

MONDAY 24 JUNE 2013

07:30 – 20:00

REGISTRATION

Location: Parkside Foyer

18:00 – 20:00

OPENING/WELCOME MIXER

18:30 – 18:40

Official Opening

Professor Barry Pogson, Australian National University
Chair, ICAR 2013

Location: Parkside Foyer

08:30 – 09:15

KEYNOTE LECTURE

08:30 – 08:35

Introduction

Dr Jim Peacock, CSIRO Plant Industry, ACT

Location: Parkside Auditorium

08:35 – 09:15

KEY-TUE-01

Arabidopsis thaliana and its relatives as model systems for the study of evolutionary questions

Weigel, D. (Germany)

Dr Detlef Weigel



Detlef Weigel did his PhD work in *Drosophila* where he discovered the founding member of an important class of transcription factors, the Forkhead/FOX proteins. He did his postdoctoral research with Elliot Meyerowitz at Caltech, where he cloned the floral regulator *LEAFY* from *Arabidopsis thaliana*. From 1993 to 2002, he was an Assistant and then Associate Professor at the Salk Institute for Biological Studies in La Jolla. In 2002, he was appointed Director at the Max Planck Institute for Developmental Biology, where he founded the Department for Molecular Biology. His current research interests range from plant development and miRNAs to natural genetic variation and evolutionary genomics. Examples of work during the past decade include the discovery of the first plant miRNA mutant, initiating the 1001 Genomes project for *Arabidopsis thaliana*, and discovering autoimmunity in hybrids as a potential barrier of gene flow. In 2008, Detlef was elected a Member of the German Academy of Sciences Leopoldina and in 2009 he was elected to the US National Academy of Sciences. He is a foreign member of the Royal Society, London (2011) and received the Otto Bayer Award of the Bayer Foundations in 2010.

09:15 – 10:00

KEYNOTE LECTURE

09:15 – 09:20

Introduction

Dr Jim Peacock, CSIRO Plant Industry, ACT

Location: Parkside Auditorium

09:20 – 10:00

KEY-TUE-02

Experimental genome evolution in plants

Bock, R. (Germany)

Professor Ralph Bock

Professor Ralph Bock is the current Director of the Department for Organelle Biology, Biotechnology and Molecular Ecophysiology at the Max Planck Institute of Molecular Plant Physiology in Potsdam-Golm. Ralph graduated in Biology/Genetics at the University of Halle (1993) and completed his PhD at the State University of New Jersey (USA) and University of Freiburg (Germany) in 1996. Subsequently, he was recruited as an Assistant Professor (University of Freiburg, Germany; 1996 – 2001), where he undertook a German Habilitation in genetics and molecular biology. Ralph became a Full Professor and Chair of the Institute for Biochemistry and Plant Biotechnology at the University of Münster (2001) and became Director and Scientific Member at the Max Planck Institute for Molecular Plant Physiology in Potsdam-Golm in 2004. Ralph is recognised as an Honorary Professor at the University of Potsdam and is an elected member of the National Academy of Science (Leopoldina). Ralph's research interests include plastid genetics and molecular biology, photosynthesis, evolutionary and systems biology and gene expression in the green algal model *Chlamydomonas*. In addition, his team has developed biotechnological applications of plastid transformation being used for molecular farming, metabolic engineering and resistance engineering in plants.



10:00 – 10:30 *Morning Tea / Exhibition / Posters*

Location: Parkside Foyer

10:30 – 11:00

PLENARY LECTURE

Chair: Dr Jean Finnegan, CSIRO Plant Industry, ACT

Location: Parkside Auditorium

10:30 PLE-TUE-01

Making a difference: asymmetry, fate and self-renewal in the stomatal lineage

Bergmann, D.C., Adrian, J., Lau, O.S., Davies, K., Northover, C., Rowe, M., Abrash, E., Matos, J. and Ballenger, C. (USA)

Professor Dominique Bergmann



Dominique has made major advances in our understanding of the control of cell fate, stem cells, and asymmetric cell division. She has achieved this by genetic dissection of stomatal development in *Arabidopsis* leaves and stems. Her battery of discoveries include genes that encode (1) the bHLH transcription factors SPEECHLESS and FAMA involved in cell fate transitions; (2) upstream signalling molecules CHALLAH (an EPL ligand) and YODA (a MAPKK kinase); and (3) BASL that determines the asymmetry of the first cell division. Her focus on cell division polarity began as a PhD student in Boulder, Colorado, working on the early establishment of left-right asymmetry in the nematode *Caenorhabditis elegans*. Her groundbreaking discoveries in *Arabidopsis* began with Chris Somerville at the Carnegie Institution at Stanford, and have continued in her own research group in the Department of Biology. Dominique was awarded a Presidential Early Career Award in 2010, and in June 2011 she was named a Gordon and Betty Moore Foundation Investigator of the Howard Hughes Medical Institute.

11:00 – 11:30

PLENARY LECTURE

Chair: Dr Jean Finnegan, CSIRO Plant Industry, ACT

Location: Parkside Auditorium

11:00 **PLE-TUE-02**

A code for RNA recognition by pentatricopeptide repeat proteins

Small, I.D. (Australia)

Professor Ian Small

Professor Ian Small leads a team investigating the mechanisms by which the ‘energy organelles’ (mitochondria and chloroplasts) express the genes from their highly derived and much reduced genomes. After a career with INRA in France, he was chosen in 2006 as Director of the new ARC Centre of Excellence in Plant Energy Biology, head-quartered in Perth, Western Australia. The highly successful Centre includes 7 main research teams and several younger affiliated groups all working on understanding how plants acquire, store and use their energy reserves during growth and development. The primary model used in the research is *Arabidopsis*. Ian is best known for his research on pentatricopeptide repeat (PPR) proteins, a large family of RNA binding proteins with key roles in mitochondrial and chloroplast gene expression. A particular feature of his research is the intertwining of classical molecular biology with computational approaches. In 2006 he was selected as a WA Premier’s Fellow.



11:30 – 12:00

PLENARY LECTURE

Chair: Dr Jean Finnegan, CSIRO Plant Industry, ACT

Location: Parkside Auditorium

11:30 PLE-TUE-03

Flowering time regulation mediated by protein arginine methylation

Cao, X.F. (China)

Professor Xiao Feng Cao



Professor Xiaofeng Cao is currently working at the Institute of Genetics and Developmental Biology, Chinese Academy of Sciences, Beijing, China. Xiaofeng completed her PhD in Plant Molecular Biology at the National Laboratory of Protein Engineering and Plant Genetic Engineering, College of Life Sciences, Peking University, Beijing, before taking a lecturing position in the College of Life Sciences, Peking University. She was a visiting scholar with Liam Dolan at the John Innes Centre, a postdoctoral fellow with John Rogers at Washington State University and a Research Associate with Steve Jacobsen at UCLA where she cloned and characterised *CMT3*, a gene encoding a chromomethylase, a novel DNA methyltransferase that is unique to plants. Cao then returned to China where she started her own group working on epigenetic regulation in higher plants. Using both *Arabidopsis* and rice as model organisms, she is interested in understanding how gene expression and plant development are regulated by histone modifications and small non-coding RNAs. The main focus of her research is the role of histone methylation in *Arabidopsis* flowering time regulation and small RNA biogenesis and function in rice development. Xiaofeng received the Excellent Performance Award from the Chinese Academy of Science in 2006 and a DuPont Young Professor Award in 2008.

12:00 – 12:50 *Lunch / Exhibition / Posters*

Location: Parkside Foyer

12:50 – 14:20

WORKSHOP 1

EPIC: EPIGENOMES OF PLANTS INTERNATIONAL
CONSORTIUM

Chairs: Dr Elizabeth Dennis, CSIRO Plant Industry, ACT
Dr Jim Peacock, CSIRO Plant Industry, ACT
Professor Doris Wagner, University of Pennsylvania, USA

Location: Parkside Auditorium

12:50 WORK-01-01

Chromatin remodelling in inducible gene expression
Wu, M.-F., Han, S.-K., Sang, Y. and **Wagner, D.** (USA)

13:10 WORK-01-02

The EPIC-CoGe Browser for *Arabidopsis* epigenomic data
Gregory, D.B., Bomhoff, M., Li, F. and Lyons, E. (USA)

13:35 WORK-01-03

An endogenous mobile RNAi pathway required for stress
response in plants
Brosnan, C.A., Lim, P. and Voinnet, O. (Switzerland)

13:46 WORK-01-04

Epigenetic regulation of carotenoid biosynthesis: impacts on
plant development
Cazzonelli, C.I., Watkins, J., Holland, S., Hou, X. and Pogson,
B.J. (Australia)

13:57 WORK-01-05

Recruitment and changes to histone modifications on *FLC*
chromatin in response to changes in transcription
Helliwell, C.A. and Robertson, M. (Australia)

14:08 WORK-01-06

Identification of long non-coding RNAs involved in RNA-
directed DNA methylation in plants
Au, P.C.K., Dennis, E.S. and **Wang, M.-B.** (Australia)

12:50 – 14:20

WORKSHOP 2

REDOX SIGNALING IN MITOCHONDRIA

Chairs: Professor Jim Whelan, University of Western Australia, WA
Dr Michael Considine, University of Western Australia, WA
Professor Christine Foyer, University of Leeds, UK

Location: Parkside 110B

12:50 WORK-02-01

Tissue specificity of proteins of the mitochondrial TCA cycle revealed by selected reaction monitoring mass spectrometry

Taylor, N.L., Fenske, R. and Millar, A.H. (Australia)

13:10 WORK-02-02

Dynamics behind the static mitochondrial proteome through protein turnover analysis in Arabidopsis

Millar, A.H., Nelson, C.J. and Li, L. (Australia)

13:30 WORK-02-03

The role of auxin in the mitochondrial stress response

Ivanova, A.D., Van Der Merwe, M., Law, S., Duncan, O., Ng, S., Van Aken, O. and Whelan, J. (Australia)

13:50 WORK-02-04

Knockdown of mitochondrial-located glutaredoxin S15 reveals a role in arsenic toxicity

Stroeher, E. and Harvey, A.H. (Australia)

14:10 FINAL DISCUSSION

14:30 – 16:00

SYMPOSIUM 1

NATURAL VARIATION, EVOLUTION AND PHENOMICS I

*Sponsored by School of Biological Sciences, Faculty of Science,
Monash University, Australia*

Chairs: Dr Norman Warthmann, Australian National University, ACT,
A/Prof Justin Borevitz, Australian National University, ACT

Location: Parkside Auditorium

14:30 SYM-01-01

The genotype-phenotype map in *Arabidopsis*
Nordborg, M. (Austria)

15:00 SYM-01-02

Decoding the complexity of quantitative natural variation and response to the environment in *Arabidopsis thaliana*
Loudet, O. (France)

15:25 SYM-01-03

Natural variation of a gene network regulating trichome patterning
Jaegle, B., Schrader, A., Failmerzger, H., Rishmawi, L., Klasen, J., Schneeberger, K., Stich, B., Tresch, A. and Hulskamp, M. (Germany)

15:40 SYM-01-04

Natural variation in the developmental consequences of a loss of chloroplast translation in *Arabidopsis thaliana*
Bryant, N., Wang, Y. and Meinke, D. (USA)

14:30 – 16:00

SYMPOSIUM 2

HORMONES

Chairs: Dr Chris Cazzonelli, Australian National University, ACT
Dr Brian Jones, University of Sydney, NSW

Location: Parkside 110B

14:30 SYM-02-01

Ins and outs of Arabidopsis peroxisome biogenesis

Bartel, B. (USA)

15:00 SYM-02-02

Strigolactone biosynthesis and roles in plant development

Brewer, P.B. and **Beveridge, C.A.** (Australia)

15:25 SYM-02-03

Auxin signaling and growth rhythmicity at the shoot apical meristem

Oliva, M., Milani, P., Brunoud, G., Mirabet, V., Hamant, O., Boudaoud, A. and Vernoux, T. (France)

15:40 SYM-02-04

DAD2, a protein involved in strigolactone perception

Snowden, K.C., Drummond, R.S.M., Janssen, B.J., Hamiaux, C., Ledger, S.E., Cooney, J.M. and Newcomb, R.D. (New Zealand)

16:00 – 16:30 *Afternoon Tea / Exhibition / Posters*

Location: Parkside Foyer

16:30 – 18:00

SYMPOSIUM 3

DEVELOPMENT I

Chairs: Dr Mary Byrne, University of Sydney, NSW
Dr Richard Macknight, University of Otago, New Zealand
Location: Parkside Auditorium

16:30 SYM-03-01

The developmental phase transition to flower formation
Yamaguchi, N., Winter, C., Yamaguchi, A., Pastore, J. and
Wagner, D. (USA)

17:00 SYM-03-02

Using bryophyte models to understand land plant evolution
Bowman, J.L., Flores, E., Dierschke, T., Hirakawa, Y., Eklund,
D.M., Alvarez, J., Furumizu, C. and Ryan, J. (Australia)

17:25 SYM-03-03

The boundary-specific transcription factor LATERAL ORGAN
BOUNDARIES limits growth by repressing brassinosteroid
accumulation
Bell, E.M., Lin, W.-C., Husbands, A.Y., Yu, L., Jaganatha, V.,
Jablonska, B. and **Springer, P.S.** (USA)

17:40 SYM-03-04

The C2-domain protein QUIRKY and the atypical receptor-like
kinase STRUBBELIG localize to plasmodesmata and mediate
tissue morphogenesis in *Arabidopsis thaliana*
Vaddepalli, P., Yashodar, B., Hillmer, S., Robinson, D.G. and
Schneitz, K. (Germany)

16:30 – 18:00

SYMPOSIUM 4

PHOTOSYNTHESIS AND DROUGHT

Chairs: Professor Peter Jahns, University of Duesseldorf, Germany
Dr Robert Sharwood, University of Western Sydney, NSW

Location: Parkside 110B

16:30 SYM-04-01

Regulation of photosynthetic electron transport by PSI cyclic electron transport

Shikanai, T. (Japan)

17:00 SYM-04-02

Retrograde signalling and drought

Estavillo, G.M. (Australia)

17:25 SYM-04-03

Localization and membrane interaction of the zeaxanthin epoxidase

Schwarz, N., Armbruster, U., Tiebel, L. and Jahns, P. (Germany and USA)

17:40 SYM-04-04

Chloroplast gene expression in C4 Cleome

Tanz, S.K., Kajala, K. and Small, I.D. (Australia)

18:00 – 20:00 *Mixer / Exhibition / Posters*

18:15 – 19:15 *Odd numbered posters to be manned by presenting authors*

Location: Parkside Foyer

08:30 – 09:00

PLENARY LECTURE

*Sponsored by the Faculty of Science
The University of Western Australia*

Chair: Professor David Smyth, Monash University, VIC

Location: Parkside Auditorium

08:30 PLE-WED-04

Regulatory networks controlling hormone-mediated growth

Lewsey, M.G., Song, L., Huang, S.C., Xie, M., Zander, M.,

Chang, K.N., Wanamaker, S., O'Malley, R.C., Weirauch, M.T.,

Hughes, T.R., Briggs, S.P., Krogan, N.J., Bar-Joseph, Z. and

Ecker, J.R. (USA and Canada)

Professor Joseph Ecker

Joseph Ecker, professor in the Plant Biology Laboratory, is one of the nation's leading authorities on the molecular biology and genetics of plants. Ecker was a principal investigator in the multinational project that sequenced the genome of *Arabidopsis thaliana*, a modest weed that has become a model organism for the study of plant genetics. This wild mustard variety is the first plant to have its genome sequenced, an achievement expected to have widespread implications for agriculture and perhaps human medicine as well. Ecker's laboratory was one of the first to map the DNA methylome of *Arabidopsis* and to compare the methylome across multiple generations of laboratory grown plants. He has applied similar techniques to first develop a detailed map of the human epigenome, comparing the epigenomes of human embryonic stem cells and differentiated connective cells from the lung called fibroblasts. The head-to-head comparison brought to light a novel DNA methylation pattern unique to stem cells, which may explain how stem cells establish and maintain their pluripotent state. Ecker is also widely regarded as one of the foremost experts on how the gaseous hormone ethylene regulates a variety of basic plant processes. For agriculture, ethylene gas is a vital chemical messenger important for such processes as fruit ripening and how plants respond to pathogenic organisms. Ecker was elected to the National Academy of Sciences in 2006 and has received many other awards for his work including the George W. Beadle Award, Genetics Society of America (2011), TIME magazines #2 Discovery of the year (2009) and the John J. Carty Award for the Advancement of Science from the National Academy of Sciences (2007). In 2011, Ecker was appointed as a Gordon and Betty Moore Foundation Investigator in the Howard Hughes Medical Institute.



09:00 – 09:30

PLENARY LECTURE

*Sponsored by The Company of Biologists and the journals:
Development, Journal of Cell Science, The Journal of Experimental
Biology, Disease Models & Mechanisms and Biology Open*

Chair: Professor David Smyth, Monash University, VIC

Location: Parkside Auditorium

09:00 PLE-WED-05

Towards understanding development and diversity of leaf shape

Tsiantis, M.T. (Germany)

Professor Miltos Tsiantis



Miltos Tsiantis completed a D. Phil in Oxford, UK, on salinity stress in plants. He began studying leaf development as a postdoctoral fellow in Jane Langdale's laboratory in Oxford. Miltos has pioneered molecular research work on *Arabidopsis thaliana* relatives and has developed *Cardamine hirsuta* as an experimental system for comparative studies on inter-species trait diversification such as leaf geometry. Another active research area of Miltos involves mathematical modeling of developmental traits on the basis of genetic networks. His aim is to build a concrete picture of the genetic networks that sculpt angiosperm shoot form and then to understand how these networks are modified through evolution to result in the multitude of distinct leaf forms apparent in nature. He has recently accepted an offer from the Max Planck to develop a new Department at the Institute in Cologne with a focus on the evolution of developmental mechanisms.

09:30 – 10:00

PLENARY LECTURE

Sponsored by School of Biological Sciences, University of Sydney

Chair: Professor David Smyth, Monash University, VIC

Location: Parkside Auditorium

09:30 PLE-WED-06

The generation and spread of small RNAs in plants

Waterhouse, P. (Australia)

Professor Peter Waterhouse

Professor Peter Waterhouse is internationally recognised for his groundbreaking research on plant viruses, and he led the way in uncovering the mechanism, roles and applications of post-transcriptional gene silencing in plants, also termed RNA interference (RNAi). Professor Waterhouse is studying the various sRNA pathways that play fundamental roles critical to the development and health of plants. Many of the pathways have essential counterparts in animals and may have implications for medical research. His research program aims to deliver technologies for silencing signals to plants to improve agronomic traits; inserting synthetic microRNAs into plants to alter plant architecture; and altering DNA structure to affect long-term agronomic traits. Dr Waterhouse completed his PhD in plant virology at the University of Dundee and the Scottish Crop Research Institute, and worked first as a postdoctoral fellow and then as a research scientist at CSIRO Plant Industry. He has received several awards, including the Victor Chang Medal (2002) and the CSIRO Chairman's Medal for his work in the gene silencing/RNAi field (2005). In 2003, Dr Waterhouse was named in The Bulletin's 'Top Ten Smartest Scientists in Australia'. In 2007 he won the prestigious Prime Minister's Prize for Science, and in 2009, he was elected as a fellow to the Australian Academy of Science.



10:00 – 10:30 *Morning Tea / Exhibition / Posters*

Location: Parkside Foyer

10:30 – 12:00

SYMPOSIUM 5

TRANSLATIONAL BIOLOGY

Sponsored by ARC Centre of Excellence in Plant Cell Walls

Chairs: Dr Yong-Ling Ruan, University of Newcastle, NSW
Dr Penny Smith, University of Sydney, NSW

Location: Parkside Auditorium

10:30 SYM-05-01

Plant cell walls: from cell biology to bioenergy and human health

Fincher, G. (Australia)

11:00 SYM-05-02

Development of a novel fertilization and weed control system based on genetically modified able to metabolize phosphite

Herrera-Estrella, L. (Mexico)

11:25 SYM-05-03

The use of Arabidopsis for cereal grain dormancy studies

Barrero, J.M. and Gubler, F. (Australia)

11:40 SYM-05-04

The use of Arabidopsis as resource to improve field pennycress, a next generation biodiesel feedstock

Dorn, K.M., Fankhauser, J.D., Wyse, D.L. and Marks, M.D. (USA)

10:30 – 12:00

SYMPOSIUM 6

DEVELOPMENT II

Sponsored by EMBL Australia

Chairs: Dr Tony Gendall, La Trobe University, VIC
Dr Bruce Veit, Forage Improvement, New Zealand

Location: Parkside 110B

10:30 SYM-06-01

The establishment of lateral organ polarity in Arabidopsis
Heisler, M.G., Caggianno, M.-P., Bahtia, N., Yu, X., Sappl, P.
and Ohno, C. (Germany)

11:00 SYM-06-02

Searching upstream regulators of vernalization insensitive3, an
early initiator of vernalization response
Yu, J., Shin, J., Bae, J. and **Lee, I.** (Republic of Korea)

11:25 SYM-06-03

Springing into flower after winter: control of flowering in
Medicago
Putterill, J.J., Yeoh, C.C., Zhang, L. and Jaudal, M. (New
Zealand)

11:40 SYM-06-04

Auxin controls gravitropic setpoint angle in higher plant lateral
organs
Roychoudhry, S., Sageman, K., Kieffer, M. and **Kepinski, S.**
(United Kingdom)

12:00 – 12:50 *Lunch / Exhibition / Posters*

Location: Parkside Foyer

12:50 – 14:20

WORKSHOP 3

**INTERNATIONAL ARABIDOPSIS INFORMATICS
CONSORTIUM: THE TRANSITION FROM TAIR TO THE
ARABIDOPSIS INFORMATION PORTAL (AIP)**

Chairs: Dr Magnus Nordborg, Gregor Mendel Institute, Austria
Professor Blake Meyers, University of Delaware, USA

Location: Parkside Auditorium

12:50 WORK-03-01

The International Arabidopsis Informatics Consortium: how we got here, and what's next for Arabidopsis Informatics
Meyers, B.C. (USA)

13:00 WORK-03-02

AIP: physical resources - in search of the missing link(s)
May, S.T. (United Kingdom)

13:15 WORK-03-03

Overview of EPIC-CoGe and its role as a module of AIP
Gregory, D.B., Bomhoff, M., Li, F. and Lyons, E. (USA)

13:23 WORK-03-04

Posmed: another gateway to the AIP databases from literature
Toyoda, T. (Japan)

13:38 WORK-03-05

Subcellular reaction room proteomes for reconstructing a compartmentalized model of Arabidopsis metabolism
Hooper, C.M., Tanz, S.K., Castleden, I., Vacher, M., Small, I. and Millar, H.A. (Australia)

13:53 WORK-03-06

Mining post translational modifications in Arabidopsis using the modhunter
Mann, G.W., Joshi, H.J., Smith-Moritz, A.M., Parsons, H.T., Petzold, C.J. and Heazlewood, J.L. (USA and Denmark)

14:08 FINAL DISCUSSION

12:50 – 14:20

WORKSHOP 4

LIVING IMAGING OF PROTEIN FUNCTIONS

Chairs: Professor Ruediger Simon, Heinrich-Heine University,
Germany
Dr Ross Sozzani, Duke University, USA
Dr Jan Willem Borst, Wageningen University,
The Netherlands

Location: Parkside 110B

12:50 WORK-04-01

Dynamics gained from fluorescent protein technologies
Sozzani, R., Hinde, E., Crosti, G., Gratton, E. and Benfey, P.
(USA)

13:02 WORK-04-02

A step toward understanding spatiotemporal dynamics of
networks regulating protein movement and asymmetric cell
division in the Arabidopsis root meristem
Blilou, I., Long, Y., Goedhart, J., Stahl, Y., Weidtkamp-Peters,
S., Simon, R., Cruz-Ramirez, A., Diaz, S. and Scheres, B. (The
Netherlands and Germany)

13:14 WORK-04-03

Moderation of Arabidopsis root stemness by CLAVATA1 and
ARABIDOPSIS CRINKLY4 receptor kinase complexes
Stahl, Y., Grabowski, S., Seidel, C.A.M. and Simon, R.
(Germany)

13:26 WORK-04-04

Visualizing BRI1-SERK3 hetero-oligomers in *Arabidopsis*
roots
Buecherl, C.A., Van Esse, G.W., Nitsch, L.M.C., Hamers, D.,
Albrecht, C., de Vries, S.C. and **Borst, J.W.** (The Netherlands)

WEDNESDAY 26 JUNE 2013

13:38 WORK-04-05

Design and use of fluorescent biosensors in plants

Jones, A., Danielson, J., Hou, B.H., Bermejo, C., Grossmann, G. and **Frommer, W.B.** (USA)

13:50 WORK-04-06

Roots on chips - microfluidic devices for imaging of plant roots

Grossmann, G., Meier, M., Guo, W.J., Ehrhardt, D.W., Quake, S.R. and Frommer, W.B. (USA)

14:02 WORK-04-07

4D light sheet based imaging reveal that shape of plant lateral root is dependent on the properties of the overlaying tissues rather than cell division pattern

Lucas, M., Von Wangenheim, D., Stelzer, E.H.K., Laplace, L., Bennett, M.J. and **Maizel, A.** (Germany and France)

14:14 FINAL DISCUSSION

14:30 – 16:00

SYMPOSIUM 7

SMALL RNA, RNA AND EPIGENETICS

Sponsored by Molecular Plant

Chairs: Dr Iain Searle, University of Adelaide, SA
Dr Andy Eamens, University of Newcastle, NSW

Location: Parkside Auditorium

14:30 SYM-07-01

The biogenesis and functional diversity of plant small RNAs
Meyers, B.C. (USA)

15:00 SYM-07-02

Cell type specific DNA methylomes of the Arabidopsis root
Lister, R., Schmitz, R.J., Breakfield, N., Valdes, M., Han, X.,
Nery, J.R., Benfey, P.N. and Ecker, J.R. (USA and Australia)

15:25 SYM-07-03

Plant viral microRNA-like small RNA targets host defense gene
through DCL1-dependent RNAi pathway
Iram, S., Hussain, M., Carroll, B.J., Schneider, C. and Schenk,
P.M. (Australia)

15:40 SYM-07-04

Non-additive gene expression and epigenetic instability in
Arabidopsis hybrids
Tanurdzic, M., Finigan, P., Auer, P., Meyers, B., Doerge,
R.W. and Martienssen, R. (Australia and USA)

14:30 – 16:00

SYMPOSIUM 8

CELL AND ORGANELLE BIOLOGY

Chairs: Professor Juergen Soll, University of Munich, Germany
Dr Laurent Nussaume, CEA, France

Location: Parkside 110B

14:30 SYM-08-01

Regulation of peroxisomal and mitochondrial dynamics in Arabidopsis

Hu, J. (USA)

15:00 SYM-08-02

Chloroplast protein biogenesis

Hwang, I. and Kim, D. (South Korea)

15:25 SYM-08-03

A mechanism for localised lignin deposition in the endodermis

Lee, Y., Rubio, M.C., Alassimone, J. and Geldner, N.
(Switzerland and Spain)

15:40 SYM-08-04

Calmodulin-mediated calcium regulation in plant organelles

Chigri, F., Mehlmer, N., Flosdorff, S., Parvin, N., Ruge, H. and
Vothknecht, U.C. (Germany)

16:00 – 16:30 *Afternoon Tea / Exhibition / Posters*

Location: Parkside Foyer

16:30 – 18:00

SYMPOSIUM 9

EMERGING TECHNOLOGIES AND SYSTEMS BIOLOGY

Sponsored by Annals of Botany

Chairs: Professor Motoaki Seki, RIKEN, Japan
Professor Brian Gregory, University of Pennsylvania, USA
Location: Parkside Auditorium

16:30 SYM-09-01 *Annals of Botany Lecture*

Mapping spatiotemporal gene regulatory networks guiding root vascular development

Brady, S.M., Taylor-Teeples, M., De Lucas, M., Gaudinier, A., Toal, T.W., Pu, L., Ahnert, S. and Roudier, F. (USA, United Kingdom and France)

17:00 SYM-09-02

Chromatin dynamics and cell fate specification in Arabidopsis

Deal, R. (USA)

17:25 SYM-09-03

A high-resolution gene expression map of Arabidopsis shoot apex

Yadav, R.K., Tavakkoli, M., Girke, T. and Reddy, G.V. (India and USA)

17:40 SYM-09-04

Border control - the membrane-linked interactome of Arabidopsis

Jones, A.M., Lalonde, S., Ho, C.-H., Xu, M., Wang, R.-S., Xuan, Y., You, C.H., Albert, R., Rhee, S.Y. and Frommer, W.B. (USA)

16:30 – 18:00

SYMPOSIUM 10

ENERGY BIOLOGY AND METABOLISM

Sponsored by the ARC Centre of Excellence in Plant Energy Biology

Chairs: Dr Adam Carroll, Australian National University, ACT
Dr Elke Stroehler, University of Western Australia, WA

Location: Parkside 110B

16:30 SYM-10-01

The evolution of signalling proteins from enzymes

Zeeman, S.C. (Switzerland)

17:00 SYM-10-02

Xylose metabolism in Arabidopsis

Heazlewood, J.L. (USA)

17:25 SYM-10-03

Repression of folypolyglutamate synthetase alters lignin composition and cell wall digestibility in Arabidopsis

Srivastava, A.C., Chen, F., Ray, T., Pattathil, S., Avci, U., Hongjia, L. Huhman, D., Sumner, L., Hahn, M., Dixon, R.A., Blancaflor, E.B. and Tang, Y. (USA)

17:40 SYM-10-04

Requirement for the plastidial oxidative pentose phosphate pathway for nitrate assimilation in *Arabidopsis*

Bussell, J.D., Keech, O., Fenzke, R. and Smith, S.M. (Australia and Sweden)

18:00 – 19:30 *Happy Hour / Exhibition / Posters*

18:15 – 19:15 *Even numbered posters to be manned by presenting authors*

Location: Parkside Foyer

08:30 – 09:00

PLENARY LECTURE

Chair: Professor Barry Pogson, Chair, ICAR 2013
Australian National University, ACT

Location: Parkside Auditorium

08:30 PLE-THU-07

Exploring the "mRNPome": profiling stress-triggered dynamics in mRNA sequestration and translation

Bailey-Serres, J., Sorenson, R., Hummel, M., Juntawong, P. and Girke, T. (Thailand)

Professor Julia Bailey-Serres

Julia Bailey-Serres is Professor of Genetics & Geneticist in the College of Natural and Agricultural Sciences, Botany & Plant Sciences at the University of California, Riverside, California. Her research focuses on mechanisms of signal transduction and gene regulation that promote plant response and adaptation to unfavourable environmental conditions. Plants respond to many environmental stimuli including light, temperature extremes, water availability, soil minerals, and air pollution (ozone). Her studies have shown that sub-optimal growth conditions typically lead to changes in protein synthesis that result from increased regulation of mRNA translation. She uses knowledge gained from molecular-genetic analyses with *Arabidopsis* to further our understanding of the responses of crop plants, such as corn and rice. Recently she has been involved in cloning the rice SUB1 gene, which is important for tolerating low oxygen environments such as flooding. A large proportion of the genes that are upregulated in response to hypoxia and other abiotic stresses are proteins with no known biological function. The Bailey-Serres lab coordinates an *Arabidopsis* 2010 Collaborative Research Project to characterize stress-induced protein of unknown function



09:00 – 09:30

PLENARY LECTURE

Sponsored by Australian National University

Chair: Professor Barry Pogson, Chair, ICAR 2013
Australian National University, ACT

Location: Parkside Auditorium

09:00 PLE-THU-08

Balancing the carbon budget; does *Arabidopsis* do a better job than bankers and politicians?

Stitt, M., Flis, A., Ishihara, H., Lunn, J., Martins, M., Piques, M., Pyl, E.-T., Sulpice, R. and Wahl, V. (Germany)

Professor Mark Stitt



Professor Mark Stitt is a leader in the systems biology of central plant metabolism, especially photosynthetic metabolism and its relationship to the environment. Since 2000, he has led the Metabolic Networks department in the Max Planck Institute of Molecular Plant Physiology in Golm, Germany. This institute, founded in 1995 following the reunification of Germany, is located just outside Potsdam, about 60 kilometres southwest of Berlin. Its mission is to carry out system-orientated research that links physiology, molecular biology, genetics, chemistry and physics, in order to understand the synthesis and regulation of metabolites that are important for storage. Mark's group looks at how biochemical pathways involved in primary carbon and nitrogen metabolism are integrated and regulated, and how they affect plant growth and development. *Arabidopsis thaliana*, tomato and maize are the main plants used in these investigations. In 2009 he was elected to the Leopoldina National Academy of Science.

THURSDAY 27 JUNE 2013

09:30 – 10:00

PLENARY LECTURE

Sponsored by New Phytologist

Chair: Professor Barry Pogson, Chair, ICAR 2013
Australian National University, ACT

Location: Parkside Auditorium

09:30 PLE-THU-09

Developmental control of plant cell growth

Sugimoto, K. (Japan)

Professor Keiko Sugimoto

Keiko Sugimoto is a Group leader of the Cell Function Research team at the Center for Sustainable Resource Center, RIKEN, Yokohama Institute, Japan. She did her PhD at the Australian National University with Geoff Wasteneys and Richard Williamson working on understanding how microtubules regulate growth and post-doctoral research with Keith Roberts at John Innes Centre on how cell size is controlled in plants and how an increase in ploidy by the endocycle contributes to this control. Her research aims at understanding the molecular mechanisms that determine “size” in plants. Cell and organ size in plants is defined by highly dynamic, intersecting signalling pathways that involve genetic, hormonal and environmental cues. Keiko aims to unravel how plants integrate developmental and environmental signals to control the balance between cell proliferation and cell differentiation.



10:00 – 10:30 *Morning Tea / Exhibition / Posters*

Location: Parkside Foyer

10:30 – 12:05

SYMPOSIUM 11

SIMON CHAN MEMORIAL SYMPOSIUM

Chairs: Dr Siobhan Brady, University of California, Davis, USA
Professor Luca Comai, University of California Davis,
USA

Location: Parkside Auditorium

10:30 Tribute from Dr Siobhan Brady and Professor Luca Comai

10:40 SYM-11-01

Centromeres and parental genome conflict

Maruthachalam, R., Tan, E.H., Henry, I., Bradnam, K., Korf, I., Comai, L. and Chan, S.W.L. (USA and India)

11:10 SYM-11-02

Simon Chan's three questions

Comai, L., Maheshwari, S., Marimuthu, M.P.A. and Tan, H. (USA)

11:35 SYM-11-03

Exploiting cryptic genetic variation in Arabidopsis

Balasubramanian, S. (Australia)

11:50 SYM-11-04

Spatial and temporal dynamics of DNA methylation and its effectors during sexual reproduction in *Arabidopsis thaliana*

Jullien, P.E., Berger, F. and Voinnet, O. (Switzerland and Singapore)

10:40 – 12:05

SYMPOSIUM 12

CELL TO CELL COMMUNICATION

Chairs: Dr John Walker, University of Missouri, USA
Dr Rosemary White, CSIRO Plant Industry, ACT

Location: Parkside 110B

10:40 SYM-12-01

Biosensors for recording transporter and enzyme activities in plants

Frommer, W.B., DeMichele, R., Ast, C., Chen, L.Q., Sosso, D., Jones, A., Danielson, J.A.H. and Ho, C.H. (USA)

11:10 SYM-12-02

Live-cell study of cell-to-cell communication in pollen tube guidance

Higashiyama, T. (Japan)

11:35 SYM-12-03

The IDA peptide regulates floral abscission and triggers an oxidative burst by direct binding to the HSL2 receptor

Butenko, M.A., Wildhagen, M., Albert, M., Shi, C.-L., Felix, G. and Aalen, R.B. (Norway and Germany)

11:50 SYM-12-04

Cell-to-Cell signaling mediated by mobile transcription factors in the root vascular tissue patterning

Lee, J.-Y., Zhou, J., Sebastian, J. and Jang, G. (Korea and USA)

12:05 – 12:50 *Lunch / Exhibition / Posters*

Location: Parkside Foyer

12:50 – 14:20

WORKSHOP 5

**THE SMALL REGULATORY MOLECULES: microRNAs
AND PEPTIDES**

Chairs: Dr Nijat Imin, Australian National University, ACT
Dr Michael Djordjevic, Australian National University,
ACT

Professor Blake Myers, University of Delaware, USA

Location: Parkside Auditorium

12:50 WORK-05-01

miRNA evolution in the *Camelineae*

Smith, L.M., Burbano, H.A., Wang, X., Fitz, J., Ural, Y. and Weigel, D. (Germany)

13:05 WORK-05-02

RNA secondary structure as a potent cis-regulatory element in *Arabidopsis*

Gregory, D.B., Vandivier, L., Zheng, Q., Silverman, I.M., Willmann, M.R. and Li, F. (USA)

13:20 WORK-05-03

Inhibition of plant microRNA activity using molecular sponges with multiple microRNA binding sites

Reichel, M. and Millar, A.A. (Australia)

13:35 WORK-05-04

Calcium is the molecular switch shifting the phyto-sulfokine receptor 1 (PSKR1) from kinase to guanylate cyclase activity

Muleya, V., Wheeler, J.I., Freihat, L., Thomas, L.O., Marondedze, C., Manallack, D.T., Ruzvidzo, O., Kwezi, L., Gehring, C. and **Irving, H.R.** (Australia, Saudi Arabia and South Africa)

THURSDAY 27 JUNE 2013

13:50 WORK-05-05

Ancestral function of CLE signaling in land plants

Hirakawa Y. and Bowman, J.L. (Australia)

14:05 WORK-05-06

Regulatory peptides that control root development in response to environmental cues

Delay, C., Imin, N. and Djordjevic, M.A. (Australia)

12:50 – 14:20

WORKSHOP 6

**PROGRAMMED CELL DEATH DURING ARABIDOPSIS
DEVELOPMENT AND STRESS RESPONSE**

Chairs: Dr Moritz Nowack, VIB-UGent, Belgium
Professor Ikuko Hara-Nishimura, Kyoto University, Japan
Professor Frank Breusegem, VIB-UGent, Belgium

Location: Parkside 110B

12:50 WORK-06-01

So many smart ways to die - programmed cell death in plants
Olvera-Carrillo, Y., Fendrych, M., Van Hautegeem, T., Van
Durme, M., Gao, Z., Daneva, A., Huysmans, M. and **Nowack,
M.K.** (Belgium)

13:05 WORK-06-02

Characterization of *Arabidopsis* inhibitor of apoptosis (IAP)-
like protein lacking a baculovirus IAP repeat (BIR) domain
plays role in cell death pathway in plant and animal systems
Nawkar, G.M., Jung, Y.J., Chae, H.B., Chi, Y.H., Kange, C.H.
and Lee, S.Y. (Korea)

13:20 WORK-06-03

A life-or-death decision: intracellular signaling in the plant
unfolded protein response
Yang, Z.T., Sun, L., Sun, L. Lu, S.J., Wang, M.J., Song, Z.T.,
Zhang, S.S., Zhou, S.F. and **Liu, J.X.** (China)

13:35 WORK-06-04

Stax, a novel negative transcriptional regulator of *Arabidopsis*
leaf senescence
Allu, A.D., Xue, G.P., Balazadeh, S. and Mueller Roeber, B.
(Germany and Australia)

THURSDAY 27 JUNE 2013

13:50 WORK-06-05

VND7-binding sequences revealed by fluorescence correlation spectroscopy

Tamura, T., Yamaguchi, M., Endo, H., Kato, K., Yoneda, A. and **Demura, T.** (Japan)

14:05 WORK-06-06

The outer mitochondrial membrane AAA ATPase *BCS1* is involved in pathogen resistance

Zhang, B., Thatcher, L., De Clercq, I., Duncan, O., Murcha, M., Singh, K., Van Breusegem, F., Whelan, J. and **Van Aken, O.** (Australia and Belgium)

14:30 – 16:00

SYMPOSIUM 13

TRANSGENERATIONAL INHERITANCE

Sponsored by Monsanto Company

Chairs: Dr Ming-Bo Wang, CSIRO Plant Industry, ACT
Dr Milos Tanurdzic, University of Queensland, QLD

Location: Parkside Auditorium

14:30 SYM-13-01

Transgenerational epigenetic inheritance in *Arabidopsis*
Colot, V. (France)

15:00 SYM-13-02

Epigenetics in hybrids
Groszmann, M., Greaves, I.K., Ying, H., Taylor, J.M.,
Peacock, W.J. and Dennis E.S. (Australia)

15:25 SYM-13-03

Reconstructing *de novo* silencing of an active plant
retrotransposon: dynamics, mechanisms, biological implications
Mari-Ordonez, A., Marchais, A., Etcheverry, M., Colot, V.
and Voinnet, O. (Switzerland and France)

15:40 SYM-13-04

Epigenetic transgenerational response to abiotic stress: a
predictive adaptive response priming stomata
Tricker, P.J., Rodriguez Lopez, C.M., Hadley, P. and
Wilkinson, M.J. (United Kingdom and Australia)

14:30 – 16:00

SYMPOSIUM 14

ABIOTIC STRESS

Chairs: Dr Stuart Roy, University of Adelaide, SA
Professor Steve Tyerman, University of Adelaide, SA

Location: Parkside 110B

14:30 SYM-14-01

A membrane bound NAC transcription factor is a regulator of mitochondrial retrograde regulation of the oxidative stress response in Arabidopsis

De Clercq, I., Vermeirssen, V., Van Aken, O., Vandepoele, K., Murcha, M., Law, S., Whelan, J. and **Van Breusegem, F.**
(Belgium and Australia)

15:00 SYM-14-02

Signaling through GABA-gated anion channels is evolutionarily conserved between animals and plants, and has a key role in stress signaling in plants

Gilliham, M., Ramesh, S.R., Ullah, S., Ryan, P.R. and Tyerman, S.D. (Australia)

15:25 SYM-14-03

NIA1NIA2 mutation regulates ion homeostasis and nitric oxide-mediated control of guard cell ion channels in Arabidopsis

Chen, Z.H., Wang, Y.Z., Wang, J.W., Sani, E., Differ, C., Hills, A., Amtmann, A. and Blatt, M.R. (UK, Australia and China)

15:40 SYM-14-04

Mutually exclusive alterations in secondary metabolism are critical for the uptake of insoluble iron compounds by Arabidopsis and *Medicago truncatula*

Rodriguez-Celma, J., Lin, W.-D., Abadia, J., Lopez-Millan, A.-F. and Schmidt, W. (Taiwan and Spain)

16:00 – 16:20 *Afternoon Tea / Exhibition / Posters*

16:05 **PASSPORT PRIZE DRAW**

Location: Parkside Foyer

16:20 – 17:05

KEYNOTE LECTURE

Sponsored by CSIRO Plant Industry

16:20 – 16:25

Introduction

Dr Elizabeth Dennis, CSIRO Plant Industry, ACT

Location: Parkside Auditorium

16:25 KEY-THU-03

Regulatory gene networks in drought stress response and tolerance

Shinozaki, K. (Japan)

Professor Kazuo Shinozaki



Kazuo Shinozaki is the Director of the newly formed RIKEN Centre for Sustainable Resource Science (CSRS) at Yokohama, Japan. He is also director of the Gene Discovery Research Group within the Centre. He was formerly director of the RIKEN Plant Science Centre, one of the leading plant science centres. In the new Centre, his group is characterising plant genes with functions linked to quantitative improvements in plants and those with new functions for minimizing the effects of environmental stresses to achieve maximum productivity. Other targets of research include genes involved in photosynthesis and productions of useful metabolites. Over many years, his research has focussed on identifying key genes involved in improved productivity and abiotic stress tolerance using genomic based methods. Kazuo is the most highly cited plant scientist in the world.

THURSDAY 27 JUNE 2013

17:05 – 17:50

KEYNOTE LECTURE

17:05 – 17:10

Introduction

Dr Elizabeth Dennis, CSIRO Plant Industry, ACT

Location: Parkside Auditorium

17:10 KEY-THU-04

Retrograde signaling during development and high light stress

Chory, J., Woodson, J.D., Jung, H.-S., Sinson, A., Perez-Ruiz, J., Priest, H. and Mockler, T. (USA)

Professor Joanne Chory

Joanne Chory, a Professor in the Plant Biology Laboratory, is interested in identifying the mechanisms by which plants respond to changes in their light environment. She and her colleagues use genetic, genomic and biochemical approaches in the reference plant, *Arabidopsis*, to identify components of the phototransduction pathways, with emphasis placed on the events mediated through a family of red/far-red-light-absorbing receptors. Her laboratory has identified mutants in these photoreceptors and in nuclear-localized signal transduction components. Work in Dr. Chory's lab has also led to the discovery of a steroid hormone, brassinolide, which controls plant development in response to light, and has identified the plant steroid receptor and signaling pathway. Chory's work has been recognised through many awards including the Genetics Society of America Medal (2012) and the Kumho Award in Plant Molecular Biology. She is a foreign associate of Académie des Sciences, France (2009) and a foreign member of the Royal Society, London (2011).



17:50 – 18:00

**STUDENT & EARLY CAREER RESEARCHER
POSTER PRIZE AWARDS / ICAR 2014 PRESENTATION**

Chair: Professor Barry Pogson: Chair, ICAR 2013

Location: Parkside Foyer

18:30 – 23:15 CRUISE TO COCKTAIL DINNER

08:45 – 10:15

SYMPOSIUM 15

NATURAL VARIATION, EVOLUTION AND PHENOMICS II

Sponsored by the Australian Plant Phenomics Facility

Chairs: Dr Xavier Sirault, CSIRO Plant Industry, ACT
Dr David Meinke, Oklahoma State University, USA

Location: Parkside 110A

08:45 SYM-15-01

Phenotyping technologies for quantitative analyses of Arabidopsis shoot and root system

Jansen, M., Nagel, K.A., Braun, S., Kastenholz, B., Schurr, U. and **Fiorani, F.** (Germany)

09:15 SYM-15-02

Phenotyping photosynthesis, biomass and growth in high throughput with model plants

Furbank, R.T., Sirault, X.R., Busch, F.A., Badger, M.R. and von Caemmerer, S. (Australia)

09:40 SYM-15-03

Genetic architecture of drought tolerance in *A.thaliana*

Korte, A., Novikova, P., Korte, P. and Nordborg, M. (Austria)

09:55 SYM-15-04

Genetic basis of growing season adaptation in Arabidopsis: phenomics in climate chambers

Borevitz, J.O. (Australia)

08:45 – 10:15

SYMPOSIUM 16

BIOTIC INTERACTIONS

Chairs: Dr Jeff Ellis, CSIRO, Plant Industry, ACT
Dr Simon Williams, University of Queensland, QLD
Location: Parkside 110B

08:45 SYM-16-01

Mechanisms by which the paired immune receptors, RPS4 and RRS1, function in *Arabidopsis thaliana*

Sohn, K.H., Segonzac, C., Rallapalli, G., Sarris, P., Woo, J., Williams, S., Paek, K., Kobe, B. and Jones, J.D. (United Kingdom, New Zealand, Republic of Korea and Australia)

09:15 SYM-16-02

Analysing plant defence responses in *Arabidopsis* with a focus on the fungal pathogen, *Rhizoctonia solani*

Singh, K.B., Foley, R.C., Hane, J., Thatcher, L.F., Gleason, C. and Anderson, J.P. (Australia)

09:40 SYM-16-03

Chemical genetic analysis of MAMP-triggered calcium signatures

Maintz, J., Kombrink, E. and Panstruga, R. (Germany)

09:55 SYM-16-04

Multiple resistance pathways elicited by TMV in *N* gene tobacco

Yoon, J.-Y., Baek, E. and **Palukaitis, P.** (Korea)

10:15 – 10:45 *Morning Tea*
Location: Parkside Foyer

10:45 – 12:15

SYMPOSIUM 17

PROTEINS AND POSTTRANSLATIONAL REGULATION

*Sponsored by the Australian Society for Biochemistry
and Molecular Biology*

Chairs: A/Prof Helen Irving, Monash Institute of Pharmaceutical
Sciences, VIC
Professor Harvey Millar, University of Western Australia,
WA

Location: Parkside 110A

10:45 SYM-17-01

Immune signalling by redox-based, post-translational protein
modifications

Spoel, S.H. (United Kingdom)

11:15 SYM-17-02

Independent evolutionary recruitment of asparaginyl
endopeptidase for peptide cyclisation

Mylne, J.S. (Australia)

11:40 SYM-17-03

Analysis of protein domains involved in tonoplast targeting and
function of the two-pore channel TPC1

Larisch, N.M., Schulze, C. and Dietrich, P. (Germany)

11:55 SYM-17-04

Protein level regulation in leaves

Svozil, J., Gruissem, W. and Baerenfaller, K. (Switzerland)

10:45 – 12:15

SYMPOSIUM 18

SIGNALING AND GENE REGULATION

Chairs: Dr Chris Helliwell, CSIRO Plant Industry, ACT
Dr John Golz, University of Melbourne, VIC

Location: Parkside 110B

10:45 SYM-18-01

Identification and characterisation of the regulatory pathways for alternative oxidase in plants

Whelan, J. (Australia)

11:15 SYM-18-02

Determinants beyond complementarity and efficient cleavage are required for strong microR159 efficacy in *Arabidopsis*

Li, J., Reichel, M., Li, Y., Deveson, I., Zheng, Z., Allen, R. and **Millar, A.** (Australia)

11:40 SYM-18-03

Regulation of flowering by Trehalose-6-phosphate signalling
Wahl, V., Ponnu, J., Schlereth, A., Arrivault, S., Langenecker, T., Franke, A., Feil, R., Lunn, J.E., Stitt, M. and **Schmid, M.** (Germany)

11:55 SYM-18-04

Interplay between the shoot meristem and lateral organ boundary is essential for regulating shoot architecture

Smith, H.M., Wu, S., Lee, D.K. and Springer, P. (USA and Australia)

12:15 – 12:45 *Lunch*

Location: Parkside Foyer

12:45 – 14:15

WORKSHOP 7

GENETIC TRAITS FROM PHENOMICS DATA

Chairs: Dr Xavier Sirault, CSIRO Plant Industry, ACT
A/Prof Justin Borevitz, Australian National University,
ACT

Location: Parkside 110A

12:45 WORK-07-01

Introduction

Borevitz, J. (Australia)

12:50 WORK-07-02

High-throughput, image-based analysis of traits in model plants
Sirault, X.R.R., Bischof, L.M., Borevitz, J., Badger, M.R. and
Furbank, R.T. (Australia)

13:10 WORK-07-03

High throughput phenotyping of model plants for biomass
accumulation and photosynthetic efficiency traits

Poire, R., Sirault, X., Watt, M., Bragg, J., Vogel, J. and
Furbank, R. (Australia and USA)

13:30 WORK-07-04

Positional cloning of a protein kinase involved in Na⁺ exclusion
in *Arabidopsis*, leading to improved salt tolerance in barley in
the field

Roy, S.J., Wang, X., Evrard, A., Schmoeckel, S., Zafar, Z.U.
and Tester, M. (Australia, China, Pakistan and Saudi Arabia)

13:50 WORK-07-05

Genetic dissection of plant development using GWAS and QTL
analyses in *Arabidopsis thaliana*

Kooke, R., Fusari, C.M., Becker, F., Vreugdenhil, D., Stitt, M.,
Sulpice, R. and Keurentjes, J.J.B. (The Netherlands and
Germany)

14:10 FINAL DISCUSSION

FRIDAY 28 JUNE 2013

12:45 – 14:15

WORKSHOP 8

TEACHING WORKSHOP FOR EARLY CAREER SCIENTISTS

Chairs: Dr Mary Williams, American Society of Plant Biologists,
The Plant Cell, USA

Dr Gonzalo Estavillo, Australian National University, ACT

Location: Parkside 110B

12:45 WORK-08-01

How to be a great teacher: Tips and resources for plant scientists

Williams, M. and Estavillo, G. (United Kingdom and Australia)

13:30 WORK-08-02

Arabidopsis detectives: innovative approach to research-led driven teaching

Estavillo, G.M., Mathesius, U., Beckmann, E. and Nicotra, A. (Australia)

13:45 FINAL DISCUSSION

14:15 – 14:30 *Afternoon Tea*

Location: Parkside Foyer

14:30 – 16:00

WORKSHOP 9

**PLANT NUTRITION IN THE FACE OF IMPENDING GLOBAL
RESOURCE LIMITATION OPPORTUNITIES FOR MODEL
PLANT RESEARCH**

Sponsored by University of Western Australia

Chairs: Dr Ricarda Jost, University of Western Australia, WA
Dr Hideki Takahashi, Michigan State University, USA
Dr Laurent Nussaume, CEA, France

Location: Parkside 110A

14:30 WORK-09-01

Too many variables - how to choose parameters for nutrient signalling experiments

Jost, R. (Australia)

14:45 WORK-09-02

Regulation of high affinity phosphate transporters in *Arabidopsis*

Thibaud, M.-C., Arrighi, J.F., Kanno, S., Desnos, T., Marin, E., Bayle, V., Chiarenza, S., Javot, H., Nakanishi, T.M. and **Nausaume, L.** (France and Japan)

15:00 WORK-09-03

Transcriptional and post-transcriptional mechanisms for homeostatic control of sulfate transport and assimilation in plants

Takahashi, H. and Kopriva, S. (USA and UK)

15:15 WORK-09-04

Nitrate sensing and signaling in *Arabidopsis thaliana*

Naery, P. (France)

FRIDAY 28 JUNE 2013

15:30 WORK-09-05

Roles of ubiquitination in the control of phosphate starvation responses in *Arabidopsis*

Rojas-Triana, M., Iglesias, J., Trigueros, M., Paz-Ares, J. and Rubio, V. (USA and Spain)

15:45 WORK-09-06

Unraveling signaling pathways involved in nutrient acquisition *via* metabolomics and systems biology driven approaches

Van der Merwe, M.J., Lloyd, J.R. and Whelan, J.S. (Australia and South Africa)

14:30 – 16:00

WORKSHOP 10

USING PROTEOMICS TO IDENTIFY RECEPTOR
COMPLEXES AND SIGNALING EVENTS

Chairs: Dr Joshua Heazlewood, Lawrence Berkeley National
Laboratory, USA
Professor Harvey Millar, University of Western Australia,
WA

Location: Parkside 110B

14:30 WORK-10-01

Introduction: Proteomic resources and the Arabidopsis
proteomics subcommittee

Heazlewood, J.L. (USA)

14:50 WORK-10-02

Integrating genetics and phosphoproteomics reveals a protein
phosphorylation network in the Abscisic acid signaling pathway
in Arabidopsis

Umezawa, T., Sugiyama, N., Takahashi, F., Anderson, J.C.,
Terao, R., Ishizuka, K., Ishihama, Y., Peck S.C. and Shinozaki,
K. (Japan and USA)

15:05 WORK-10-03

Redox-regulation of the SUMO E2 in plant immunity

Skelly, M.J., Malik, S.I., Spoel, S.H. and Loake, G.J. (United
Kingdom)

15:20 - WORK-10-04

Proteome and metabolome profiling of cytokinin action in
Arabidopsis identifying both distinct and similar responses to
cytokinin down- and up-regulation

Cerny, M., Kuklova, A., Hoehenwarter, W., Fragner, L.,
Novak, O., Rotkova, G., Strnad, M., Weckwerth, W. and
Brzobohaty, B. (Czech Republic and Austria)

FRIDAY 28 JUNE 2013

15:35 WORK-10-05

Proteomics of model plant systems to identify mechanisms essential for plant salt tolerance

Vera-Estrella, R., Pantoja, O. and **Barkla, B.J.** (Mexico)

15:50 FINAL DISCUSSION

16:00 – 17:00 *Closing and Farewell Drinks*

Location: Parkside Foyer

POSTERS

Posters are available for viewing in the Parkside Foyer of the Sydney Convention Centre from 10:00 on Tuesday through to 16:30 on Thursday. All posters are on display for three full days (Tuesday through to Thursday).

Posters will be attended by the presenting author from 18:15 to 19:15 on both the Tuesday and Wednesday evenings at the mixer/cocktail functions. The odd numbered posters will be manned on the Tuesday and the even numbered posters on the Wednesday. The day and time of presentation is also listed below in the poster reference number.

Posters 001 – 011	Evolution and Natural Variation
Posters 012 – 035	Small RNA, RNA and Epigenetics
Posters 036 – 102	Development
Posters 103 – 109	Hormones
Posters 110 – 144	Cell and Organelle Biology
Posters 145 – 198	Intracellular Signaling
Posters 199 – 203	Cell to Cell Communication
Posters 204 – 248	Abiotic Stress
Posters 249 – 276	Biotic Stress / Interactions
Posters 277 – 291	Energy Biology and Metabolism
Posters 292 – 297	Photosynthesis and Water
Posters 298 – 299	Phenomics
Posters 300 – 310	Proteins and Postranslational Regulation
Posters 311 – 322	Emerging Technologies and Systems Biology
Posters 323 – 325	Translational Biology
Posters 326 – 327	Education
Posters 328 – 351	Late Posters

Evolution and Natural Variation Posters 001 - 011

POS-TUE-001 18:15 - 19:15

Wild populations of *Arabidopsis thaliana* from South America: a study of physiology and genetic diversity

Kasulin, L., Rowan, B., Sanchez, S.E., Wang, X., Leon, R., Yanovsky, M., Weigel, D., Borevitz, J. and **Botto, J.** (Argentina and Australia)

POSTERS

POS-WED-002 18:15 - 19:15

Using Bayesian methods to reveal the evolutionary patterns of male fertility restorer (*Rf*) genes

Boykin, L.M. and Small, I. (Australia)

POS-TUE-003 18:15 - 19:15

Looking at patterning from an evolutionary perspective

Chopra D., Willing, E.M., Schneeberger, K., Albani, M., Coupland, G., Schrader, A. and Hülkamp, M. (Germany)

POS-WED-004 18:15 - 19:15

The genotype data are used for preservation and quality control of *Arabidopsis* wild type strains and related species at RIKEN BRC

Iuchi, S., Iuchi, A., Aso, Y., Kawamura, S. and Kobayashi, M. (Japan)

POS-TUE-005 18:15 - 19:15

Natural variation of a gene network regulating trichome patterning

Jaegle, B., Schrader, A., Failmerzger, H., Rishmawi, L., Klasen, J., Schneeberger, K., Stich, B., Tresch, A. and Hülkamp, M. (Germany)

POS-WED-006 18:15 - 19:15

Comparative analysis of miRNAs between the *Brassica rapa* and *Arabidopsis thaliana* genomes

Kim, B., Oh, M., Sohn, S.-H., Ahn, B.-O., Mun, J.-H. and **Kim, J.** (Republic of Korea)

POS-TUE-007 18:15 - 19:15

Natural variation in thermal responses of *Arabidopsis*

Sanchez-Bermejo, E., Zhu, W., Tasset, C., Sundaramoorthi, V., Tabit, A., Sureshkumar, S. and Balasubramanian, S. (Australia)

POS-WED-008 18:15 - 19:15

Functional analysis of a cryptic intron in *Arabidopsis thaliana*

Sureshkumar, S., Taskar, E. and Balasubramanian, S. (Australia)

POS-TUE-009 18:15 - 19:15

Phenotypic variation in a local island population of *Arabidopsis thaliana*

Tabib, A.R., Balasubramanian, S. and Spillane, C. (Australia and Ireland)

POSTERS

POS-WED-010 18:15 - 19:15

Triplet repeats and phenotypic variation in *Arabidopsis thaliana*
Vishwanathan, S., Sanchez-Bermejo, E. and Balasubramanian, S. (Australia)

POS-TUE-011 18:15 - 19:15

A cryptic phenotypic variation unmasked under higher temperature in *Arabidopsis thaliana*
Zhu, W.S., Bulach, D., Seemann, T. and Balasubramanian, S. (Australia)

Small RNA, RNA and Epigenetics

Posters 012 – 035

POS-WED-012 18:15 - 19:15

Analysis of the epigenome in *Arabidopsis* hybrids during embryo development
Alonso-Peral, M.M., Trigueros, M., Sherman, B., Zhu, A., Taylor, J., Peacock, W.J. and Dennis, E.S. (Australia)

POS-TUE-013 18:15 - 19:15

Exploring the role of RNA 5-methylcytosine in *Arabidopsis thaliana*
Burgess, A., David, R., Sibbritt, T., Priess, T. and Searle, I. (Australia)

POS-WED-014 18:15 - 19:15

miR396 repression of *GRFS* inhibits cell proliferation by UV-B radiation in *Arabidopsis thaliana* leaves
Casadevall, R., Rodriguez Virasoro, R., Manuel Debernardi, J., Palatnik, J. and **Casati, P.** (Argentina)

POS-TUE-015 18:15 - 19:15

Rapid recovery gene silencing: the role of small RNAs and RNA decay in stress memory and recovery
Crisp, P.A., Marri, S., Estavillo, G.M., Searle, I.R. and Pogson, B.J. (Australia)

POS-WED-016 18:15 - 19:15

All microRNA target sites are equal but some are more equal than others: investigating the influence of target site context on microRNA efficacy
Deveson, I.W. and Millar, A.A. (Australia)

POSTERS

POS-TUE-017 18:15 - 19:15

Measuring the duration of winter: it's all in the chromatin

Finnegan, E.J., Helliwell, C.A., Sheldon, C.C. and Dennis, E.S. (Australia)

POS-WED-018 18:15 - 19:15

Mobility of phosphate starvation-responsive microRNAs in *Arabidopsis thaliana*

Huen, A.K., Rodriguez-Medina, C., Ho, A., Atkins, C., Waterhouse, P. and Smith, P.M.C. (Australia and France)

POS-TUE-019 18:15 - 19:15

A nature of a stress-activated transposon and the effect on the host genome

Ito, H., Kim, J.M., Matsunaga, W., Toyoda, T., Endo, T.A., Ishida, J., Morosawa, T. and Seki, M. (Japan)

POS-WED-020 18:15 - 19:15

A role for long non-coding RNAs in Arabidopsis seed development

Jones, A., Lohe, A., Helliwell, C. and Searle, I. (Australia)

POS-TUE-021 18:15 - 19:15

Secondary structure of miR156 precursors is important in ambient temperature-responsive miRNA biogenesis in flowering time regulation in *Arabidopsis thaliana*

Kim, W., Jun, A.R., Kim, H.E., Lee, J.H. and Ahn, J.H. (South Korea)

POS-WED-022 18:15 - 19:15

Characterising mutants in root-to-shoot mobile silencing

Liang, D., Nakasugi, K., Talbot, M.J., White, R.G. and Waterhouse, P.M. (Australia)

POS-TUE-023 18:15 - 19:15

Targeted analysis of parent-of-origin dependent allelic expression in Arabidopsis endosperm

Day, R.C. and **Macknight, R.C.** (New Zealand)

POS-WED-024 18:15 - 19:15

RNA structure clustering: a path to find novel genetic and epigenetic regulatory modules

Marri, S., Pogson, B.J., Aharoni, A., Gregory, B.D. and Cazzonelli, C. (Australia, Israel and USA)

POSTERS

POS-TUE-025 18:15 - 19:15

Endogene protection from RNA silencing

McHale, M., Eamens, A.L., Finnegan, E.J. and Waterhouse, P.M. (Australia)

POS-WED-026 18:15 - 19:15

Tripogon loliiformis miRNAome: The role of microRNAs in stress response in resurrection plants

Njaci, I., Williams, B., Dickman, M.B., Zhang, X. and Mundry, S.G. (Australia and USA)

POS-TUE-027 18:15 - 19:15

Quantitative proteomic analysis of *Arabidopsis thaliana* double-stranded RNA binding2 (DRB2) knockout mutant plants

Reis, R.S., Hart-Smith, G., Eamens, A., Wilkins, M. and Waterhouse, P.M. (Australia)

POS-TUE-027A 18:15 - 19:15

Genome-wide distribution of Arabidopsis linker histones in plants grown under normal and limited light conditions

Rutowicz, K., Wilczynski, B., Puzio, M., Lirski, M., Kotlinski, M., Archacki, R., Koblovska, K., Iwanicka-Nowicka, R., Tiuryn, J. and Jerzmanowski, A. (Poland)

POS-WED-028 18:15 - 19:15

Investigating the synergy between ribonucleases and pentatricopeptide repeat proteins within higher plant chloroplasts

Sharwood, R.E., Luro, S. and Stern, D.B. (Australia and USA)

POS-TUE-029 18:15 - 19:15

Poly(A) specific ribonucleases, AtCCR4s are important for the starch metabolism

Suzuki, Y., Hirai, M.Y., Green, P.J. Yamaguchi, J. and Chiba, Y. (Japan)

POS-WED-030 18:15 - 19:15

Transcriptome analysis of Arabidopsis hybrids during early embryo development

Trigueros, M., Alonso-Peral, M.M., Sherman, B., Taylor, J., Peacock, W.J. and Dennis, E.S. (Australia)

POS-TUE-031 18:15 - 19:15

PsRobot: a web-based plant small RNA meta-analysis toolbox
Wu, H.J., Ma, Y.K., Chen, T., **Wang, M.** and Wang, X.J. (China)

POSTERS

POS-WED-032 18:15 - 19:15

Wide-spread long non-coding RNAs (lncRNAs) as endogenous target mimics (eTMs) for microRNAs in plants

Wu, H.J., Wang, Z.M., Wang, M. and Wang, X.J. (China)

POS-TUE-033 18:15 - 19:15

Phosphorylation of UPF1 is essential for NMD in *Arabidopsis*

Wawer, I., Kerenyi, F., Sikorski, P.J., Kufel, J. and Silhavy, D. (Poland and Hungary)

POS-WED-034 18:15 - 19:15

Visualization of mRNAs *in vivo* in *Arabidopsis* using the modified MS2 system

Xu, M., White, R. and Helliwell, C. (Australia)

POS-TUE-035 18:15 - 19:15

Plant microRNAs display differential 3'-truncation and tailing, modifications which are Argonaute1-dependent and conserved across species

Zhai, J., Zhao, Y., Simon, S., Arikiti, S., Yu, B., Cao, X., Timmermans, M., Yang, B., Chen, X. and Meyers, B.C. (USA and China)

Development Posters 036 – 102

POS-WED-036 18:15 - 19:15

Development of pavement cell shape in *Arabidopsis* cotyledons

Armour, W.J., Barton, D.A., Law, A. and Overall, R.L. (Australia)

POS-TUE-037 18:15 - 19:15

Identification of *AtMYB80* downstream target genes involved in pollen development using ChIP

Avdic, A., Li, S.F. and Parish, R.W. (Australia)

POS-WED-038 18:15 - 19:15

EMF1 regulates vernalization signaling by the repression of *VIN3*

Bae, J., Yu, J., Shin, J. and Lee, I. (Korea)

POSTERS

POS-TUE-039 18:15 - 19:15

WDR55 interacts with DDB1 and is required for apical patterning in the *Arabidopsis* embryo

Bjerkan, K.N., Jung-Romeo, S., Gregis, V., Jurgens, G., Kater, M.M., Genschik, P. and Grini, P.E. (Norway, France, Italy and Germany)

POS-WED-040 18:15 - 19:15

Short Internodes/Stylish gene family members are important for development of various organs in *Arabidopsis thaliana*

Cierlik, I., Baylis, T., Cleas, A., Staldal, V., Mattsson, J. and Sundberg, E. (Sweden and Canada)

POS-TUE-041 18:15 - 19:15

Identification of novel components of the genetic pathways controlling shoot branch outgrowth

Chevalier, F., Ponce, M.R., Rodriguez-Buey, M.L., Sanchez-Ferrero, J.C., Chagoyen, M., Micol Molina, J.L. and **Cubas, P.** (Spain)

POS-WED-042 18:15 - 19:15

Identification and next generation mapping of an *Arabidopsis* EMS mutant that displays lengthened plastochron and pleiotropic effects on reproductive organs

David, R., Lim, H.M. and Searle, I.R. (Australia)

POS-TUE-043 18:15 - 19:15

Regulation of the expression of *VND7* gene encoding a master regulator for xylem vessel formation by a GATA type transcription factor

Endo, H., Yamaguchi, M., Kato, K., Yoneda, A. and Demura, T. (Japan)

POS-WED-044 18:15 - 19:15

AtNHX5 and *AtNHX6* are required for lateral root development

Ford, B.A., Das, P. and Gendall, A.R. (Australia)

POS-TUE-045 18:15 - 19:15

Transcriptional regulation of the Medicago *SOC1* gene family for controlling flowering

Fudge, J.B., Lee, R.H. and Macknight, R.C. (New Zealand)

POSTERS

POS-WED-046 18:15 - 19:15

Two MADS-box genes preponderantly expressed in root, *XAANTAL1* and 2 (*AGL12* and *AGL14*) participate in flowering transition

Garcia-Ponce, B., Perez-Ruiz, R., Dominguez, A., Tapia-Lopez, R., Villajuana, M., Marsh, N., Garay-Arroyo, A., Sanchez, M.P. and Alvarez-Buylla, E.R. (Mexico)

POS-TUE-047 18:15 - 19:15

Control of leaf vein formation by auxin signalling

Gardiner, J., Donner, T.J. and Scarpella, E. (Canada)

POS-WED-048 18:15 - 19:15

Acceleration of flowering by Cape Verde Islands alleles of *FLOWERING H* is dependent on the floral promoter *FD*
Seedat, N., Dinsdale, A., Ong, E.-K. and **Gendall, A.R.** (Australia)

POS-TUE-049 18:15 - 19:15

Regulation of shoot apical meristem and cotyledon formation by *SEUSS* and *SEUSS-LIKE 2*

Lee, J.E. and **Golz, J.F.** (Australia)

POS-WED-050 18:15 - 19:15

Bridging signals from receptors to MAPK kinases in stomatal development

Ho, C., Paciorek, T. and Bergmann, D. (USA)

POS-TUE-051 18:15 - 19:15

Sterols are required for the cell fate determination of the stomatal lineage in *Arabidopsis*

Qian, P., Han, B., Forestier, E., Hu, Z., Gao, N., Schaller, H., Li, J. and **Hou, S.** (China and France)

POS-WED-052 18:15 - 19:15

SH3 domain-containing protein (SH3P) family molecules are involved in the root gravitropic response in *Arabidopsis*

Ichikawa, M., Miyoshi, H., Kanao, K., Fukao, Y., Fujiwara, M. and Sato, M. (Japan)

POS-TUE-053 18:15 - 19:15

Changes in distribution of cell wall polysaccharides in floral and fruit abscission zones during fruit development in tomato

Terao, A., Hyodo, H., Satch, S. and **Iwai, H.** (Japan)

POSTERS

POS-WED-054 18:15 - 19:15

Promotion of chloroplast proliferation upon enhanced post-mitotic cell expansion in leaves

Kawade, K., Horiguchi, G., Ishikawa, N., Hirai, M.Y. and Tsukaya, H. (Japan)

POS-TUE-055 18:15 - 19:15

Variation of the level of the heterosis among F₁ hybrid individuals in *Arabidopsis thaliana*

Kawanabe, T., Saeki, N. and Fujimoto, R. (Japan)

POS-WED-056 18:15 - 19:15

Function of kip-related proteins of *Arabidopsis* during plant development

Jun, S.E., Hwang, J.Y., Kim, M.J., Kwon, H.I., Umeda, M. and **Kim, G.T.** (South Korea and Japan)

POS-TUE-057 18:15 - 19:15

Large scale gene expression analysis in ABC model homeotic mutants

Klepikova, A.V., Logacheva, M.D. and Penin, A.A. (Russia)

POS-WED-058 18:15 - 19:15

Regulation of flowering in *Arabidopsis* by *VOZ* transcription factors

Kumar, S. and Choudhary, P. (India)

POS-TUE-059 18:15 - 19:15

Live-cell analysis of embryogenesis in *Arabidopsis thaliana*

Kurihara, D., Gooh, K. and Higashiyama, T. (Japan)

POS-WED-060 18:15 - 19:15

RAPTOR, a highly conserved element of the eukaryotic TOR kinase growth promoting complex, is not essential for plant survival

Larking, A., Rexin, D. and Veit, B. (New Zealand)

POS-TUE-061 18:15 - 19:15

The new finding of *Arabidopsis GRF-INTERACTION FACTOR* gene family in development of carpel and ovule

Lee, B.H. and Kim, J.H. (Korea)

POS-WED-062 18:15 - 19:15

MADS-Box protein complexes act as thermal mediators in different ambient temperature regimes

Lee, J.H., Kim, J.J., Hong, S.M. and Ahn, J.H. (South Korea)

POSTERS

POS-TUE-063 18:15 - 19:15

SERKs control embryo development via MAPK signaling pathway in *Arabidopsis thaliana*

Gou, X.P., Cai, Z.P., Wang, X.J., Li, H.Q. and **Li, J.** (China)

POS-WED-064 18:15 - 19:15

Regulation of the *MLP* gene family members, by two layers of tissue specific degradation, play a developmental role in *Arabidopsis*

Litholdo Junior, C.G., Parker, B., Eamens, A., Cordwell, S. and Waterhouse, P. (Sydney and Brazil)

POS-TUE-065 18:15 - 19:15

Epigenetic control of callus regeneration in *Arabidopsis*

Liu, S., He, C., Huang, H. and Xu, L. (China)

POS-WED-066 18:15 - 19:15

The transcriptional network analysis of adaxial-abaxial polarity in *Arabidopsis* leaf development

Liu, T., Reinhart, B., Magnani, E., Huang, T., Kerstetter, R. and Barton, K. (USA)

POS-TUE-067 18:15 - 19:15

Functional characterization of pollen-specific kinases through the generation of knock-down transgenic plants expressing hairpin-RNAs (hpRNAs) and amiRNAs

Lucca, N., Ibeas, M.A., Hafidh, S., Twell, D. and Leon, G. (Chile and United Kingdom)

POS-WED-068 18:15 - 19:15

A ROS responsible transcription factor regulates root growth via ABA signalling

Mabuchi, K., Busch, W., Benfey, P.N. and Tsukagoshi, H. (Japan, Austria and USA)

POS-TUE-069 18:15 - 19:15

Photoperiodic compensation: a mechanism underlying regulation of chlorophyll amount by circadian clock in *Arabidopsis thaliana*

Mizoguchi, T. and Miyata, K. (Japan)

POS-WED-070 18:15 - 19:15

Characterisation of molecular factors determining asymmetry in flowers of *Arabidopsis thaliana*

Mohrholz, A. and Harter, K. (Germany)

POSTERS

POS-TUE-071 18:15 - 19:15

The regulatory role of aAtMYB5 in seed coat and trichome development

Napoli, R., Li, S.F. and Parish, R. (Australia)

POS-WED-072 18:15 - 19:15

The tale of GalT14 and its possible role in AGP glycan biosynthesis in *Arabidopsis thaliana*

Narciso, J.O., Doblin, M.S., Zeng, W. and Bacic, A. (Australia)

POS-TUE-073 18:15 - 19:15

Approaches to integrate nitrogen signals into the flowering network

Olas, J.J., Schlereth, A., Schmid, M., Stitt, M. and Wahl, V. (Germany)

POS-WED-074 18:15 - 19:15

Development of vegetative axillary branches after vernalization in *Arabis alpina*, perennial plant

Park, J.Y. and Lee, I (Korea)

POS-TUE-075 18:15 - 19:15

Use of a novel fluorescent based system to investigate protein-protein interactions of petal loss

Quon, T. and Smyth, D.R. (Australia)

POS-WED-076 18:15 - 19:15

Tissue specific requirement of TOR signalling in plants

Rexin, D. (New Zealand)

POS-TUE-077 18:15 - 19:15

Characterization of root cell identity through genomic localization of T-DNA insertions in *Arabidopsis thaliana* GAL4-GFP enhancer trap lines

Rueda, I.D. and Zavala, M.E. (USA)

POS-WED-078 18:15 - 19:15

Rapid screening for photo-protective mechanism in *Arabidopsis* using fluorescence imaging

Rungrat, T., Wilson, P., Borevitz, J. and Pogson, B. (Australia)

POS-TUE-079 18:15 - 19:15

Transcriptional control of root cap differentiation

Rymen, B., Mitsuda, N., Matsui, M., Ohme-Takagi, M. and Sugimoto, K. (Japan)

POSTERS

POS-WED-080 18:15 - 19:15

A larger cotyledon area after germination is a common phenomenon in heterotic F1 of *Arabidopsis thaliana* and Chinese cabbage

Saeki, N., Kawanabe, T., Abe, H., Shimizu, M., Konno, S., Kaji, M. and Fujimoto, R. (Japan)

POS-TUE-081 18:15 - 19:15

The DUF642 protein *At2g41800* localizes to preprophase band, phragmoplast and cell wall in synchronized root meristem cells of *Arabidopsis thaliana*

Salazar-Irbe, A., Agredano-Moreno, L., Jimenez-Garcia, L.F. and Gambao-De Buen, A. (Mexico)

POS-WED-082 18:15 - 19:15

LSM proteins provide accurate splicing and decay of selected transcripts to ensure normal *Arabidopsis* development

Salinas, J., Perea-Resa, C., Hernandez-Verdeja, T., Lopez-Cobollo, R. and Castellano, M. (Spain)

POS-TUE-083 18:15 - 19:15

The regulation of grain size in *Brachypodium distachyon*

Shaw, L.M., Allen, S., Whan, A., Bischof, L. and Helliwell, C. (Australia)

POS-WED-084 18:15 - 19:15

The role of auxin and cytokinins in cambium development

Siligato, R., Ruzicka, K. and Mahonen, A.P. (Finland)

POS-TUE-085 18:15 - 19:15

Coordination of auxin sensing and meristem activity during development

Rast, M.I. and **Simon, R.** (Germany)

POS-WED-086 18:15 - 19:15

Characterization of genes involved in developmental changes in *Agave tequilana* by heterologous expression in *A. thaliana*

Simpson, J.K., Abraham-Juarez, M.J., Santoyo-Villa, J.N., Ramos-Tamayo, M., Guzman-Lopez, J.A. and Avila De Dios, E. (Mexico)

POS-TUE-087 18:15 - 19:15

Molecular cloning and functional analysis of the expansion gene *PdEXT* in *Populus deltoids*

Li, S.F., **Su, X.H.**, Zhang, B.Y., Chu, Y.G., Hu, Z.M., Lu, M.Z. and Ding, C.J. (China)

POSTERS

POS-WED-088 18:15 - 19:15

Molecular genetic analysis of *PDF3*, a transcription factor expressed specifically in the shoot epidermis

Sugihara, A. and Takahashi, T. (Japan)

POS-TUE-089 18:15 - 19:15

Translational regulation of the *SAC51* mRNA by thermospermine

Takano, A., Ishitsuka, S., Ishii, N. and Takahashi, T. (Japan)

POS-WED-090 18:15 - 19:15

Relation between sepal boundary and petal primordium in *Arabidopsis thaliana*

Takeda, S., Hamamura, Y., Mitsuda, N., Noguchi, M., Aida, M. and Higashiyama, T. (Japan)

POS-TUE-091 18:15 - 19:15

Genetic screening for novel regulatory factors of secondary cell wall formation during xylem vessel cell differentiation in *Arabidopsis*

Takenaka, Y., Kawabe, H., Ohtani, M., Kato, K., Yoneda, A. and Demura, T. (Japan)

POS-WED-092 18:15 - 19:15

VND7-binding sequences revealed by fluorescence correlation spectroscopy

Tamura, T., Yamaguchi, M., Endo, H., Kato, K., Yoneda, A. and Demura, T. (Japan)

POS-TUE-093 18:15 - 19:15

Regulation of plant epidermal cell differentiation by a tomato (*Solanum lycopersicum*) R3 MYB transcription factor

Tominaga-Wada, R., Nukumizu, Y., Sato, S. and Wada, T. (Japan)

POS-WED-094 18:15 - 19:15

Ploidy-cell size relationship is context-dependent in *Arabidopsis*

Tsukaya, H., Katagiri, Y., Hasegawa, J. and Matsunaga, S. (Japan)

POS-TUE-095 18:15 - 19:15

Differential phase shift in clock core components alters multiple hormone signaling and reduces coordination for growth and leaf movement

Bours, R., Kohlen, W., Van Zanten, M., Pierik, R., Delatte, T., Bouwmeester, H. and **van der Krol, A.** (The Netherlands)

POSTERS

POS-WED-096 18:15 - 19:15

The *Arabidopsis* leaf transcriptome cart: dynamic landscapes of multi-dimensional transcriptome along lifespan

Woo, H.R., Koo, H.J., Yang, J.O., Choi, S.H., Lee, I.H., Seo, C., Nam, H.G., Lee, S., Hwang, D. and Lim, P.O. (Republic of Korea)

POS-TUE-097 18:15 - 19:15

Wound-induced auxin flux triggers stem cell fate transition for de novo root organogenesis in *Arabidopsis*

Liu, J., Sheng, L., Huang, H. and **Xu, L.** (China)

POS-WED-098 18:15 - 19:15

Revealing the identity of apple fruit flesh

Yao, J.L., Tomes, S., Luo, Z., Karunairetnam, S., Macdiarmid, R. and Gleave, A.P. (New Zealand)

POS-TUE-099 18:15 - 19:15

A rice TCP transcription factor regulates tiller formation and root growth

Lee, J.O., Choi, K.S., Huh, S.M., Kim, D.Y. and **Yoon, I.S.** (Republic of Korea)

POS-WED-100 18:15 - 19:15

SAC51 mediates thermospermine-dependent repression of xylem proliferation

Yoshimoto, K., Tong, W., Fukushima, H., Motose, H. and Takahashi, T. (Japan)

POS-TUE-101 18:15 - 19:15

The role of *Arabidopsis* *HAWAIIAN SKIRT* (*HWS*) gene in floral development and its orthologue gene *ERECT PANICLE3* (*EP3*) in rice

Yu, H.Y., Gonzalez-Carranza, Z.H., Murchie, E.H., Peters, J.L., Pyke, K.A. and Roberts, J.A. (China, United Kingdom and Netherlands)

POS-WED-102 18:15 - 19:15

ACR4-dependent stem cell division in *Arabidopsis* roots

Yue, K., Sandal, P., Rao, A.G., De Smet, I. and Beeckman, T. (Belgium, USA and United Kingdom)

POSTERS

Hormones Posters 103 – 109

POS-TUE-103 18:15 - 19:15

Molecular mechanisms of ethylene-auxin interactions

Alonso, J.M., Merchante, C., Yun, J. and Stepanova, A.N.
(USA)

POS-WED-104 18:15 - 19:15

How strigolactones impact root system architecture

Depuydt, S., Jiang, L., De Cuyper, C., Matthys, C., Walton, A.,
De Keyser, A. and Goormachtig, S. (Belgium)

POS-TUE-105 18:15 - 19:15

Jasmonic acid signaling is linked to auxin homeostasis through
the modulation of *YUCCA8* and *YUCCA9* expression

Hentrich, M. and **Pollmann, S.** (Spain)

POS-WED-106 18:15 - 19:15

Brassinosteroids attenuate ABA-inhibited early seedling
development via BES1/TPL/HDA19-induced epigenetic
silencing of *ABI3*

Ryu, H., Bae, W. and Hwang, I. (South Korea)

POS-TUE-107 18:15 - 19:15

Comprehensive degradation analyses of AUX/IAAs in
combination with several auxins and all TIR1/AFBs

Shimizu-Mitao, Y. and Kakimoto, T. (Japan)

POS-WED-108 18:15 - 19:15

Functional divergence between the strigolactone and kirrikin
signalling components D14 and KAI2 pre-dates the emergence
of seed plants

Sun, Y.K., Scaffidi, A., Flematti, G.R., Smith, S.M. and Waters,
M.T. (Australia)

POS-TUE-109 18:15 - 19:15

The NAC-like gene gibberellin suppressing factor controls plant
growth and development by regulating gibberellin metabolism
pathway in *Arabidopsis*

Chen, J.-I. and **Yang, C.-H.** (Taiwan)

POSTERS

Cell and Organelle Biology Posters 110 – 144

POS-WED-110 18:15 - 19:15

Characterisation of candidate *Glycine max* symbiosome membrane proteins

Brear, E.M., Clarke, V., Loughlin, P., Qu, Y., Chen, C., Overall, R., Day, D. and Smith, P. (Australia)

POS-TUE-111 18:15 - 19:15

Natural variation in the developmental consequences of a loss of chloroplast translation in *Arabidopsis thaliana*

Bryant, N., Wang, Y. and Meinke, D. (USA)

POS-WED-112 18:15 - 19:15

Crystal structure of rice importin- α and structural basis of its interaction with plant-specific nuclear localization signals

Chang, C.W., Counago, R.L.M., Williams, S.J., Boden, M. and Kobe, B. (Australia)

POS-TUE-113 18:15 - 19:15

An essential role for Arabidopsis TRS33, a component of TRAPP in cell growth and organization in plant apical meristems

Chen, J., Zhao, S.T., Zhang, J., Liu, B.B., Li, J.B., Qi, X.Y., Lu, M.Z. and Zheng, H.Q. (China and Canada)

POS-WED-114 18:15 - 19:15

Asymmetric distribution of AtSWEET sucrose effluxers in phloem parenchyma transfer cells of Arabidopsis veins

Nguyen, S., Zimmerman, K., Arun Chinnappa, K.S., Collings, D. and **McCurdy, D.W.** (Australia and New Zealand)

POS-TUE-115 18:15 - 19:15

The sensitivity of actin knockout mutants to microfilament disruption with latrunculin B depends on total actin expression levels

Buijs, G., Garrill, A. and **Collings, D.A.** (New Zealand and Netherlands)

POS-WED-116 18:15 - 19:15

Molecular mechanisms of PVC-vacuole trafficking in plant cells

Cui, Y. and Jiang, L. (Hong Kong, China)

POSTERS

POS-TUE-117 18:15 - 19:15

Role of sodium-proton antiporters *nhx5* and *nhx6* in the *Arabidopsis* secretory pathway

Ernest, J.R. and Gendall, A.R. (Australia)

POS-WED-118 18:15 - 19:15

A role for the mitochondrial redox-related lea protein (SAG21/AtLEA5) in the regulation of plant growth and stress tolerance

Foyer, C.H., Theodoulou, F.L. and Rogers, H. (United Kingdom)

POS-TUE-119 18:15 - 19:15

Characterisation of two glycosyl transferases involved in arabinogalactan-protein biosynthesis

Hernandez-Sanchez, A.M., Lampugnani, E.R., Doblin, M.S. and Bacic, A. (Australia)

POS-WED-120 18:15 - 19:15

Constructing the scaffold of the protein-building machinery: identification of a pentatricopeptide repeat protein involved in chloroplast ribosomal RNA biogenesis

Liu, S., Small, I. and **Howell, K.A.** (Australia)

POS-TUE-121 18:15 - 19:15

Sharper - a computational tool for automatic quantitative analysis of cell shape and its use in a chemical genetics approach in plants

Ivakov, A., Lohse, M., Scherer, U., Nikoloski, Z. and Persson, S. (Germany)

POS-WED-122 18:15 - 19:15

A novel mechanism of golgi retention for integral membrane proteins

Gao, C. and **Jiang, L.** (Hong Kong, China)

POS-TUE-123 18:15 - 19:15

Understanding of leaf senescence-associated NAC transcriptional regulatory network in *Arabidopsis*

Kim, H.J., Phee, B.K., Kim, Y.W., Hong, B.S., Rupak, T., Jun, J.H., Woo, H.R., Lim, P.O. and Nam, H.G. (Republic of Korea)

POS-WED-124 18:15 - 19:15

Understanding how RNA editing factors recognize their TNA targets

Kindgren, P., Yap, A. and Small, I. (Australia)

POSTERS

POS-TUE-125 18:15 - 19:15

Functional characterization of mitochondrial outer membrane proteins in *Arabidopsis thaliana*

Kubiszewski-Jakubiak, S., Murcha, M., Duncan, O. and Whelan, J. (Australia)

POS-WED-126 18:15 - 19:15

A putative soluble trafficking component might play a novel role as a mediator in post-golgi trafficking of ion exchangers under salinity stress in *Arabidopsis thaliana*

Kwon, Y. and Hwang, I. (Korea)

POS-TUE-127 18:15 - 19:15

A GT47 family glycosyl transferase from *Nicotiana* pollen mediates the synthesis of (1,5)- α -L-arabinan when expressed in *Arabidopsis thaliana*

Lampugnani, E.R., Moller, I.E., Cassin, A., Koh, P.L., Wilson, S., Bacic, A. and Newbigin, E. (Australia)

POS-WED-128 18:15 - 19:15

The molecular mechanism of ELF4 to regulate GI sub-nuclear distribution

Lim, J., Yeom, M., Kim, H., Kim, Y. and Nam, H.G. (Republic of Korea)

POS-TUE-129 18:15 - 19:15

Characterising *Arabidopsis* nitrilase family and 14-3-3 protein interactions

Man, J., Li, R., Van Der Kwast, M., Martin, T. and Millar, H. (Australia)

POS-WED-130 18:15 - 19:15

Understanding the genetic basis for the structural diversity of the hemicellulose xyloglucan

Mansoori, N., Schultink, A. and Pauly, M. (USA)

POS-TUE-131 18:15 - 19:15

Does editing of the *rpoC1* transcript regulate activity of the plastid-encoded RNA polymerase?

Melonek, J., Bersoult, A., Chateigner-Boutin, A.L., Delannoy, E., Gusewski, S., Howell, K.A., Kahlau, S., Matthes, A., Tanz, S.K., Bock, R. and Small, I. (Australia and Germany)

POSTERS

POS-WED-132 18:15 - 19:15

Characterisation of transport proteins on the symbiosome membrane of soybean (*Glycine max*)

Mohd Noor, S.N., Clarke, V., Overall, R., Day, D. and Smith, P. (Australia)

POS-TUE-133 18:15 - 19:15

Functional analysis of ribosome assembly cofactors related to 30S ribosome subunits in chloroplast

Motohashi, R., Suzuki, K., Ichinoise, M. and Shinozaki, K. (Japan)

POS-WED-134 18:15 - 19:15

The specific role of mitochondrial protein import for germination

Wang, Y., Law, S.I., Narsai, R., Whelan, J. and **Murcha, M.W.** (Australia)

POS-TUE-135 18:15 - 19:15

Regulation of *A. thaliana* mesophyll SV channels by phosphoinositides

Perez, V., Ovalle-Garcia, E., Antillon, A., Ortega-Blake, I. and **Pantoja, O.** (Mexico)

POS-WED-136 18:15 - 19:15

FAX1, a novel membrane protein in the chloroplast inner envelope involved in export of fatty acids and/or derivatives

Li, N., Guegel, I., Philippar, K. and **Soll, J.** (Germany)

POS-TUE-137 18:15 - 19:15

Multiplicity of the EXO70 exocyst subunit in Arabidopsis

Synek, L., Cvrckova, F., Pecenkova, T., Kulich, I., Soukupova, H. and Zarsky, V. (Czech Republic)

POS-WED-138 18:15 - 19:15

EXPO function in plants

Wang, J., Ding, Y., Wang, J.Q., Lo, S.W. and Jiang, L.W. (Hong Kong, China)

POS-TUE-139 18:15 - 19:15

Biogenesis of EXPO in plant cells

Wang, X.F., Zeng, Y.L. and Jiang, L.W. (Hong Kong, China)

POSTERS

POS-WED-140 18:15 - 19:15

Acquisition, conservation, and loss of dual-targeted proteins in land plants

Xu, L., Carrie, C., Law, S.R., Murcha, M.W. and Whelan, J. (Australia and Germany)

POS-TUE-141 18:15 - 19:15

The last of the editors

Yap, A., Kindgren, P., Colas Des Francs-Small, C. and Small, I. (Australia)

POS-WED-142 18:15 - 19:15

Functional characterization of mitochondrial mechanosensitive channel MSL1 in *Arabidopsis thaliana*

Yomogihara, S., Harada, N., Asakura, C., Yamaguchi, S., Ichikawa, M., Furuichi, T. and Shiina, T. (Japan)

POS-TUE-143 18:15 - 19:15

From root hairs to spinal neurons: tubular ER network and directional cell growth

Qi, X., Doyle, C., Ma, V. and **Zheng, H.** (Canada)

POS-WED-144 18:15 - 19:15

Autophagy and autophagosome in plants

Zhuang, X.H. and Jiang, L.W. (Hong Kong, China)

Intracellular Signaling

Posters 145 – 198

POS-TUE-145 18:15 - 19:15

Characterisation of a pectin methylesterase inhibitor involved in cell wall development and mucilage structure in the *Arabidopsis* seed coat

Allen, P.J., Li, S.F. and Parish, R.W. (Australia)

POS-WED-146 18:15 - 19:15

Characterization of underground stolon "rhizome" of *Cardamine leucantha* [Brassicaceae] by transcriptome analysis

Araki, K.S., Nagano, A.J., Nakano, R.T., Kitazume, T., Yamaguchi, K., Hara-Nishimura, I., Shigenobu, S. and Kudoh, H. (Japan)

POSTERS

POS-TUE-147 18:15 - 19:15

Identification of two MYB-related transcription factors, At4g09450 and At2g38090, as putative regulators of wall ingrowth deposition in phloem parenchyma transfer cells
Arun Chinnappa, K.S., Hou, J., Wu, Y., Sheahan, M. and McCurdy, D.W. (Australia)

POS-WED-148 18:15 - 19:15

Metabolic oscillators: linking NAD⁺ and the circadian clock
Bell, L.J., Schulz, P., Hannah, M.A. and Webb, A.R.R. (United Kingdom and Belgium)

POS-TUE-149 18:15 - 19:15

Transported signaling molecules that regulate root stem cell homeostasis
Berckmans, B., Stahl, Y. and Simon, R. (Germany)

POS-WED-150 18:15 - 19:15

Action of NF-Y transcription factors in plant stress responses
Breeze, E., Buchanan-Wollaston, V., Denby, K. and PRESTA Consortium U.O.W. (United Kingdom)

POS-TUE-151 18:15 - 19:15

The LRR ectodomain of the receptor kinase FLS2 not only senses flagellin but also contributes to receptor activation
Bittel, P., Jehle, A.K., Mueller, K., Boller, T., Felix, G. and **Chinchilla, D.** (Switzerland and Germany)

POS-WED-152 18:15 - 19:15

Spatio-temporal transcriptomic responses to nitrate in *Arabidopsis* roots
Contreras-Lopez, O., Vidal, E.A., Moyano, T.C. and Gutierrez, R.A. (Chile)

POS-TUE-153 18:15 - 19:15

The *Arabidopsis* cyclic nucleotide interactome suggests a role for cyclic nucleotides in the regulation of photorespiration during the defense response
Donaldson, L.E., Gehring, C.A. and Meier, S.K. (Saudi Arabia)

POS-WED-154 18:15 - 19:15

The influence of auxin transport inhibitors on chloroplast movement and phototropin expression in *Arabidopsis thaliana*
Eckstein, A. and Gabrys, H. (Poland)

POSTERS

POS-TUE-155 18:15 - 19:15

Ambient temperature response and serine/arginine protein mediated alternative splicing in *Arabidopsis thaliana*

Fulton, L.M. and Balasubramanian, S. (Australia)

POS-WED-156 18:15 - 19:15

Transcriptome analysis of desiccation tolerance in seeds of *Arabidopsis thaliana*

Gonzalez-Morales, S.I., Chávez Montes, R.A., Hayano-Kashiro, C., Chauvin, A.L. and Herrera Estrella, L. (México)

POS-TUE-157 18:15 - 19:15

Nitrate regulatory mechanisms involved in the control of flowering time

Gras, D.E., Mancilla, Y. and Gutiérrez R.A. (Chile)

POS-WED-158 18:15 - 19:15

ELF3 as a repressive hub: alternative ELF3 repressive complexes across temperature

Griffiths, J., Smith, R.W., Stewart, K.L., Steel, G., MacGregor, D.R. and Halliday, K.J. (United Kingdom)

POS-TUE-159 18:15 - 19:15

Interaction of nitrogen forms and auxin to promote root formation as revealed by the analysis of an *Arabidopsis* ammonium transporter mutant

Hacisalihoglu, G., Araya, T., Von Wiren, N. and Takahashi, H. (USA and Germany)

POS-WED-160 18:15 - 19:15

Functional promoter analysis of *GRXC9*, a gene activated by a non-canonical salicylic acid-dependent pathway in *Arabidopsis*

Herrera, A., Carvallo, L. and Holuigue, L. (Chile)

POS-TUE-161 18:15 - 19:15

Hunting for genes that link *Cis*-carotenes to chloroplast development

Hou, X., Cazzonelli, C.I. and Pogson, B.J. (Australia)

POS-WED-162 18:15 - 19:15

Differential regulation of *Arabidopsis* plastid gene expression and RNA editing in non-photosynthetic tissues

Tseng, C.C., Lee, C.J., Chung, Y.T., Sung, T.Y. and **Hsieh, M.H.** (Taiwan)

POSTERS

POS-TUE-163 18:15 - 19:15

Identification of protein-protein interactions regulating sodium-proton antiporter activity

Huynh, D. and Gendall, A.R. (Australia and Vietnam)

POS-WED-164 18:15 - 19:15

A unique approach to identify and validate novel regulatory peptide-coding genes

Imin, N., Ogilvie, H., Delay, C., Frickey, T. and Djordjevic, M. (Australia and Germany)

POS-TUE-165 18:15 - 19:15

Unraveling the gene regulatory network of a senescence-associated NAC transcription factor in *Arabidopsis thaliana*

Kamranfar, I., Xue, G.P., Balazadeh, S. and Mueller-Roeber, B. (Germany and Australia)

POS-WED-166 18:15 - 19:15

Overexpression of the sweetpotato R2R3-type *IbMYB1a* gene activates anthocyanin production in heterologous plants

Kim, C.Y., An, C.H., Lee, S.-H., Lee, K.-W., Jeong, Y.J., Woo, S.G., Jeon, H. and Kwak, S.-S (Korea)

POS-TUE-167 18:15 - 19:15

Characterization of transcription factor *HAT2* using T-DNA mutants

Kim, H.U., Jung, S.J., Lee, K.R., Roh, K.H. and Kim, J.B. (Korea)

POS-WED-168 18:15 - 19:15

The central role of NLP transcription factors in nitrate-inducible gene expression

Konishi, M. and Yanagisawa, S. (Japan)

POS-TUE-169 18:15 - 19:15

Identification and characterisation of a novel mitochondrial stress-responsive protein

Law, S.R., Wang, Y., Guan, K.Y. and Whelan, J. (Australia)

POS-WED-170 18:15 - 19:15

Rapid vacuolar structural changes in guard cells require phosphatidylinositol 3,5-bisphosphate

Bak, G., Lee, E.-J., Lee, Y., Mariko, M., Segami, S., Sze, H., Maeshima, M., Hwang, J.-U. and Lee, Y. (South Korea, Japan, USA and Switzerland)

POSTERS

POS-TUE-171 18:15 - 19:15

Parental imprinting of *UCL1* regulating curly leaf polycomb protein activity in Arabidopsis

Jeong, C.W., Yun, H., Choi, Y. and **Lee, J.S.** (Korea)

POS-WED-172 18:15 - 19:15

Arabidopsis DREB2C transcription factor acts as an activator of the expression of the heat-inducible *phytolectin 4* gene *AtCYS4*

Je, J., Song, C. and **Lim, C.O.** (Korea)

POS-TUE-173 18:15 - 19:15

In silico analysis of cell-type specific omic responses reveal novel spatiotemporal regulatory networks regulating phosphate acquisition during Pi stress in Arabidopsis and rice

Linn, J., Secco, D., Vadermerwe, M. and Whelan, J. (Australia)

POS-WED-174 18:15 - 19:15

Comprehensive analysis of the *Arabidopsis* stigmatic papilla cell transcriptome

Matsuda, T., Osaka, M., Sakazono, S., Takahashi, H., Nakazono, M., Iwano, M., Takayama, S., Suzuki, G., Watanabe, M. and Suwabe, K. (Japan)

POS-TUE-175 18:15 - 19:15

Characterization of the function of calmodulin-like (CML)23 and CML24 in the *Arabidopsis thaliana* circadian clock

Mohd Noh, N.I. (United Kingdom)

POS-WED-176 18:15 - 19:15

Genomic analysis of IRE1-dependent decay of mRNAs in *Arabidopsis thaliana* reveals a connection between unfolded protein response and several physiological plant processes

Moreno, A.A., Blanco, F. and Orellana, A. (Chile)

POS-TUE-177 18:15 - 19:15

A novel circadian clock regulator in Arabidopsis

Nagel, D.H., Pruneda-Paz, J.L. and Kay, S.A. (USA)

POS-WED-178 18:15 - 19:15

Inflorescence stem grafting made easy in Arabidopsis

Nisar, N., Verma, S., Pogson, B.J. and Cazzonelli, C.I. (Australia)

POSTERS

POS-TUE-179 18:15 - 19:15

The tetrapyrrole mediated plastid signal negatively regulates *CBF* expression under circadian control in *Arabidopsis*

Norén, L., Kindgren, P. and Strand, A. (Sweden and Australia)

POS-WED-180 18:15 - 19:15

Functional analysis of *GRF9* in *Arabidopsis thaliana*

Omidbakhshfard, M.A., Xue, G.P. and Mueller-Roeber, B. (Germany and Australia)

POS-TUE-181 18:15 - 19:15

Arabidopsis seed germination requires GA signalling in the epidermis through an interplay between DELLA and a *cis*-element targeted by a homeodomain transcription factor

Rombolá-Caldentey, B., Rueda-Romero, P., Carbonero, P. and **Oñate-Sánchez, L.** (Spain)

POS-WED-182 18:15 - 19:15

Role of a GATA-type transcription factor in regulating seed dormancy downstream of the DELLA protein, RGL2

Ravindran, P., Stamm, P. and Kumar, P.P. (Singapore)

POS-TUE-183 18:15 - 19:15

The role of calcium in the nitrate signaling pathway in *Arabidopsis thaliana* roots

Riveras, E., Alvarez, J.M., Oses, C., Tamayo, K.P. and Gutierrez, R.A. (Chile)

POS-WED-184 18:15 - 19:15

Control of starch accumulation in *Arabidopsis* by a P-starvation induced peptide-coding orphan transcript

Musialak-Lange, M., **Rojas-Triana, M.**, Stecyk, E., Araujo, W. and Scheible, W. (Germany and USA)

POS-TUE-185 18:15 - 19:15

Cell type-specific and condition-sensitive alternative splicing and *Arabidopsis* roots

Li, W., Lan, P., Lin, W.D., Ray, P. and **Schmidt, W.** (Taiwan, China and USA)

POS-WED-186 18:15 - 19:15

Regulation of the XER02 gene in *Arabidopsis*

Seyit, R., Li, S.F., Gendall, A. and Parish, R.W. (Australia)

POSTERS

POS-TUE-187 18:15 - 19:15

Identification and characterization of thermomemory-transcriptional regulators

Shahnejat-Bushehri, S., Meuller-Roeber, B. and Balazadeh, S. (Germany)

POS-WED-188 18:15 - 19:15

A novel glyphosate resistant mutant sheds light on the regulation of the shikimate pathway

Sharkhuu, A., Narsimhan, M.L., Weller, S.C., Bressan, R.A., Merzaban, J. and Gehring, C. (Saudi Arabia and USA)

POS-TUE-189 18:15 - 19:15

CLV3 peptide-induced complex formation between the stem cell regulators CLV1 and CRN

Somssich, M., Ma, Q., Weidtkamp-Peters, S., Seidel, C.A.M. and Simon, R. (Germany)

POS-WED-190 18:15 - 19:15

Identification and functional analysis of novel transcription factors which are phosphorylated in response to abscisic acid in guard cells

Takahashi, Y., Ebisu, Y., Kinoshita, T., Doi, M., Okuma, E., Murata, Y. and Shimazaki, K. (Japan)

POS-TUE-191 18:15 - 19:15

Enhanced resistance to diverse pathogens and pests conferred by mutations in glutathione S-transferase signalling pathways

Thatcher, L.F., Foley, R.C. and Singh, K.B. (Australia)

POS-WED-192 18:15 - 19:15

The N-end rule pathway mediates nitric oxide sensing

Gibbs, D.J., Isa, N.M., Movahedi, M., Mendiondo, G., Corbineau, F., Leon, J., Bachmair, A., Gray, J.E., **Theodoulou, F.L.** and Holdsworth, M.J. (United Kingdom, France, Spain and Austria)

POS-TUE-193 18:15 - 19:15

Investigating roles for At3g04420 and At1g33060, two NAC-domain transcription factors, as master regulators of transfer cell development in *Arabidopsis thaliana*

Wu, Y., Hou, J., Arun Chinnappa, K.S., Sheahan, M.B. and McCurdy, D.W. (Australia)

POSTERS

POS-WED-194 18:15 - 19:15

Systems approaches map regulatory networks downstream of the auxin receptor AFB3 in the nitrate response of *Arabidopsis thaliana* roots

Vidal, E.A., Moyano, T.C., Riveras, E., Contreras-Lopez, O., and Gutierrez, R.A. (Chile)

POS-TUE-195 18:15 - 19:15

Cis-carotenes: do they have regulatory roles in plants?

Wakins, J.L., Cazzonelli, C.I. and Pogson, B.J. (Australia)

POS-WED-196 18:15 - 19:15

ATIPK2 β regulates flowering time through the autonomous pathway

Sang, S.H. and **Xia, H.J.** (China)

POS-TUE-197 18:15 - 19:15

The *ATMYB80* transcription factor, its direct target genes and the cotton homolog *GHMYB80* in *Arabidopsis* male fertility

Xu, Y., Li, S.F. and Parish, R.W. (Australia)

POS-WED-198 18:15 - 19:15

Stable internal reference genes for normalization of real-time RT-PCR in tobacco (*Nicotiana tabacum*) during virus infection

Yoon, J.Y., Baek, E., Choi, S.K. and Palukaitis, P. (Korea)

Cell to Cell Communication

Posters 199 – 203

POS-TUE-199 18:15 - 19:15

Characterisation of putative plasmodesmata proteins of the *Arabidopsis* calnexin family

Liu, D.Y.T., Smith, P.M.C., Day, D.A. and Overall, R.L. (Australia)

POS-WED-200 18:15 - 19:15

Phosphorothioate antisense oligodeoxynucleotides to transiently suppress gene expression in living pollen tubes

Mizuta, Y. and Higashiyama, T. (Japan)

POS-TUE-201 18:15 - 19:15

Short- and long-distance signal transmission - following tagged proteins and their mRNA across graft junctions in *Arabidopsis*

White, R.G. and Liang, D. (Australia)

POSTERS

POS-WED-202 18:15 - 19:15

Identification of a new ligand for the HAESA-LIKE2 leucine-rich repeat receptor-like kinase

Wildhagen, M., Butenko, M.A., Albert, M., Felix, G. and Aalen, R. (Germany)

POS-TUE-203 18:15 - 19:15

The pollen-expressed transcription factor CUPID family controls male-female interaction in *Arabidopsis*

Liang, Y., Tan, Z.M., Zhu, L., Zhou, J.J., Niu, Q.K., Chen, L.Q., Zhang, X.Q. and **Ye, D.** (China)

Abiotic Stress Posters 204 – 248

POS-WED-204 18:15 - 19:15

Promoter analysis of an *Arabidopsis* gene for 9-cis-epoxycarotenoid dioxygenase-3 (*AtNCED3*) involved in dehydration-inducible transcription

Behnam, B., Iuchi, S., Fujita, M., Fujita, Y., Yamaguchi-Shinozaki, K., Kobayashi, M. and Shinozaki, K. (Japan)

POS-TUE-205 18:15 - 19:15

Acclimation responses of *Arabidopsis thaliana* to sustained phosphite treatments

Berkowitz, O., Jost, R., Kollehn, D.O., Fenske, R., O'Brien, P.A. and Hardy, G.E. (Australia)

POS-WED-206 18:15 - 19:15

Transcriptional regulatory cascade in heat stress response of *Arabidopsis thaliana*

Buchholz, A., Szymanski, J. and Willmitzer, L. (Germany)

POS-TUE-207 18:15 - 19:15

General and differential changes in the transcriptome participate in the establishment of the heat stress response in *Arabidopsis* seedlings

Yanguéz, E., Castro Sanz, A.B., Fernandez Bautista, N., Munoz, A. and **Castellano, M.M.** (Spain)

POS-WED-208 18:15 - 19:15

Four transcription factors are related to the multiple response of *Arabidopsis* AtGST11 gene under abiotic stresses

Ezaki, B., Kouno, T. and Yulita, K.S. (Japan)

POSTERS

POS-TUE-209 18:15 - 19:15

Abscisic acid and auxin antagonistically regulate root meristem activity through a nodulin homeobox protein in *Arabidopsis*
Duan, Y., He, J., Zhang, J., Hua, D., Wang, L., Chen, Z., Li, C. and **Gong, Z.** (China)

POS-WED-210 18:15 - 19:15

Functional and transcriptome analysis reveals an adaptive strategy for abiotic stress tolerance dependant on the bifunctional activity of members of the *Arabidopsis* NF-YA transcription factor family
Leyva-González, M.A., Ibarra-Laclette, E., Cruz-Ramirez, A. and **Herrera-Estrella, L.** (Mexico)

POS-TUE-211 18:15 - 19:15

Characterization of an iron over-accumulating mutant of *Arabidopsis thaliana*
Hindt, M.N., Pivarski, K. and Guerinot, M.L. (United Kingdom)

POS-WED-212 18:15 - 19:15

Thioredoxin h-type has dual functions that molecular chaperone and disulfide reductase in *Arabidopsis*
Hwang, G.Y., Park, J.H., Kim, M.J., Shin, M.R., Chi, Y.H. and Lee, S. Y. (Korea)

POS-TUE-213 18:15 - 19:15

Emerging roles of RNA chaperones in stress response and development of plants
Kang, H., Jung, H.J., Xu, T., Gu, L. and Lee, K.W. (Korea)

POS-WED-214 18:15 - 19:15

Growth platform-dependent and independent phenotypic and metabolic responses of *Arabidopsis thaliana* and its halophytic relative, *Thellungiella salsuginea*, under salt stress
Kazachkova, Y., Batushansky, A., Cisneros, A., Tel-Zur, N., Fait, A. and Barak, S. (Israel)

POS-TUE-215 18:15 - 19:15

Determining the effect of phosphate supply on the proteome of *Arabidopsis thaliana* shoots
Kerbler, S.M., Jost, R., Taylor, N.L. and Finnegan, P.M. (Australia)

POSTERS

POS-WED-216 18:15 - 19:15

Genes encoding plant-specific class III peroxidases are responsible for increased cold tolerance of the brassinosteroid-insensitive 1 mutant

Kim, B.H., Kim, S.Y., Fu, M.J. and Nam, K.H. (Korea)

POS-TUE-217 18:15 - 19:15

Acetic acid is essential for drought tolerance in plants

Kim, J.M., To, T.K. and Seki, M. (Japan)

POS-WED-218 18:15 - 19:15

The R2R3 MYB gene *atMYB73* negatively regulates the expression of *SOS1* and *SOS3* in *Arabidopsis* only in response to high salinity

Kim, J.H., Nguyen, H.N., Hong, S.H. and Lee, H. (Korea)

POS-TUE-219 18:15 - 19:15

AtDabb1 is a pathogen-responsive protein with antifungal activity in *Arabidopsis thaliana*

Kim, M.J., Hwang, G.Y., Oh, H.T., Paeng, S.K., Melencion, S.M.B. and Lee, S.Y. (Korea)

POS-WED-220 18:15 - 19:15

Functional analysis of novel chloroplast membrane proteins, COR413-IM1-IM2 regulated by an *Arabidopsis* transcription factor *DREB1A*

Kodaira, S.K., Kanai, M., Maruyama, K., Yamada, K., Kidokoro, S., Shinozaki, K. and Yamaguchi-Shinozaki, K. (Japan)

POS-TUE-221 18:15 - 19:15

Heat-induced chaperone activity of serine / threonine protein phosphatase 5, PP5, improves thermotolerance in *Arabidopsis*

Lee, E.S., Melencion, S.M.B., Chae, H.B., Park, J.H., Kang, C.H. and Lee, S.Y. (Korea)

POS-WED-222 18:15 - 19:15

The influence of two major antioxidants on stress responses in plants

Lim, B., Smirnof, N. and Cobbett, C.S. (Australia and United Kingdom)

POSTERS

POS-TUE-223 18:15 - 19:15

The effects of elevated carbon dioxide and temperature on microRNA expression Arabidopsis development

Liu, Q.A., May, P., Liao, W., Wu, Y.J., Shuai, B., McCombie, W.R. and Zhang, M.Q. (USA)

POS-WED-224 18:15 - 19:15

Dual functions of Arabidopsis sulfiredoxin: acting as a redox-dependent sulfinic acid reductase and as a redox-independent nuclease enzyme

Maibam, P., Kim, M.J., Lee, E.S., Shin, M.R., Park, J.H. and Lee, S.Y. (Korea)

POS-TUE-225 18:15 - 19:15

Integrated analysis (phytohormones and transcripts) of the effects of heat shock stress in Arabidopsis, rice and soybean

Maruyama, K., Urano, K., Kojima, M., Sakakibara, H., Shinozaki, K. and Yamaguchi-Shinozaki, K. (Japan)

POS-WED-226 18:15 - 19:15

Effects of progressive drought in Arabidopsis plants overexpressing or silenced for the patatin-like gene *pPLA1a*
Vieira Da Silva, I., Bernardes Da Silva, A., Alcantara, A., Marques Da Silva, J., Arrabaca, J.D. and **Matos, A.R.** (Portugal)

POS-TUE-227 18:15 - 19:15

Heat-shock dependent oligomeric status alters the function of a plant-specific thioredoxin-like protein, AtTDX

Melecion, S.M.B., Park, J.H., Paeng, S.K., Shin, M.R., Jung, Y.J. and Lee, S.Y. (Korea)

POS-WED-228 18:15 - 19:15

Identification of novel subclass III SnRK2-interacting proteins in Arabidopsis

Mogami, J., Fujita, Y., Kidokoro, S., Tsukiori, Y., Nakagami, H., Yanagisawa, S., Ishida, T., Mizoi, J., Shinozaki, K. and Yamaguchi-Shinozaki, K. (Japan)

POS-TUE-229 18:15 - 19:15

The *Arabidopsis* nitrate transceptor NRT1.1 governs distinct signaling pathways and governs root colonization via local modification of auxin fluxes

Bouguyon, E., Pervent, M., Perrine-Walker, F., Krouk, G., Mounier, E., Gojon, A. and **Nacry, P.** (France)

POSTERS

POS-WED-230 18:15 - 19:15

The role of SDG receptor-like kinases in germination under abiotic stress

Nanda, A.K. and Masle, J. (Australia)

POS-TUE-231 18:15 - 19:15

In *Arabidopsis*, thioredoxin reductase type C (NTRC) organizes enhanced thermo-resistance by its oxidized and reduced-dependent holdase chaperon function

Oh, H.T., Nawkar, G.M., Jung, Y.J., Chae, H.B., Chi, Y.H. and Lee, S.Y. (Korea)

POS-WED-232 18:15 - 19:15

Functional analysis of B-class heat shock transcription factors in *Arabidopsis*

Ohama, N., Mizoi, J., Yoshida, T., Yoshida, T., Shinozaki, K. and Yamaguchi-Shinozaki, K. (Japan)

POS-TUE-233 18:15 - 19:15

Control mechanism of osmotic stress response and plant growth by potassium transporter in *Arabidopsis*

Osakabe, Y., Arinaga, N., Umezawa, T., Katsura, S., Yamada, K., Tanaka, H., Abo, M., Yoshimura, E., Shinozaki, K. and Yamaguchi-Shinozaki, K. (Japan)

POS-WED-234 18:15 - 19:15

The 1-CYS peroxiredoxin functions not only a regulator of seed dormancy but a molecular chaperone under oxidative stress conditions

Park, J.H., Paeng, S.K., Nawkar, G.M., Maibam, P., Lee, E.S. and Kang, C.H. (Korea)

POS-TUE-235 18:15 - 19:15

ERF115 gene codes for a transcription factor involved in tolerance to high salinity stress in *Arabidopsis thaliana*

Leon, L., **Salinas, P.** and Holuigue, L. (Chile)

POS-WED-236 18:15 - 19:15

An epigenetically-controlled transcriptional state underpins a physiological role for the release of heterochromatic silencing under heat

Sanchez, D.H. and Paszkowski, J. (Switzerland)

POSTERS

POS-TUE-237 18:15 - 19:15

Functional analysis of NF-YC10, a novel interacting protein with *Arabidopsis* DREB2A, which may be involved in the stress specific expression of DREB2A target genes

Sato, H., Mizoi, J., Tanaka, H., Maruyama, K., Qin, F., Osakabe, Y., Shinozaki, K. and Yamaguchi-Shinozaki, K. (Japan)

POS-WED-238 18:15 - 19:15

Regulation of NA^+ transport, the role of *AtHKT1;1* expression in Col-0 and C24

Schmoeckel, S.M., Sundstrom, J.F., Tester, M., Berger, B. and Roy, S.J. (Australia and Saudi Arabia)

POS-TUE-239 18:15 - 19:15

Characterization of transgenic lines changed in flavonoid biosynthesis reveals contribution of flavonoids to freezing tolerance in *Arabidopsis thaliana*

Schulz, E., Tohge, T., Zuther, E., Fernie, A.R. and Hinch, D.K. (Germany)

POS-WED-240 18:15 - 19:15

Comparative analysis of rice and wheat seedling responses to anoxia and re-oxygenation

Shingaki-Wells, R.N., Huang, S. and Millar, A.H. (Australia)

POS-TUE-241 18:15 - 19:15

Transcriptome analysis under salt stress in *Triticum aestivum*

Takahashi, F., Tilbrook, J., Trittermann, C., Berger, B., Roy, S., Seki, M., Tester, M. and Shinozaki, K. (Japan and Australia)

POS-WED-242 18:15 - 19:15

Effects of elevated ambient pressure on the rates of dark respiration and net photosynthesis

Takeishi, H., Awata, H., Hayashi, J., Machimura, T., Koshino-Kimura, Y., Kobayashi, A. and Akamatsu, F. (Japan)

POS-TUE-243 18:15 - 19:15

GABA-gated anion channels in plants - they exist and have important physiological roles

Ramesh, S.D., **Tyerman, S.**, Ryan, P.R. and Gilliam, M. (Australia)

POSTERS

POS-WED-244 18:15 - 19:15

Molecular mechanism of TCP transcription factor in response to abiotic stress response

Urano, K., Maruyama, K., Ogata, Y., Suzuki, H., Shibata, D., Gonzalez, N., Inze, D., Yamaguchi-Schinozaki, K. and Shinozaki, K. (Japan)

POS-TUE-245 18:15 - 19:15

Mutation in replication factor C subunit 3 compromises plant repair capability to replication damage in *Arabidopsis thaliana*
Chen, L., Chen, J., Cui, K., Li, Y. and **Xia, S.** (China)

POS-WED-246 18:15 - 19:15

Translating drought (tolerance) research from *Arabidopsis* to wheat

Yadav, A.K., Tee, E., Howitt, C.A. and Pogson, B.J (Australia)

POS-TUE-247 18:15 - 19:15

The glutamate carboxypeptidase *AMP1* mediates ABA and abiotic stress responses in *Arabidopsis*

Shi, Y., Wang, Z., Meng, P., Zhang, X. and **Yang, S.** (China)

POS-WED-248 18:15 - 19:15

Clinal variation in the freezing tolerance of *Arabidopsis thaliana* accessions and memory of low temperature priming under warm conditions

Zuther, E., Schulz, E., Juszczak, I., Lee, Y.P., Baier, M. and Hinch, D.K. (Germany)

Biotic Stress / Interactions

Posters 249 – 276

POS-TUE-249 18:15 - 19:15

Class IX Ethylene Response Factor (ERF) transcription factors include master regulators of ethylene signalling and pathogen resistance

Anderson, J.P., Onate-Sanchez, L. and Singh, K.B. (Australia and Spain)

POS-WED-250 18:15 - 19:15

Analysis of responses of *Arabidopsis thaliana* to infection by *Alternaria brassicicola* using metabolite profiling

Botanga, C.J., Bethke, G., Chen, Z., Gallie, D.R., Fiehn, O. and Glazebrook, J. (USA)

POSTERS

POS-TUE-251 18:15 - 19:15

Root microbiome assemblage is affected by plant development through root exudation

Chaparro, J.M., Badri, D.V. and Vivanco, J.M. (USA)

POS-WED-252 18:15 - 19:15

ERF72 regulates *Fusarium oxysporum* resistance in Arabidopsis

Chen, Y.C., Wong, C.L., Muzzi, F., Vlaardingerbroek, I., Aitken, E., Kidd, B.N. and Schenk, P.M. (Australia)

POS-TUE-253 18:15 - 19:15

RNase L inhibitor proteins play a negative role in plant response to oxidative stress and bacterial wilt

Cheng, C.-P. and Li, Y.-M. (Taiwan)

POS-WED-254 18:15 - 19:15

Activation of R-mediated innate immunity and disease susceptibility is affected by different mutations in a cytosolic *O*-Acetylserine (thiol) lyases in Arabidopsis

Tahir, J., Watanabe, M., Jing, H.C., Hunter, D., Tohge, T., Nunes-Nesi, A., Brotman, Y., Fernie, A.R., Hoefgen, R. and **Dijkwel, P.P.** (New Zealand, Germany and China)

POS-TUE-255 18:15 - 19:15

Genetic and genomic analysis of *Rhizoctonia solani* interactions with Arabidopsis

Foley, R.C., Gleason, C.A., Anderson, J.P. and Singh, K.B. (Australia)

POS-WED-256 18:15 - 19:15

A conserved sweet sucrose transporter is key for nectar secretion in eudicot flowers

Lin, I., Chen, L.Q., Sosso, D., Gase, K., Kim, S.G., Kessler, D., Klinkenberg, P., Carter, C., Baldwin, I.T. and **Frommer, W.B.** (USA)

POS-TUE-257 18:15 - 19:15

Hyaloperonospora arabidopsidis effectors manipulate the defence response of *Arabidopsis thaliana*

Harvey, S.E., Steinbrenner, J. and Beynon, J. (United Kingdom)

POSTERS

POS-WED-258 18:15 - 19:15

Defence responses of *Arabidopsis thaliana* to infection by *Botrytis cinerea* are regulated by the circadian clock
Adams, N., Stone, W., Denby, K.J., Roden, L. and **Ingle, R.A.**
(South Africa and United Kingdom)

POS-TUE-259 18:15 - 19:15

Characterization of Arabidopsis CRT1 in plant immunity and genome stability
Bordiya, Y., Mang, H.G., Choi, H.W., Manosalva, P., Einem, S., Liu, P., Moreau, M., Kogel, K.H., Klessig, D.F. and **Kang, H.G.** (USA and Germany)

POS-WED-260 18:15 - 19:15

Mediator: a new concept for plant defense regulation
Kidd, B.N., Cevik, V., Fallath, T., Cahill, D.M., Beynon, J., Manners, J.M., Kazan, K. and Schenk, P.M. (Australia and UK)

POS-TUE-261 18:15 - 19:15

An Arabidopsis calmodulin-like protein AtCML13 can control the formation of PEN1-SNAP33-VAMP722 ternary snare complex
Yun, H.S., Schmidt, J., Schulze-Lefert, P. and **Kwon, C.** (South Korea and Germany)

POS-WED-262 18:15 - 19:15

Understanding beneficial plant-endophyte interactions at high resolution
Lipkowitz, J.R. and Benfey, P.N. (USA)

POS-TUE-263 18:15 - 19:15

Investigating the link between RNA processing, flowering time and defence
Lyons, R.L., Chalker, K., Rusu, A., Shirasu, K., Simpson, G.G., Manners, J. and Kazan, K. (Australia and United Kingdom)

POS-WED-264 18:15 - 19:15

Non-specific phospholipase C2 is involved in defence response of *Arabidopsis thaliana* to *Pseudomonas syringae* attack
Kocourkova, D., Krckova, Z., Pejchar, P., Brouzdova, J., Valentova, O. and **Martinec, J.** (Czech Republic)

POSTERS

POS-TUE-265 18:15 - 19:15

Overexpression of the Dof protein in tobacco leads to transcriptional activation of the resistance gene N, suggesting potential roles in the regulation of hypersensitive response to TMV

Takano, M., Odaira, S., Haque, M.A., Sasaki, N. and **Nuynoya, H.** (Japan and Bangladesh)

POS-WED-266 18:15 - 19:15

Chlorosis causing compounds in the *Arabidopsis-fusarium* interaction

Pretorius, L.S., Kidd, B.N. and Schenk, P.M. (Australia)

POS-TUE-267 18:15 - 19:15

Cell biology of anti-viral silencing in Arabidopsis

Pumplin, N. and Voinnet, O. (Switzerland)

POS-WED-268 18:15 - 19:15

DNA demethylation and disease resistance

Le, N.T., **Schumann, U.**, Tiwari, S., Smith, N.A., Llewellyn, D., Dennis, E. and Wang, M.-B. (Australia)

POS-TUE-269 18:15 - 19:15

The paired R genes RPS4 and RRS1 function together in effector-triggered immunity

Sohn, K., **Segonzac, C.**, Rallapalli, G., Sarris, P., Williams, S., Woo, J., Paek, K., Kobe, B. and Jones, J. (United Kingdom, New Zealand, Australia and South Korea)

POS-WED-270 18:15 - 19:15

Identification and characterization of an Arabidopsis mutant resistant to Phytophthora infection

Pan, Q.N., Deng, F.Y., Quan, J.L. and **Shan, W.X.** (China)

POS-TUE-271 18:15 - 19:15

A putative salicylic acid transporter EDS5 is localized to the plant chloroplast envelope membrane system in *Arabidopsis*

Yamasaki, K., Motomura, Y., Kikuchi, S., Nakai, M. and **Shiina, T.** (Japan)

POS-WED-272 18:15 - 19:15

Control of defense gene expression via chloroplast Ca²⁺ sensor protein CAS in *Arabidopsis thaliana*

Shimotani, K., Nakai, K., Sano, S. and Shiina, T. (Japan)

POSTERS

POS-TUE-273 18:15 - 19:15

Viral small interfering RNAs target host genes to mediate disease symptoms in plants

Smith, N.A., Eamens, A.L. and Wang, M.B. (Australia)

POS-WED-274 18:15 - 19:15

HAT4, a novel *Arabidopsis thaliana* microRNA responsive to *Phytophthora* infection

Wang, Q.H., Xu, K., Luo, S.Z., Zhang, W., Meng, Y.L., Li, T.T., Zhong, C.C., Wang, M.B. and Shan, W.X. (China and Australia)

POS-TUE-275 18:15 - 19:15

The crystal structure of the heterodimer formed between the toll-interleukin 1 receptor (TIR) domains of the Arabidopsis R proteins RRS1 and RPS4

Williams, S.J., Wan, L., Sohn, K., Ve, T., Bernoux, M., Ellis, J., Dodds, P.N. and Kobe, B. (Australia and United Kingdom)

POS-WED-276 18:15 - 19:15

Shift of NPR1 oligomeric status mediated by nitric oxide regulates basal disease resistance

Yun, B.W., Yin, M., Matika, D., Kim, K.M., Spoel, S.H. and Loake, G.J. (United Kingdom and South Korea)

Energy Biology and Metabolism

Posters 277 – 291

POS-TUE-277 18:15 - 19:15

A public metabolome database tool enables rapid classification of Arabidopsis photorespiratory mutants via metabolite profiling

Carroll, A.J., Whitehead, L., Kaines, S., Zhang, P., Wiszniewski, A., Bussell, J.D., Keech, O., Smith, S.M. and Badger, M. (Australia and Sweden)

POS-WED-278 18:15 - 19:15

Functional characterization of xylose isomerase from Arabidopsis

Chiu, T.Y., Lao, J., Stonebloom, S., Scheller, H.V. and Heazlewood, J.L. (USA)

POSTERS

POS-TUE-279 18:15 - 19:15

ECH2 and H⁺-pyrophosphatase correlatively act in oilseed mobilization during germination

Ferjani, A., Katano, M., Kazama, Y., Hirano, T., Abe, T. and Tsukaya, H. (Japan)

POS-WED-280 18:15 - 19:15

Role of the circadian clock in coordination of growth with primary metabolism

Flis, A., Sulpice, R. and Stitt, M. (Germany and Ireland)

POS-TUE-281 18:15 - 19:15

Succinate dehydrogenase assembly factor 2 is needed for assembly and activity of mitochondrial complex II and for normal root elongation in *Arabidopsis*

Huang, S., Taylor, N.L., Stroher, E., Fenske, R., and Millar, A.H. (Australia)

POS-WED-282 18:15 - 19:15

The 'fungicide' phosphite and its effects on plant metabolism and gene expression

Jost, R., Berkowitz, O., Watanabe, M., Giavalisco, P., Lambers, H., Hoefgen, R., Scheible, W.R. and Finnegan, P.M. (Australia, Germany and USA)

POS-TUE-283 18:15 - 19:15

A novel vacuolar sugar carrier is involved in cellular sugar homeostasis in *Arabidopsis*

Klemens, P.A.W., Chardon, F., Krapp, A. and Neuhaus, H.E. (Germany and France)

POS-WED-284 18:15 - 19:15

Modulation of plant composition by an orphan gene of *Arabidopsis*

Li, L., Zheng, W., Jones, D., Shang, X., Sow, W., Song, L, Huang, S. and Wurtele, E.S. (USA)

POS-TUE-285 18:15 - 19:15

An examination of the enzymatic properties of a broad family of alanine aminotransferase

McAllister, C.H., Facette, M., Holt, A. and Good, A.G. (Canada)

POSTERS

POS-WED-286 18:15 - 19:15

Mitochondrial translation efficiency mediated by LETM proteins leads to enhanced drought stress tolerance in *Arabidopsis thaliana*

Radomiljac, J.D., Zhang, B., Van Aken, O., Van Der Merwe, M., Considine, M.J. and Whelan, J. (Australia)

POS-TUE-287 18:15 - 19:15

Investigation of the flavin cofactor metabolism using *Arabidopsis* as a model system

Sandoval, F.J., Lynch, J., Sa, N. and Roje, S. (USA)

POS-WED-288 18:15 - 19:15

Multiplex micro-respiratory measurements of *Arabidopsis* tissue

Sew, Y.S., Stroher, E., Holzmann, C., Huang, S.B., Taylor, N.L., Jordana, X. and Millar, A.H. (Australia and Chile)

POS-TUE-289 18:15 - 19:15

Genome-scale constraint-based *In silico* modelling of *Arabidopsis thaliana* energy metabolism

Vacher, M. and Small, I. (Australia)

POS-WED-290 18:15 - 19:15

A functional study of *Arabidopsis thaliana* sirtuins

Van Der Kelen, K., Gossele, V., Vandorpe, M., De Block, M., Metzloff, M., Hannah, M.A. and Van Breusegem, F. (Belgium)

POS-TUE-291 18:15 - 19:15

Characterization of methionine cycle enzymes MTII and DEP1 in *Arabidopsis thaliana*

Zierer, W., Pommerrenig, B. and Sauer, N. (Germany)

Photosynthesis and Water

Posters 292 – 297

POS-WED-292 18:15 - 19:15

Regulation of secondary sulfur assimilation during drought stress in *Arabidopsis thaliana*

Chan, K.X., Estavillo, G.M., Phua, S.Y., Crisp, P.A. and Pogson, B.J. (Australia)

POS-TUE-293 18:15 - 19:15

PsbS protein interactions during non-photochemical quenching

Correa Galvis V.A. and Jahns P. (Germany)

POSTERS

POS-WED-294 18:15 - 19:15

Differential regulation of plastid proteins in stay-green
Arabidopsis: beyond the retention of LHCII and chlorophyll
Grassl, J., Pru-Inskjá, A., Hortensteiner, S., Taylor, N.L. and
Millar, A.H. (Australia and Switzerland)

POS-TUE-295 18:15 - 19:15

Dynamics and mechanisms of energy dissipation
Jahns, P., Paul, S., Muller, O., Schumann, S., Adams III, W.W.,
Demmig-Adams, B. and Holzwarth, A.R. (Germany and USA)

POS-WED-296 18:15 - 19:15

A comprehensive global transcriptional analysis of chlorophyll
catabolic genes
Meier, S.K. and Gehring, C.A. (Saudi Arabia)

POS-TUE-297 18:15 - 19:15

Engineering drought tolerance in brassicaceae by manipulating
the SAL1 gene
Phua, S.Y., Estavillo, G.M., Chan, K.X., Pornsiriwong, W.,
Nisar, N. and Pogson, B.J. (Australia)

Phenomics Posters 298 – 299

POS-WED-298 18:15 - 19:15

A survey of dominant mutations in *Arabidopsis thaliana*
Meinke, D. (USA)

POS-TUE-299 18:15 - 19:15

Chloroplast function database II: a large-scale collection of
homozygous mutants and their phenotype effects for nuclear-
encoded chloroplast proteins
Myouga, F., Akiyama, K., Tomonaga, Y., Kato, A., Sato, Y.,
Kobayashi, M., Nagata, N., Sakurai, T. and Schinozaki, K.
(Japan)

POSTERS

Proteins and Postranslational Regulation Posters 300 – 310

POS-WED-300 18:15 - 19:15

Organellar protein trafficking and insertion of tail-anchored proteins in plants

Duncan, O. and Whelan, J. (Australia)

POS-TUE-301 18:15 - 19:15

CaM-regulation of CNGCs in *Arabidopsis*: New insights and new models

Fischer, C., Subert, C. and Dietrich, P. (Germany)

POS-WED-302 18:15 - 19:15

Biochemical characterization of OsERG3 as a small C2-domain protein in rice

Kang, C.H., Kim, C.Y., Park, J.H. and Lee, S.Y. (Republic of Korea)

POS-TUE-303 18:15 - 19:15

Post-transcriptional regulation by initiation context in *Arabidopsis thaliana*

Kim, Y. and Hwang, I. (Korea)

POS-WED-304 18:15 - 19:15

Analysis of the *Arabidopsis thaliana* nuclear proteome

Kotlinski, M., Fogtman, A., Palusinski, A., Rubel, T., Oledzki, J., Dadlez, M., Koblovska, M. and Jerzmanowski, A. (Poland)

POS-TUE-305 18:15 - 19:15

Stable expression of the sweet protein monellin variant MNEI in tobacco chloroplasts

Lee, S.B., Kim, Y.S., Lee, J.H., Jang, A.C., Seoh, E.J., Suh, S.C. and Lee, Y.H. (Korea)

POS-WED-306 18:15 - 19:15

Proteome coverage of *Arabidopsis*: implications for shotgun proteomic studies

Mann, G.W., Joshi, H.J., Petzold, C.J. and Heazlewood, J.L. (USA and Denmark)

POS-TUE-307 18:15 - 19:15

Characterisation of *Glycine max* symbiosome membrane iron transporters

Qu, Y., Clarke, V.C., Loughlin, P.C., Brear, E.M., Chen, C., Day, D.A. and Smith, P.M.C. (Australia)

POSTERS

POS-WED-308 18:15 - 19:15

AtSerp1, an inhibitor in vivo of the papain-like cysteine protease RD21

Roberts, T.H., Lampl, N., Curmi, P.M.G. and Fluhr, R. (Australia)

POS-TUE-309 18:15 - 19:15

Arabidopsis blue light receptor, phototropin 2, is a substrate for modification by SUMO

Sztatelman, O., Strzalka, W., Krzeszowiec, W., Kedracka-Krok, S. and Gabrys, H. (Poland)

POS-WED-310 18:15 - 19:15

PSKR1 is a moonlighting receptor guanylate cyclase that acts as a homo dimmer

Wheeler, J.I., Muleya, V., Mok, Y.-F., Griffin, M., Chowdhury H. and Irving, H.R. (Australia)

Emerging Technologies and Systems Biology

Posters 311 – 322

POS-TUE-311 18:15 - 19:15

Rapid and facile EMS mutant identification by a single parental backcross and whole genome sequencing

Allen, R.S., Nakasugi, K., Doran, R., Millar, A.A. and Waterhouse, P.M. (Australia)

POS-WED-312 18:15 - 19:15

iNID an automatic framework for identifying Network models for Interplays among Developmental signaling in plants

Choi, D., Choi, J., Kang, B., Lee, S., Cho, Y., Ryu, H., Hwang, D. and Hwang, I. (Republic of Korea)

POS-TUE-313 18:15 - 19:15

A novel approach for understanding metabolic system: metabolomics-based mathematical modelling

Hirai, M.Y., Sriyudthsak, K. and Shiraishi, F. (Japan)

POS-WED-314 18:15 - 19:15

Deciphering and prediction of transcriptome dynamics under fluctuating field conditions

Nagano, A.J., Sato, Y., Mihara, M., Antonio, B.A., Motoyama, R., Itoh, H., Nagamura, Y. and Izawa, T. (Japan)

POSTERS

POS-TUE-315 18:15 - 19:15

Rice DB: an *Oryza* information portal linking annotation, sub-cellular location, function, expression, regulation and evolutionary information for rice and *Arabidopsis*

Narsai, R., Devenish, J., Castleden, I., Narsai K., Xu, L., Shou, H. and Whelan, J. (Australia and China)

POS-WED-316 18:15 - 19:15

Redesigning PPR proteins to bind new RNA targets

Colas des Francs-Small, C. and Small, I. (Australia)

POS-TUE-317 18:15 - 19:15

Genome editing in higher plants; toward precise manipulation of nuclear and organelle genomes

Osakabe, K. (Japan)

POS-WED-318 18:15 - 19:15

Reconstruction of low-fold sequenced recombinant genomes using a HMM approach revealed new flowering time related genes in *Fragaria vesca*

Patel, V. (Germany)

POS-TUE-319 18:15 - 19:15

Uncovering transcriptional circuits by functional genomics

Pruneda-Paz, J., Breton, G., Nagel, D., Kang, S.E., Ravelo, S., Doherty, C., Sartor, R. and Kay, S. (USA)

POS-WED-320 18:15 - 19:15

Promotercad: data driven design of plant regulatory DNA

Shimoyama, S., Cox, R.S., Nishikata, K., Yoshida, Y. and Toyoda, T. (Japan)

POS-TUE-321 18:15 - 19:15

Spatial operation of anther specific promoter (gALCHS7) using RIP (Ribosomal Inactivating Protein) gene through microscopic analysis in petunia

Suh, E.J., Han, B.H., Yae, B.W., Suh, S.C., Chang, A.C., Lee, S.B., Lee, S.K. and Lee, Y.H. (South Korea)

POS-WED-322 18:15 - 19:15

Direct mass spectrometry imaging of intact tissues of *Arabidopsis thaliana*

Takahashi, K. (Japan)

POSTERS

Translational Biology Posters 323 – 325

POS-TUE-323 18:15 - 19:15

Short-term response of amino acid metabolism to phosphate stress

Alexova, R., Nelson, C.J. and Millar, A.H. (Australia)

POS-WED-324 18:15 - 19:15

Proteomic analyses of respiratory metabolism under salinity stress

Jacoby, R., Fenske, R., Nelson, C., Millar, H. and Taylor, N. (Australia)

POS-TUE-325 18:15 - 19:15

How similar are the nitrate uptake systems of Arabidopsis and cereal crops?

Plett, D., Holtham, L., Baumann, U., Toubia, J., Tester, M., Kaiser, B.N. and Garnett, T. (Australia and Saudi Arabia)

Education Posters 326 – 327

POS-WED-326 18:15 - 19:15

Arabidopsis detectives: innovative approach to research-led driven teaching

Estavillo, G.M., Mathesius, U., Beckmann, E. and Nicotra, A. (Australia)

POS-TUE-327 18:15 - 19:15

Teaching tools in plant biology, to inspire the next generation

Williams, M.E. (United Kingdom)

POSTERS

Late Posters Posters 328 – 351

POS-WED-328 18:15 - 19:15

Photoperiodic flowering regulators indirectly affect light-induced stomatal opening

Ando, E., Ohnishi, M., Wang, Y., Matsushita, T., Watanabe, A., Hayashi, Y., Inoue, S. and Kinoshita, T. (Japan)

POS-TUE-329 18:15 - 19:15

Characterization of Arabidopsis GH5 enzymes

Wang, Y., Groth, E. and **Aspeborg, H.** (Sweden)

POS-WED-330 18:15 - 19:15

Global Plant Council

Bastow, R.M. (Switzerland)

POS-TUE-331 18:15 - 19:15

Intracellular distribution of 3'-phosphoadenosine 5'-phosphate (PAP) in *A. thaliana* mutants affected in PAP metabolism and transport

Hofsetz, E., Ashykhmina, N., Estavillo, G.M., Pogson, B.J., Fluegge, U.I. and Gigolashvili, T. (Germany and Australia)

POS-WED-332 18:15 – 19:15

The genes involved in N-glycosylation pathway STT3a and CGL1 affect the resistance against bacterial pathogen *Pseudomonas syringae* pv. tomatoe DC3000

Kannig, B.S., Macoy, D.M., Chakraborty, R. and **Kim, M.G.** (Korea)

POS-TUE-333 18:15 - 19:15

Early endosomal components are required for polar pin protein localization and plant architecture in *Arabidopsis*

Tanaka, H., **Kitakura, S.**, Rakusova, H., Uemura, T., Feraru, M.I., De Rycke, R., Robert, S., Kakimoto, T. and Friml, J. (Belgium, Japan and Austria)

POS-WED-334 18:15 – 19:15

Brassinosteroid-mediated increase in crop yield and resistance to abiotic and biotic stresses

Prasad, B., Sahni, S., Rahman, T., Divi, U. and **Krishna, P.** (Canada and Australia)

POSTERS

POS-TUE-335 18:15 - 19:15

Evolutionary conserved motifs involved in activity and regulation of the ABA-insensitive (ABI) 4 transcription factor
Gregorio-Jorge, J., Hernández-Bernal, A.F., Cordoba, E. and Leon, P. (Mexico)

POS-WED-336 18:15 – 19:15

Comparative transcriptome analysis of energy-rich *Arabidopsis thaliana* under dark and light conditions
Liang, C. and Lim, B.L. (Hong Kong, China)

POS-TUE-337 18:15 - 19:15

HSP90 mediates temperature entrainment of the circadian clock
Ma, Z., Davis, A., Philippou, K., Heroven, C. and Davis, S. (Germany)

POS-WED-338 18:15 – 19:15

A retrotranspositional regulation of a heat-activated retrotransposon
Matsunaga, W., Masuta, Y., Kato, A. and Ito, H. (Japan)

POS-TUE-339 18:15 - 19:15

The single-stranded DNA binding protein *WHIRLY1* represses *WRKY53* expression and leaf senescence in *Arabidopsis thaliana*, in a developmental stage-dependent manner
Miao, Y. and Jiang, J. (China and Germany)

POS-WED-340 18:15 – 19:15

Plant receptor kinases as targets for bacterial effectors
Reinhard, A. and Nuernberger, T. (Germany)

POS-TUE-341 18:15 - 19:15

Arabidopsis amidase1 contributes to auxin biosynthesis *in vivo*
Sanchez Parra, B., Lehmann, T., Hentrich, M., Jost, R., Aronsson, H. and Pollmann, S. (Spain, Germany, Australia and Sweden)

POS-WED-342 18:15 – 19:15

Effect of parental reproductive age on the spontaneous mutation rates in *Arabidopsis*
Singh, A.K., Tufail, B., Anathi, R.M., Shanmuhapreya, D. and Baskar, R. (India)

POSTERS

POS-TUE-343 18:15 - 19:15

An ortholog of human TRAF-like protein of *Arabidopsis thaliana* is essential for pollen wall development

Singh, S.K., Srinivasan, R., Bhat, S.R. and Sreenivasulu, Y. (India)

POS-WED-344 18:15 – 19:15

ATML1 promotes epidermal cell differentiation in *Arabidopsis* shoots

Takada, S., Takada, N. and Yoshida, A. (Japan)

POS-TUE-345 18:15 - 19:15

ARABIDOPSIS CRINKLY 4 is a downstream target of ATML1-mediated transcriptional regulation

Takada, N., Yoshida, A. and Takada, S. (Japan)

POS-WED-346 18:15 – 19:15

Entrainment through the *Arabidopsis* circadian clock factor *ELF3* is conveyed by cellular localization, as revealed by natural variation studies of an altitude - associated allele

Usman Anwer, M., Boikoglou, E., Hallstein, M. and Jon Davis, S. (Germany and USA)

POS-TUE-347 18:15 - 19:15

Emerging evidence on the role of cell wall invertase in regulating vascular development

Wang, L. and Ruan, Y.-L. (Australia)

POS-WED-348 18:15 – 19:15

Functional characterization of non-cytolytic members within the NLP effector superfamily

Albert, I., Boehm, H., Toliashvili, L., Kikic, Z., Oecking, C., Whisson, S., Van Den Ackerveken, G. and Nuernberger, T. (Germany and The Netherlands)

POS-TUE-349 18:15 - 19:15

Cytolytic toxins of the NEP1-like protein family release DAMPs as mobile signal of danger

Boehm, H., Albert, I., Kikic, Z., Toliashvili, L., Oecking, C. and Nuernberger, T. (Germany)

POSTERS

POS-WED-350 18:15 – 19:15

Lysin-motif-proteins mediate peptidoglycan-perception in
Arabidopsis thaliana

Fellermeier, F., Willmann, R., Lajunen, H.M., Desaki, Y.,
Kolb, D., Molinaro, A., Nuernberger, T. and Gust, A.A.
(Germany and Italy)

POS-TUE-351 18:15 - 19:15

Functional roles of cell wall polysaccharides during ovule and
seed development

Tucker, M.R., Phan, J., Koltunow, A.M.G., Fincher, G.B. and
Burton, R.A. (Australia)