**4:40 - 5:10** Mark Sutherland, Centre for Systems Biology, University of Southern Queensland, Australia

Mapping markers for priority traits in the northern grains region of Australia

**5:10 - 5:40** Ken Chalmers, MPBCRC, Adelaide, Australia

Integrating Molecular Genetics into Barley Breeding

**5:40** Close for the day

**6:00** Networking Happy Hour

**7:00** Dinner

**8:00** Quiz night

## Tuesday 29th August

Genetics to function - Chair: Ute Baumann

**9:00 - 9:40am** Yasunari Ogihara, Kihara Institute for Biological Research, Kyoto, Japan

Comprehensive analysis of wheat ESTs in response to environmental stresses

**9:40 - 10:20** Kazuhiro Sato, Research Institute for Bioresources, Okayama University, Japan

Applications of barley EST markers for the analysis of Triticeae germplasm

**10:20 - 10:50** Andreas Schreiber, ACPFG, Adelaide, Australia

Wheat and barley: embarking on comparative transcriptomics for the cereals

**10:50 - 11:10** Morning tea

**11:10 - 11:40** Ute Roessner, ACPFG, Melbourne, Australia

Investigation of plant responses to environmental stress

**11:40 - 12:20** Robbie Waugh, SCRI, Scotland UK

Realising the potential for whole genome LD-scans in barley

**12:20 - 1:00** Mark Sorrells, Cornell University, USA

Linkage Disequilibrium and Association Mapping in Wheat Improvement

**1:00 - 2:00** Lunch

Other Species - Chair: Renata Polotnianka

**2:00 - 2:30** Thomas Dresselhaus, University of Regensburg, Germany

A transcriptomics approach to study female gametophyte functions in wheat and maize

**2:30 - 3:00** Andrew Jacobs, ACPFG, Adelaide, Australia

What does moss have that higher plants do not?

**3:00 - 3:30** Afternoon tea



## Tuesday 29th August *(cont)*

- 3:30 - 4:00** Richard Oliver, Murdoch University, Perth, Australia  
 Multiple fungal toxin host-specific susceptibility gene interactions in the wheat-stagonospora pathosystem; implications for QTL mapping of resistance genes of Dothideomycetes.
- 4:00 - 4:30** Alex Johnson, ACPFG, Adelaide, Australia  
 Rice as a model for studying cell type-specific gene expression in cereals
- 4:30 - 5:00** Stuart Roy, ACPFG, Adelaide, Australia  
 Use of Arabidopsis to direct engineering of salinity tolerance in cereals
- 5:00 - 5:30** Peter Gresshoff, ARC Centre for Integrative Legume Research, Brisbane, Australia  
 How does a plant control organ number? Molecular mechanism derived from functional genomics
- 5:30** Close for the day
- 7:00** Dinner
- 8:00** Poster presentations and dessert

## Wednesday 30th August

- Genetics to genes - Chair: Chunyuan Huang
- 9:00 - 9:40am** Roger Wise, Iowa State University, USA  
 GeneChip analysis of innate immunity to plant disease
- 9:40 - 10:20** Evans Lagudah, CSIRO, Canberra, Australia  
 Mutational and comparative genomic analysis of a multi-pathogenic disease resistance locus in wheat
- 10:20 - 10:50** Raja Kota, CSIRO, Canberra, Australia  
 Towards map-based cloning of Sr2, a durable stem rust resistance gene in hexaploid wheat (*Triticum aestivum* L.)
- 10:50 - 11:20** Morning tea
- 11:20 - 12:00** Patrick Hayes, Department of Crop and Soil Science, Oregon State University, USA  
 Have a blast and a cold one: perspectives on barley stress resistance and growth habit
- 12:00 - 12:30** Nick Collins, ACPFG, Adelaide, Australia  
 Positional cloning projects at ACPFG
- 12:30 - 1:00** Andrew Chen, ACPFG, Adelaide, Australia  
 Investigation of reproductive frost tolerance in wheat and barley
- 1:00 - 2:00** Lunch
- 2:00** Free time
- 6:30** Conference Dinner at Currency Creek Estate Winery



## Thursday 31st August

Genetics to genes II - Juan Juttner

**9:00 - 9:40am** Daryl Somers, Ag Canada, Canada

Making sense of genetic maps, expression maps, linkage disequilibrium and wheat breeding

**9:40 - 10:10** Abraham Korol, University of Haifa, Israel

Do we have satisfactory quality of cereal maps?

**10:10 - 10:40** Wolfgang Spielmeier, CSIRO, Canberra, Australia

A sodium transporter is a candidate gene for Nax1, a gene for salt tolerance in durum wheat.

**10:40 - 11:10** Morning tea

**11:10 - 11:40** Boulos Chaloub, INRA, Evry, France

Unravelling molecular basis of polyploidy-related evolutionary events that shaped the genomes of wheat species (Triticum and Aegilops)

**11:40 - 12:10** Peter Sharp, University of Sydney, Australia

Identification of GBSS and puroindoline allelic variation by TILLING

**12:10 - 12:40** Tzion Fahima, University of Haifa, Israel

Application of genomic tools for utilization of wild emmer wheat germplasm: From genetic diversity to positional cloning

**12:40 - 12:50** Peter Langridge, ACPFG

Conference close

**1:00** Lunch

**2:00** Depart McCracken Country Club

Arrive Adelaide Airport

*Approx. 3.30 pm*

Arrive Waite Campus

*Approx. 3.30 pm*