

INVITED LECTURES

(ES Hall, ES Building; 9:00-12:00/ 14:00-16:00 June 11)

9:00-9:30

Visualization and analysis of flowering plant gamete fusion

Stefanie Sprunck

University of Regensburg, Germany

9:30-10:00

Molecular dialogues between pollen and pistil

Mark Johnson

Brown University, USA

10:00-10:30 *Coffee Break*

10:30-11:00

Control of progression through meiosis

Arp Schnittger

University of Hamburg, Germany

11:00-11:30

Love is a battlefield: programmed cell death during fertilization

Rita Groß-Hardt

University of Bremen, Germany

11:30-12:00

Sperm cell delivery in plants – how the pollen tube finds its target

Anja Geitmann

McGill University, Canada

12:00-14:00 *Poster session, Lunch, ITbM tour*

14:00-14:30

Ion homeostasis and reproduction: molecular basis and integrative mechanisms

José Feijó

University of Maryland, USA

14:30-15:00

The actin cytoskeleton and pollen tube growth

Alice Y Cheung

University of Massachusetts, USA

15:00-15:30

Capturing Heterosis: Developing self-reproducing sorghum and cowpea hybrids for smallholder farmers

Anna Koltunow

CSIRO, Australia

15:30-16:00

The early plant embryo as a model for genetic control of development in 3D

Dolf Weijers

Wageningen University, The Netherlands

POSTER SESSIONS

(Entrance Hall, ITbM; 15:00-17:00 June 10/ 12:00-14:00 June 11)

P1: Transferring our understanding of female reproductive development to barley

Laura G Wilkinson¹, Kelly Houston², Caitlin S Byrt¹, Rachel A Burton¹, Matthew R Tucker¹

¹ARC Centre of Excellence in Plant Cell Walls, School of Agriculture, Food and Wine, The University of Adelaide, Australia ²Cell and Molecular Sciences, The James Hutton Institute, Dundee, UK

P2: The search for Receptor Kinases that regulate Compatible Pollen Responses in the Brassicaceae Stigma

Hyun Kyung Lee¹, Daphne Goring¹

¹Cell & Systems Biology, University of Toronto

P3: Using natural variation to identify novel regulators of ovule number in *Arabidopsis thaliana*

Jing Yuan¹, Sharon A Kessler¹

¹Botany and Plant Pathology, Purdue University

P4: AtMYS is Essential for Pollen Tube Growth and Embryogenesis by Mediating Endomembrane Trafficking in *Arabidopsis thaliana*

Saiying Hou¹

¹School of Life Sciences, Peking University

P5: Deciphering the links between ROS, Ca²⁺ and cell wall remodeling during *Arabidopsis thaliana* pollen tube growth

Jérémy Dehors¹, Bruno Gügi¹, Alain Mareck¹, Patrice Lerouge¹, Arnaud Lehner¹, Jean-Claude Mollet¹

¹Laboratoire GlycoMEV, University of Rouen

P6: Characterization of FLOWERING LOCUS T (FT) in tobacco – antagonistically acting key regulators in floral development

Marius Max Zimmermann¹, Lena Grundmann², Andrea S. Caesar², Florentin J. Schmidt¹, Farina A.

Beinecke¹, David R. Wiedmann¹, Dirk Pruefer^{1,2}, Gundula A. Noll¹

¹Institute of Plant Biology and Biotechnology, University of Muenster ²Fraunhofer Institute for Molecular Biology and Applied Ecology, Schlossplatz 8, 48143 Münster, Germany

P7: Meiotic Control on Gametophyte Development

Saurabh Pandey¹, Ramesha A. Reddy², Hardik Gala³, Aparna Singh¹, Aravind L.⁴, Imran Siddiqi¹

¹CSIR-CCMB ²Seri-Biotech Research Laboratory, Central Silk Board, Bangalore ³Department of Biology, University of Washington, Seattle, USA ⁴National Center for Biotechnology Information, National Institutes of Health, Bethesda, USA

P8: Strategies to differentiate between gametophytic and zygotic transcripts in early embryos of Arabidopsis

Jose Jaime Alaniz¹, Gerardo Del Toro-De León¹, Daoquan Xiang², Raju Datla², Stewart Gillmor¹

¹LANGEBIO-CINVESTAV, Mexico ²Plant Biotechnology Institute, National Research Council, Canada

P9: PHERES1 controls endosperm development through regulation of auxin biosynthesis and expression of imprinted genes

Rita Adriano Batista¹, Duarte Dionísio Figueiredo¹, Jordi Moreno-Romero¹, Charlotte Siemons¹, Juan Santos-González¹, Claudia Köhler¹

¹Plant Biology, Swedish University of Agricultural Sciences

P10: Variation in interspecific unilateral incompatibility in Arabidopsis

Lian Fan¹, James Doughty¹, Rod Scott¹, Simon Hiscock²

¹Department of Biology and Biochemistry, University of Bath ²University of Oxford, Department of Plant Science

P11: Mutation in a glycosylphosphatidylinositol (GPI) transamidase complex subunit disrupts male gametophyte function in Arabidopsis

Nicholas James Desnoyer¹, Xunliang Liu¹, Ravishankar Palanivelu¹

¹School of Plant Sciences, University of Arizona

P12: Loss of a pollen tube gene regulatory network leads to aberrant synergid cell calcium fluctuations and unhinges tip growth dynamics from synergid responses

Nathaniel Donaldson Ponvert¹, Alexander Leydon², Jacob Goldberg¹, Mark Johnson¹

¹Brown University, Department of Molecular Biology, Cell Biology, and Biochemistry ²University of Washington, Department of Biology

P13: Epigenetic Reprogramming of the Plant Paternal Genome

Michael Borg¹, Elin Axelsson¹, Fred Berger¹

¹Gregor Mendel Institute

P14: Dissecting the molecular genetics of the *Papaver* self-incompatibility machinery in a heterologous Arabidopsis system

Zongcheng Lin^{1,2}, Marina Trivino^{1,2,3}, Maurice Bosch³, Veronica Franklin-Tong⁴, Moritz Karl Nowack^{1,2}

¹Department of Plant Biotechnology and Bioinformatics, Gent University ²Center for Plant Systems Biology, VIB, 9052 Ghent, Belgium ³Institute of Biological, Environmental & Rural Sciences (IBERS), Aberystwyth University, Aberystwyth, SY23 3EB, UK ⁴School of Biosciences, University of Birmingham, Birmingham, B15 2TT, UK

P15: The role of APETALA2/ERF transcription factors in floral meristem initiation and identity and floral organ initiation in *Arabidopsis*

John William Chandler¹, Wolfgang Werr¹

¹Developmental Biology, Cologne University

P16: *Amborella trichopoda* as a model to explore evolutionary conserved double fertilization mechanisms in flowering plants

María Flores-Tornero¹, Frank Vogler¹, Marek Mutwil², Sebastian Proost², David Potěšil³, Ivana Ichnatová³, Zbyněk Zdráhal³, Thomas Dresselhaus¹, Stefanie Sprunck¹

¹Cell Biology and Plant Biochemistry, University of Regensburg ²Max-Planck Institute for Molecular Plant Physiology, Am Muehlenberg 1, 14476 Potsdam, Germany ³Core Facility – Proteomics, CEITEC, Central European Institute of Technology, Masaryk University, Kamenice 5, CZ- 62500 Brno, Czech Republic

P17: Dynamics of cohesion regulation in *Arabidopsis* male meiocyte

Yuki Hamamura¹, Chao Yang¹, Franziska Böhwer¹, Shinichiro Komaki¹, Viola Kuttig¹, Arp Schnittger¹

¹Developmental Biology, University of Hamburg

P18: Profiling of the epigenetic mark for embryogenesis competence in Norway spruce (*Picea abies*)

Miyuki Nakamura¹, Rafael Muñoz-Viana¹, Lars Hennig¹

¹Plant Biology, The Swedish University of Agricultural Sciences

P19: Comparative transcriptomics of egg apparatus of (a)sexual dandelion (*Taraxacum*) to resolve the genetic basis of parthenogenesis

Kitty Vijverberg¹, Carla Oplaat¹, Marco Busscher¹, Tao Zhao¹, M. Eric Schranz¹

¹Plant Sciences, Biosystematics Group, Wageningen University & Research

P20: Insights into Fasciclin-like arabinogalactan proteins involved in plant reproduction; from *Quercus* to *Arabidopsis*

Maria Isabel Amorim¹, Márcio Couto¹, Maria João Ferreira¹, Mário Luis Costa¹, Silvia Coimbra¹

¹Department Biology, Faculdade de Ciências -Universidade do Porto

P21: *SUPERMAN* controls the auxin/cytokinin balance to promote carpel formation and stem cell termination

Nathanael Prunet^{1,4}, Xu Yifeng², Darragh Stewart³, Frank Wellmer³, Toshiro Ito², Elliot Meyerowitz¹, Thomas Jack⁴

¹Division of Biology and Biological Engineering, HHMI & Caltech ²Nara Institute of Science and Technology ³Trinity College ⁴Dartmouth College

P22: Ion dynamics in morphogenesis: The role of H⁺ regulation in pollen tube guidance

Maria Teresa Portes¹, Daniel Santa Cruz Damineli¹, José Feijó¹

¹Cell Biology & Molecular Genetics, University of Maryland

P23: Arabidopsis pollen tube integrity and sperm release are regulated by RALF-mediated signaling

Zengxiang Ge^{1,2}

¹Peking University ²Department of Biochemistry and Molecular Biology, Molecular and Cell Biology Program, Plant Biology Program, University of Massachusetts, Amherst, Massachusetts 01003, USA

P24: SPOROCTELESS/NOZZLE: new insights to understand the mechanism that controls sporogenesis

Edoardo Vignati¹, Marta A. Mendes¹, Lucia Colombo¹

¹Dipartimento di BioScienze, Università degli studi di Milano

P25: Flowering Locus T from Panax ginseng shows age specific expression and increases root length in the transgenic Arabidopsis

Padmanaban Mohanan¹, Davaajargal Myagmarjav¹, Dabing Zhang³, Deok-Chun Yang², Yu-Jin Kim²

¹Graduate School of Biotechnology, Kyung Hee University ²Department of Oriental Medicinal Biotechnology, College of Life sciences, KyungHee University, Yongin, Gyeonggi do, Republic of Korea

³Join international research laboratory of metabolic and developmental sciences, Shanghai Jiao Tong University, Shanghai, China

P26: Discovery of novel molecular players of feronia pathway by identification of causal alleles with SNP-ratio mapping (SRM) approach

Andrea Djura Zupunski¹, Heike Lindner¹, Aurelien Boisson-Dernier¹, Hiroko Shimosato-Asano¹, Ueli Grossniklaus¹

¹Department of Plant and Microbial Biology, University of Zurich

P27: Adaptation of the ancient DUO1/DAZ1 regulatory module is crucial for male germline differentiation in angiosperms

Dieter Hackenberg¹, Mingmin Zhao¹, Yosra Al Hakeem¹, Ugur Sari¹, Liang-zi Zhou², Thomas Dresselhaus², David Twell¹

¹Department of Genetics and Genome Biology, University of Leicester ²Department of Cell Biology and Plant Biochemistry, University of Regensburg, Universitätsstraße 31, 93053 Regensburg, Germany

P28: To be, or not to be – MSL8, a Mechanosensitive Ion Channel, Monitors the Life and Death of a Pollen Grain/Germinating Tube in vitro in Arabidopsis thaliana

Yanbing Wang¹, Gregory Jensen¹, Elizabeth Haswell¹

¹Biology, Washington University in St. Louis

P29: Discovery of mutants defective in central cell fertilization by a novel screening

method

Xiaoyan Liu¹, Liyang Xie¹, Yujiro Homma², Yoshihiro Kinoshita², Frederic Berger³, Tetsuya Higashiyama², Ryushiro Kasahara^{1,4}

¹Horticultural Plant Biology and Metabolomics Center, Fujian Agriculture and Forestry University, China.

²Institute of Transformative Bio-Molecules, Nagoya University, Furo, Chikusa, Nagoya, Aichi, Japan

³Gregor Mendel Institute (GMI), Austrian Academy of Sciences, Vienna Biocenter (VBC), Dr. Bohr-Gasse 3, 1030 Vienna, Austria ⁴School of Life Sciences, Fujian Agriculture and Forestry University, NO.15 Shangxiadian Road, Cangshan, Fuzhou

P30: Identification of *cis*-elements by *MYB98* promoter analyses

Li-yang Xie¹, Xiao-yan Liu¹, Benjamin Peters², Lynette Brownfield², Ryushiro Kasahara^{1,3}

¹Horticultural Plant Biology and Metabolomics Center, Fujian Agriculture and Forestry University, China.

²Department of Biochemistry, University of Otago, PO Box 56, Dunedin 9054, New Zealand.

³School of Life Sciences, Fujian Agriculture and Forestry University, NO.15 Shangxiadian Road, Cangshan, Fuzhou

P31: Transcriptome dynamics of sperm cells during semi *in-vivo* pollen tube growth

Chandra Shekhar Misra¹, Jörg D Becker¹

¹Plant Genomics Group, Instituto Gulbenkian de Ciência

P32: *De novo* assembly and characterization of the locomotory apparatus of early land plants

Sónia Gomes Pereira¹, Mónica Bettencourt-Dias¹, Jörg D. Becker¹

¹Instituto Gulbenkian de Ciência, Oeiras, Portugal

P33: Epigenetic reprogramming in early divergent land plants?

Ann-Cathrin Lindner¹, Sónia Gomes Pereira¹, Jörg D. Becker¹

¹Instituto Gulbenkian de Ciência, Oeiras, Portugal

See Flyer for the entire program of the satellite symposium:

<http://www.iaspr.org/upload/files/Satellite%20symposium%202018%20in%20Nagoya3.pdf>