



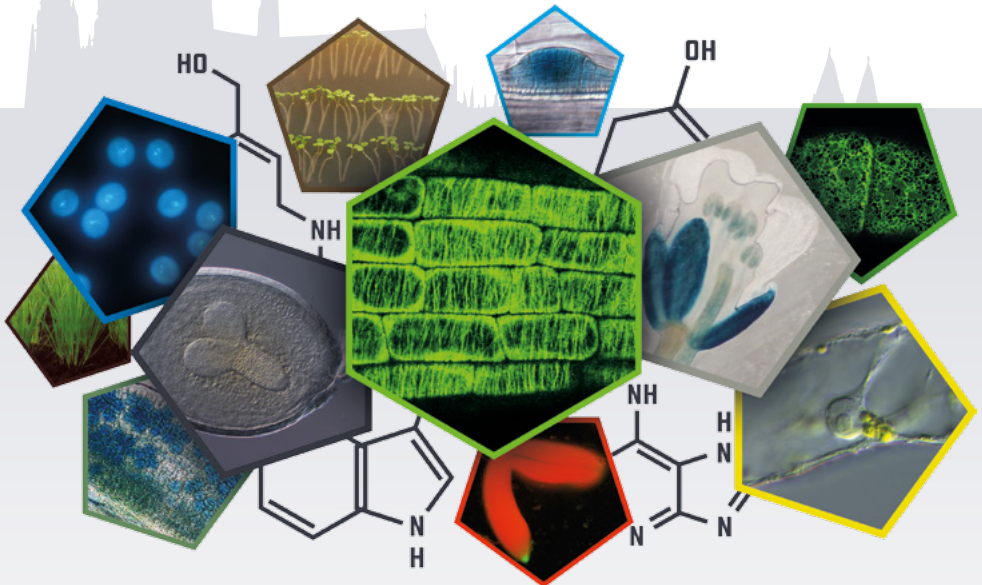
ACPD 2018

Auxins and Cytokinins in Plant Development

... and Interactions with Other Phytohormones

International Symposium 2018

July 1-5, 2018 | Prague, Czech Republic



PROGRAMME

LIST OF POSTERS



PARTNERS

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GENERAL INFORMATION

Organized by



**Institute of Experimental
Botany CAS, v.v.i**

Organizing Committee

Radomíra Vaňková – chair

Petre I. Dobrev, Klára Hoyerová, Miroslav Kamínek, Václav Motyka, Jan Petrášek

Congress Secretariat

GUARANT International spol. s r. o.

Na Pankráci 17, 140 21 Prague 4, Czech Republic

Phone: +420 284 001 444, fax: +420 284 001 448, e-mail: acpd2018@guarant.cz



AUSPICES

The symposium will be held under the auspices of

prof. RNDr. Eva Zažímalová, CSc.

President of the Czech Academy of Sciences



**Czech Academy
of Sciences**

RNDr. Martin Vágner, CSc.

Director of the Institute of Experimental Botany of the Czech Academy of Sciences



**Institute of Experimental
Botany CAS, v.v.i**



WELCOME ADDRESS

Dear Colleagues!

We would like to welcome you cordially in Prague at ACPD2018 (“Auxins and Cytokinins in Plant Development”, July 1–5, 2018).

Taking into account the intensive cross-talk among plant hormones, we decided to continue in the extended concept established at ACPD2014 by including the interactions of auxins and cytokinins with other plant hormones.

We hope you will enjoy ACPD2018, the tenth in the consecutive series of symposia on plant hormones organized by the Institute of Experimental Botany CAS.

Your contributions to the scientific programme as well as your lively discussions will make the ACPD2018 interesting and exciting event.

Welcome in Prague!

Radomíra Vaňková

On behalf of Organizing Committee

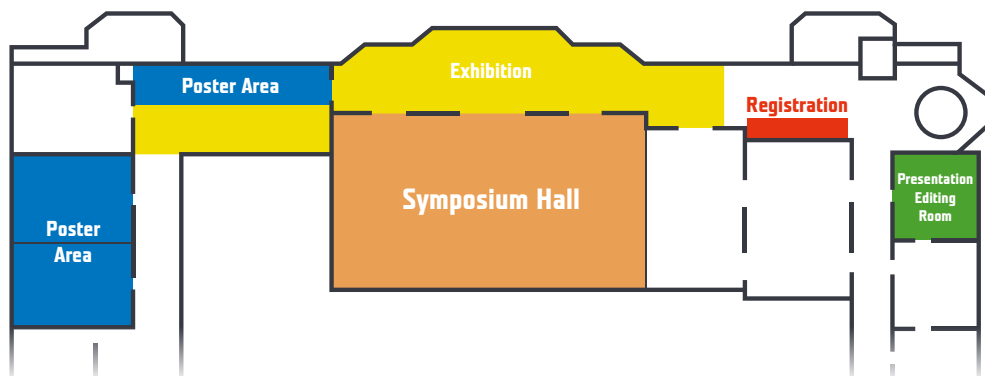


SYMPOSIUM VENUE

Vienna House Diplomat Prague****

Evropská 15, 160 41 Prague 6, Czech Republic

First Floor Plan





PROGRAMME AT A GLANCE

Saturday, June 30, 2018

16:00–20:00	Registration and poster mounting
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Sunday, July 1, 2018

09:00–09:20	Opening of the Symposium
09:20–10:00	Opening lecture
10:00–10:30	Coffee
10:30–12:00	Plenary lectures
12:00–13:30	Lunch
13:30–14:45	Biosynthesis and metabolism
14:45–15:15	Coffee
15:15–16:45	Biosynthesis and metabolism
18:00–20:00	Welcome Cocktail

Monday, July 2, 2018

09:00–10:30	Signalling
10:30–11:00	Coffee
11:00–12:30	Signalling
12:30–14:00	Lunch
14:00–15:30	Signalling
15:30–16:00	Coffee
16:00–17:15	Development
17:15–19:45	Poster session I (with refreshment) P1 Biosynthesis and metabolism P2 Signalling P4 Transport

Tuesday, July 3, 2018

09:00–10:30	Development
10:30–11:00	Coffee
11:00–12:00	Development
12:00–13:30	Lunch
13:30–14:45	Development
14:45–15:15	Coffee
15:15–15:45	Development
19:30–23:30	Symposium Dinner

Wednesday, July 4, 2018

09:00–10:15	Transport
10:15–10:45	Coffee
10:45–11:30	Transport
11:30–13:00	Lunch
13:00–14:30	Interactions and cross-talk
14:30–15:00	Coffee
15:00–16:45	Interactions and cross-talk
16:45–19:30	Poster session II (with refreshment) P3 Development P5 Interactions and cross-talk P6 Interaction with the environment

Thursday, July 5, 2018

09:00–10:30	Interaction with the environment
10:30–11:00	Coffee
11:00–12:15	Interaction with the environment
12:15–13:45	Lunch
13:45–15:15	Interaction with the environment
15:15–15:30	Symposium Closing and Discussion
17:00–19:30	Farewell Party



SCIENTIFIC PROGRAMME

SATURDAY JUNE 30

16:00–20:00 Registration and poster mounting

SUNDAY JULY 1

09:00–09:20 **Opening of the Symposium**
Eva Zažímalová
President of the Czech Academy of Sciences

09:20–10:00 **Opening lecture**
Molecular networks orchestrating biomass productivity
 Dirk Inzé
VIB-UGent Center for Plant Systems Biology, Belgium

10:00–10:30 Coffee

PLENARY LECTURES

10:30–11:10 **Auxin signaling and transport**
 Jiří Friml
IST Austria, Klosterneuburg, Austria

11:10–11:50 **New insights into cytokinin signalling**
 Joe Kieber
Biology Department, University of North Carolina, Chapel Hill, NC, United States

12:00–13:30 Lunch

**BIOSYNTHESIS AND METABOLISM****Chair: Hitoshi Sakakibara****13:30–14:00** **“Keeping the balance” – mechanisms controlling auxin and cytokinin homeostasis and their regulation**

Karin Ljung

*Umeå Plant Science Centre, Swedish University of Agricultural Sciences, Umeå, Sweden***14:00–14:15** **Auxin and cytokinin homeostasis on cellular and subcellular levels**

Ondřej Novák

*Laboratory of Growth Regulators, Centre of the Region Haná for Biotechnological and Agricultural Research, Faculty of Science of Palacký University & Institute of Experimental Botany CAS, Olomouc, Czech Republic***14:15–14:30** **New generation of urea-derived inhibitors of cytokinin oxidase/dehydrogenase for future in vivo studies**

David Kopečný

*Department of Protein Biochemistry and Proteomics, CRH, Faculty of Science, Palacký University, Olomouc, Czech Republic***14:30–14:45** **Contribution of DAD-mediated IAA inactivation to auxin homeostasis in Norway spruce seedlings**

Federica Brunoni

*Department of Plant Physiology, Umeå University (Umu), Umeå Plant Science Centre, Umeå, Sweden***14:45–15:15** **Coffee****Chair: Karin Ljung****15:15–15:45** **Biosynthesis and transport of cytokinin variations control the specificity of the action in shoot growth and development**

Hitoshi Sakakibara

*Graduate School of Bioagricultural Sciences, Nagoya University, Nagoya, Japan***15:45–16:00** **Characterisation of immediate-response cytokinin metabolism in Arabidopsis: differences in pathway kinetics determine the natural spectrum of cytokinin metabolites**

Petr Hošek

*Institute of Experimental Botany of the Czech Academy of Sciences, Prague, Czech Republic***16:00–16:15** **So does cytokinin inhibit or promote root growth? The ipt29-short-root story**

Ioanna Antoniadi

*Department of Forest Genetics and Plant Physiology, Umeå Plant Science Centre, Swedish University of Agricultural Sciences, Umeå, Sweden***16:15–16:30** **The biosynthesis and signalling of cytokinins during the formation of tumours in the *Ustilago maydis-Zea mays* pathosystem**

Ibraheem Alimi

*Biology, Trent University, Peterborough, Canada***16:30–16:45** **Brassinosteroids regulate glucosinolate biosynthesis in *Arabidopsis thaliana***

Oh Man-Ho

*Biological Sciences, Chungnam National University, Daejeon, Republic of Korea***18:00–20:00** **Welcome Cocktail**



MONDAY JULY 2

SIGNALLING

Chair: **Thomas Schmülling**

09:00–09:30 Auxin and drought response in Arabidopsis

Mark Estelle

Cell and Developmental Biology, UCSD, La Jolla, United States

09:30–09:45 Mapping auxin receptor selectivity in three dimensions and over evolution

Richard Napier

School of Life Sciences, University of Warwick, Coventry, United Kingdom

09:45–10:00 Root growth inhibition by auxin – an old story full of surprises

Matyáš Fendrych

IST Austria, Klosterneuburg, Austria

10:00–10:15 Auxin receptors for rapid protoplast swelling and rapid growth responses – a critical comparison

Hartwig Luethen

Biozentrum Plattbek, University of Hamburg, Hamburg, Germany

10:15–10:30 Molecular dynamics determination of the auxin binding pathway on TIR1

Charo del Genio

School of Life Sciences, University of Warwick, Coventry, United Kingdom

10:30–11:00 Coffee

Chair: **Dolf Weijers**

11:00–11:30 The many facets of cytokinin as a signal regulating plant development and stress responses

Thomas Schmülling

Institute of Biology/Applied Genetics, Dahlem Centre of Plant Sciences (DCPS), Freie Universität Berlin, Berlin, Germany

11:30–11:45 BIL1-mediated phosphorylation of ARF5 integrates TDIF/TDR and cytokinin signaling into vascular cambial activity

Ildoo Hwang

Pohang University of Science and Technology, Pohang, Republic of Korea

11:45–12:00 Structural insights into the specificity of multistep phosphorelay signaling in Eukaryotes

Jan Hejátko

CEITEC – Central European Institute of Technology and National Centre for Biomolecular Research, Masaryk University, Brno, Czech Republic

12:00–12:15 Cytokinin perception in potato: receptor properties and expression

Sergey Lomin

Timiryazev Institute of Plant Physiology, Russian Academy of Sciences, Moscow, Russian Federation

12:15–12:30 Cellulose biosynthesis inhibition reduces cell cycle activity in a nitrate reductase- and cytokinin-dependent manner

Thorsten Hamann

Biology, Norwegian university of science and technology, Trondheim, Norway

12:30–14:00 Lunch

**Chair: Mark Estelle**

- 14:00–14:30** **Origin and evolution of the nuclear auxin response system**
Dolf Weijers
Laboratory of Biochemistry, Wageningen University, Wageningen, Netherlands
- 14:30–14:45** **Auxin response factor (ARF) activators are transcriptionally regulated by gene-specific repressor network**
Jekaterina Truskina
Laboratoire Reproduction et Développement des Plantes, ENS de Lyon, Lyon, France
- 14:45–15:00** **Cytokinin response regulators are indispensable for organ formation in *Marchantia polymorpha***
Shiori S. Aki
Graduate School of Science and Technology, Nara Institute of Science and Technology, Nara, Japan
- 15:00–15:15** **Identification of a cytokinin-signalling type-B response regulator (RRB) transcription factor regulating two symbiotic nodulation genes in *Medicago truncatula***
Sovanna Tan
Institute of Plant Sciences Paris-Saclay, CNRS, Univ of Paris-Sud, Univ Paris-Diderot, INRA, Univ of Evry, University Paris-Saclay, Gif-sur-Yvette, France
- 15:15–15:30** **The role of cytokinin signaling during vascular proliferation**
Brecht Wybouw
VIB-UGent Center for Plant Systems Biology, Belgium
- 15:30–16:00** **Coffee**

DEVELOPMENT**Chair: Eric Schaller**

- 16:00–16:30** **Epigenetic compensation of a genetic lesion**
Bruno Müller
Seed development, Leibniz-Institut für Pflanzengenetik und Kulturpflanzenforschung, Seeland, Germany
- 16:30–16:45** **Genetic and hormonal control of vascular cell proliferation**
Bert De Rybel
Department of Plant Biotechnology and Bioinformatics, Ghent University, Ghent, Belgium; VIB-UGent Center for Plant Systems Biology, Belgium; Laboratory of Biochemistry, Wageningen University, Wageningen, Netherlands
- 16:45–17:00** **WUSCHEL provides robustness to apical stem cell fate by pathway wide control of auxin signaling**
Jan Lohmann
Centre for Organismal Studies, Heidelberg University, Heidelberg, Germany
- 17:00–17:15** **A molecular rheostat adjusts auxin flux to promote root protophloem differentiation**
Christian Hardtke
Department of Plant Molecular Biology, University of Lausanne, Lausanne, Switzerland
- 17:15–19:45** **Poster session I (with refreshment)**
P1 Biosynthesis and metabolism
P2 Signalling
P4 Transport



TUESDAY JULY 3

Chair: Bruno Müller

- 09:00–09:30 An auxentric view of gene expression during plant development**
Lars Ostergaard
John Innes Centre, Norwich Research Park, Norwich, United Kingdom
- 09:30–09:45 HD-ZIPII proteins coordinate a biradial-to-radial symmetry transition of auxin signalling response during gynoecium development**
Laila Moubayidin
Crop Genetics, John Innes Centre, Norwich, United Kingdom
- 09:45–10:00 Cytokinins beyond plants: Understanding the evolution of the inter-kingdom signalling molecules through *Dictyostelium discoideum***
Megan Aoki
Environmental and Life Sciences Graduate Program, Trent University, Peterborough, Canada
- 10:00–10:15 Longitudinal zonation and symmetries in proliferation activity of the *Arabidopsis thaliana* root meristem in cytokinin deficient and auxin overproducing mutants**
Victoria Mironova
Institute of Cytology and Genetics SB RAS, Novosibirsk, Russian Federation; Novosibirsk State University, Novosibirsk, Russian Federation
- 10:15–10:30 The role of the L-AFL transcription factors in organ patterning**
Hélène Robert Boisivon
Mendel Centre for Genomics and Proteomics of Plants Systems, CEITEC MU – Central European Institute of Technology, Masaryk University, Brno, Czech Republic

10:30–11:00 Coffee

Chair: Wendy Peer

- 11:00–11:15 To grow or not to grow – differential growth control**
Jürgen Kleine-Vehn
Department for applied genetics and cell biology, Universität für Bodenkultur Wien (BOKU), Vienna, Austria
- 11:15–11:30 The tomato BLADE ON PETIOLE gene family and TERMINATING FLOWER regulate leaf axil patterning along the proximal-distal Axes**
Anat Izhaki
Institute of Plant Sciences, Volcani Center, Agricultural Research Organization, Rishon LeZion, Israel
- 11:30–11:45 Developmental patterning of Asteraceae flower heads**
Teng Zhang
Department of Agricultural Science, Viikki Plant Science Centre, University of Helsinki, Helsinki, Finland
- 11:45–12:00 Leaf morphogenesis: from cells to shape through patterning**
Leo Serra
Institut Jean-Pierre Bourgin, Institut National de la Recherche Agronomique (INRA), AgroParisTech, CNRS, Université Paris-Saclay, Versailles, France
- 12:00–13:30 Lunch

**Chair: Jürgen Kleine-Vehn**

13:30–14:00 Cytokinin-dependent control of growth and development through action of the type-B response regulators

Eric Schaller

Department of Biological Sciences, Dartmouth College, Hanover, United States

14:00–14:15 Mechanical feedback acting on auxin distribution machinery mediates in differential cell elongation

Rishi Bhalerao

Dept of Forest Genetics and Plant Physiology, Umeå Plant Science Center, Umeå, Sweden

14:15–14:30 Cytokinin regulation of cambium activity and wood formation in hybrid aspen

Melis Kucukoglu

Institute of Biotechnology, University of Helsinki, Helsinki, Finland; Natural Resources Institute Finland (Luke), Helsinki, Finland, Helsinki, Finland

14:30–14:45 The role of cytokinin signaling in rice root vascular patterning

John Vaughan-Hirsch

Plant & Crop Sciences, University of Nottingham, Sutton Bonington, United Kingdom

14:45–15:15 Coffee

Chair: Lars Ostergaard

15:15–15:30 IAA oxidation via DAO2 is important for floral development in Arabidopsis

Wendy Peer

University of Maryland, College Park, United States

15:30–15:45 Genome-wide transcript profiling reveals an auxin-responsive transcription factor promoting adventitious root formation in rice

Shri Ram Yadav

Department of Biotechnology, Indian Institute of Technology, Roorkee, India

19:30–23:30 Symposium Dinner



WEDNESDAY JULY 4

TRANSPORT

Chair: Angus Murphy

- 09:00–09:30** **Cytoplasmic HSP90 proteins regulate auxin transport**
Markus Geisler
Department of Biology, University of Fribourg, Fribourg, Switzerland
- 09:30–09:45** **Cell intrinsic (re)establishment of PIN2 polarity in Arabidopsis root epidermis**
Matouš Glanc
IST Austria, Klosterneuburg, Austria; Department of Experimental Plant Biology, Charles University, Faculty of Science, Prague, Czech Republic
- 09:45–10:00** **TRANSPORTER OF IBA1 links cytokinin and auxin to regulate lateral root formation**
Lucia Strader
Department of Biology, Washington University in St. Louis, St. Louis, MO, United States
- 10:00–10:15** **cis-Cinnamic acid is a novel, natural auxin efflux inhibitor that promotes lateral root formation**
Ilias El Houari
Plant Systems Biology, VIB, Gent, Belgium
- 10:15–10:45** **Coffee**

Chair: Markus Geisler

- 10:45–11:00** **ABCB transporters: why is boring non-polar plasma membrane exclusion necessary for long distance polar auxin transport?**
Angus Murphy
Dept Plant Science and Landscape Architecture, University of Maryland, College Park MD, United States
- 11:00–11:15** **Phosphorylation control of PIN auxin efflux carriers by D6 PROTEIN KINASES and associated proteins**
Claus Schwechheimer
Plant Systems Biology, Technische Universitaet Muenchen, Freising, Germany
- 11:15–11:30** **Alternative splicing of PIN auxin efflux carriers**
Ivan Kashkan
CEITEC, Masaryk University, Brno, Czech Republic

11:30–13:00 **Lunch**

INTERACTIONS AND CROSS-TALK

Chair: Eva Benková

- 13:00–13:30** **Hormonal control of shoot branching**
Ottoline Leyser
Sainsbury Laboratory, University of Cambridge, Cambridge, United Kingdom
- 13:30–13:45** **Digging for novel regulators of rooting at the crossroad of auxin and jasmonate crosstalk**
Abdellah Lakehal
Umeå Plant Science centre; Dept. of plant physiology, SE-90781, Umeå university, Umeå, Sweden



13:45–14:00 Interaction of auxin and cytokinin in the specification of vascular pattern in diverse species

Anthony Bishopp

Centre of Plant Integrative Biology, University of Nottingham, Nottingham, United Kingdom

14:00–14:15 Hormones interaction during flower and fruit development in tomato

Hagai Yasuor

Department of Vegetable and Field Crops Research, Gilat Research Center, ARD, Gilat, Israel

14:15–14:30 The involvement of endogenous plant hormones in the regulatory network of fatty acid biosynthesis in soybean seed

Thien Nguyen

Biology, Trent University, Peterborough, Canada

14:30–15:00 Coffee

Chair: Ottoline Leyser

15:00–15:30 Auxin and cytokinin synergism regulates secretory pathway to steer elongation growth

Eva Benková

Institute of Science and Technology, Austria, Klosterneuburg, Austria

15:30–15:45 Mutations in tetrapyrrole biosynthesis pathway uncouple nuclear WUSCHEL expression from de novo shoot development in *Arabidopsis thaliana*

Yoshihisha Ikeda

Palacký University, Olomouc, Czech Republic

15:45–16:00 Light controls cytokinin signaling via transcriptional regulation of constitutively active histidine kinase CK11

Tereza Dobisová

Functional Genomics and Proteomics of Plants, CEITEC – Central European Institute of Technology and National Centre for Biomolecular Research, Masaryk University, Brno, Czech Republic

16:00–16:15 Auxin and ABA signaling coordinate branching responses to light signals

Scott Finlayson

Department of Soil and Crop Sciences, Texas A&M University, College Station, TX, United States

16:15–16:30 Organic electronic ion pumps and their plant hormone delivery repertoire

Michal Karady

Department of Forest Genetics and Plant Physiology, SLU, Umeå Plant Science Centre, Umeå, Sweden

16:30–16:45 Boron, auxin and cytokinin during reproductive development in maize

Michaela Sylvia Matthes

Biological Sciences, University of Missouri, Columbia, United States

16:45–19:30 Poster session II (with refreshment)

P3 Development

P5 Interactions and cross-talk

P6 Interaction with the environment



THURSDAY JULY 5

INTERACTION WITH THE ENVIRONMENT

Chair: Jutta Ludwig-Müller

- 09:00–09:30** **Auxin, cytokinin, strigolactones and sugars – roles in shoot branching**
Christine Beveridge
School of Biological Sciences, The University of Queensland, Brisbane, Australia
- 09:30–09:45** **Altered day-night rhythms cause a new type of abiotic stress revealing crosstalk between cytokinin, jasmonic acid and the circadian clock**
Anne Cortleven
Institute of Biology/Applied Genetics, Dahlem Centre of Plant Sciences (DCPS), FU Berlin, Berlin, Germany
- 09:45–10:00** **Light control of leaf flattening**
Martina Legris
University of Lausanne, Lausanne, Switzerland
- 10:00–10:15** **Cytokinin-stress connections and the role of CRFs**
Aaron Rashotte
Biological Sciences, Auburn University, Auburn, United States
- 10:15–10:30** **Cytokinins mediate resistance and determine the bacterial biocontrol activity against hemibiotrophic bacterial pathogens**
Thomas Roitsch
Department of Plant and Environmental Sciences, University of Copenhagen, Taastrup, Denmark

10:30–11:00 Coffee

Chair: Christina Beveridge

- 11:00–11:30** **Protein and gene regulatory network involved in hormone-dependent nutrient sensing**
Benoit Lacombe
Biochimie et Physiologie Moléculaire des Plantes, CNRS, INRA, SUPAGRO, UM, Montpellier, France
- 11:30–11:45** **Hormonal response of selected Brassica crops under drought stress**
Branka Salopek Sondi
Department of Molecular Biology, Ruđer Bošković Institute, Zagreb, Croatia
- 11:45–12:00** **Cell surface TMK mediated transcriptional auxin signaling in plants**
Tongda Xu
Fujian Agricultural and Forestry University, Fuzhou, China
- 12:00–12:15** **Mathematical modeling of the effects of chilling stress on *Arabidopsis thaliana* root stem cell niche**
Maria Savina
Department of Systems Biology, Institute of Cytology and Genetics SB RAS, Novosibirsk, Russian Federation; Faculty of Natural Sciences, Novosibirsk State University, Novosibirsk, Russian Federation

12:15–13:45 Brunch

**Chair: Benoit Lacombe**

- 13:45–14:15** **Auxin homostasis in tomato and *Arabidopsis* under heat stress**
Jutta Ludwig-Müller
Institute of Botany, Technische Universität Dresden, Dresden, Germany
- 14:15–14:30** **Auxin drives angle-dependent gravitropic behaviour in the root**
Marta Del Bianco
School of Biology, University of Leeds, Leeds, United Kingdom
- 14:30–14:45** **Cytokinin-induced priming against biotic stress**
Cris Argueso
Bioagricultural Sciences and Pest Management, Colorado State University, Fort Collins, United States
- 14:45–15:00** **Cytokinin in thermomorphogenesis**
Jan Novák
Laboratory of Plant Molecular Biology, Institute of Biophysics CAS, v.v.i. and Mendel University in Brno, Brno, Czech Republic; Department of Molecular Biology and Radiobiology, CEITEC – Central European Institute of Technology, Mendel University in Brno, Brno, Czech Republic
- 15:00–15:15** **Age-dependent modulation of hypoxia tolerance in *Arabidopsis*: a role for cytokinin?**
Shanice Martopawiro
Plant Ecophysiology, Utrecht University, Utrecht, Netherlands
- 15.15–15.30** **Symposium Closing and Discussion (Radomíra Vaňková)**
- 17:00–19:30** **Farewell Party**



LIST OF POSTERS

POSTER SESSION 1

Monday July 2, 17:15–19:45

01. Biosynthesis and Metabolism

P-01-01

Cytokinin *N*-glucosylation restricts shoot apical meristem activity but is apparently dispensable for other major developmental processes in *Arabidopsis*

Louisa Brock¹, Ondřej Novák², Tomáš Werner³

¹Institute of Biology/Applied Genetics, Freie Universität Berlin, Berlin, Germany; ²Centre of the Region Haná for Biotechnological and Agricultural Research, Palacký University, Olomouc, Czech Republic; ³Institute of Plant Sciences, University of Graz, Graz, Austria

P-01-02

Identification of putative IAA-amino acid conjugate hydrolases genes in barley

Lenka Dzurová, Barbora Hanzlíková, Véronique Bergougnoux-Fojtík

Department of Molecular Biology, Palacký University Olomouc, Olomouc, Czech Republic

P-01-03

Cytokinin *N*-glucosides: their involvement in the evolution of hormonal homeostatic mechanisms in plants and roles in control of plant development

Václav Motyka¹, Eva Pokorná¹, Petre I. Dobrev¹, Lucie Doležálková², Miroslav Kamínek¹, Klára Hoyerová¹, Lenka Závěská Drábková³

¹Laboratory of Hormonal Regulations in Plants, Institute of Experimental Botany of the Czech Academy of Sciences, Prague, Czech Republic; ²Department of Biochemistry, Faculty of Science, Charles University, Prague, Czech Republic; ³Department of Taxonomy, Institute of Botany of the Czech Academy of Sciences, Průhonice, Czech Republic

P-01-04

Identification of new components and regulatory mechanisms of auxin metabolism in tobacco BY-2 cells

Karel Müller, Klára Hoyerová, Kateřina Malínská, Roberta Filepová, Zuzana Vondráková, Jozef Lacek, Petre I. Dobrev, Jan Petrášek

Laboratory of Hormonal Regulations in Plants, Institute of Experimental Botany of the Czech Academy of Sciences, Prague, Czech Republic

P-01-05

Auxin homeostasis in endoplasmic reticulum

Aleš Pěničik, Vladimír Skalický, Martin Kubeš, Ondřej Novák

Laboratory of Growth Regulators & Department of Chemical Biology and Genetics, Centre of the Region Haná for Biotechnological and Agricultural Research, Palacký University & Institute of Experimental Botany CAS, Olomouc, Czech Republic

P-01-06

Dispersive solid phase extraction as a new tool for plant hormone sample preparation

Ivan Petřík, Anna Valníčková, Miroslav Strnad, Ondřej Novák

Laboratory of Growth Regulators, Centre of the Region Haná for Biotechnological and Agricultural Research, Faculty of Science of Palacký University & Institute of Experimental Botany CAS, Olomouc, Czech Republic

**P-01-07****Profiling of plant hormones by utilization multi-immunoaffinity purification based on monoclonal antibodies**

Lenka Plačková¹, Jana Okleščiková¹, Karel Doležal^{2,1}, Ondřej Novák¹

¹Laboratory of Growth Regulators, Centre of Region Hana for Biotechnological and Agricultural Research, Faculty of Sciences of Palacký University and Institute of Experimental Botany, Czech Academy of Sciences, Olomouc, Czech Republic; ²Department of Chemical Biology and Genetics, Centre of the Region Haná for Biotechnological and Agricultural Research, Faculty of Science of Palacký University, Olomouc, Czech Republic

P-01-08**Are cytokinin-N7- and N9-glucosides active players in cytokinin metabolisms?**

Eva Pokorna¹, Lucie Doležalkova², Petre I. Dobrev¹, Tucker H. Hallmark³, Aaron Rashotte³, Petr Galuszka⁴, Katarina Holubova⁴, Vaclav Motyka¹

¹Laboratory of Hormonal Regulations in Plants, Institute of Experimental Botany of the Czech Academy of Sciences, Prague, Czech Republic; ²Faculty of Biochemistry, Charles University in Prague, Prague, Czech Republic; ³Department of Biological Sciences, Auburn University, Auburn, United States; ⁴Department of Biochemistry, Palacký University, Olomouc, Czech Republic

P-01-09**Canis familiaris tissues are characterized by different profiles of cytokinins typical of the tRNA degradation pathway**

Mark Seegobin¹, Anna Kisiala¹, Adam Noble², David Kaplan³, Craig Brunetti¹, Neil Emery¹

¹Biology, Trent University, Peterborough, Canada; ²Noblegen, Peterborough, Canada; ³Molecular Genetics, University of Toronto, Toronto, Canada

P-01-10**Subcellular phytohormone profiling in *Arabidopsis* based on FAOS technique**

Vladimír Skalický¹, Ioanna Antoniad², Martin Kubeš³, Karin Ljung², Ondřej Novák^{1,2}

¹Laboratory of Growth Regulators, Centre of the Region Haná for Biotechnological and Agricultural Research, Faculty of Science of Palacký University & Institute of Experimental Botany CAS, Olomouc, Czech Republic; ²Department of Forest Genetics and Plant Physiology, Umeå Plant Science Centre, Swedish University of Agricultural Sciences, Umeå, Sweden; ³Department of Chemical Biology and Genetics, Centre of the Region Haná for Biotechnological and Agricultural Research, Olomouc, Czech Republic

P-01-11**Cytokinin biosynthesis and perception in poplar**

Pavel Jaworek¹, David Kopečný¹, David Zalabák¹, Štěpán Kouřil¹, Tomáš Hluska¹, Radka Končítíková¹, Kateřina Podlešáková¹, Marek Šebela¹, Petr Tarkowski^{2,1}

¹Centre of the Region Haná for Biotechnological and Agricultural Research, Faculty of Science, Palacký University, Olomouc, Czech Republic; ²Centre of the Region Haná for Biotechnological and Agricultural Research, Crop Research Institute, Olomouc, Czech Republic

P-01-12**Cytokinin degradation in the endoplasmic reticulum: Molecular mechanisms and physiological relevance**

Michael C. E. Niemann¹, Henriette Weber¹, Tomáš Hluska², Georgeta Leonte¹, Samantha M. Anderson³, Alessandro Senes³, Tomáš Werner⁴

¹Institute of Biology/Applied Genetics, Dahlem Centre of Plant Sciences (DCPS), Freie Universität Berlin, Berlin, Germany; ²Department of Molecular Biology, Centre of the Region Haná for Biotechnological and Agricultural Research, Palacký University, Olomouc, Czech Republic; ³Department of Biochemistry, University of Wisconsin-Madison, Madison, Wisconsin, United States; ⁴Institute of Plant Sciences, University of Graz, Graz, Austria

**P-01-13****WUSCHEL regulates auxin biosynthesis in stem cell niche to control the stem cell fate and organogenesis in Arabidopsis shoot apical meristems**Ram Yadav, Shalini Yadav*Department of Biological Sciences, Indian Institute of Science Education and Research Mohali, SAS Nagar, India***02. Signalling****P-02-01****Flavonoids enhance plant immunity via the accumulation of ROS and inhibition of auxin signaling in Arabidopsis**Jonguk An, Sun Ho Kim, Sunghwa Bahk, Woo Sik Chung*Division of Applied Life Science (BK21plus program), Plant Molecular Biology and Biotechnology Research Center, Gyeongsang National University, Jinju, Republic of Korea***P-02-02****Investigating crosstalk between canonical and non-canonical auxin signalling pathways**Heather Bland, Lars Østergaard*Department of Crop Genetics, John Innes Center, Norwich, United Kingdom***P-02-03****Diversification of cytokinin phosphotransfer signaling genes in *Medicago truncatula* and other legume genomes**Mathias Brault¹, Florian Frugier¹, Pascal Gamas², Frédéric Debellé², Sovanna Tan¹*¹IPIS2 (Institute of Plant Sciences Paris-Saclay), CNRS, Univ Paris-Sud, Univ Paris-Diderot, INRA, Univ d'Evry, Université Paris-Saclay, Gif-sur-Yvette, France; ²LIPM, Université de Toulouse, INRA, CNRS, Castanet-Tolosan, France***P-02-04****CFB, a cytokinin-regulated gene encoding an F-box protein targeting CAS1, a key enzyme in plant sterol biosynthesis**Wolfram G. Brenner¹, Jan Erik Leuendorf¹, Cortleven Anne¹, Laetitia B. B. Martin^{2,3}, Hubert Schaller², Schmülling Thomas¹*¹Applied Genetics, Freie Universität Berlin, Berlin, Germany; ²Institut de biologie moléculaire des plantes, Le Centre national de la recherche scientifique, Strasbourg, France; ³Metabolic Biology, John Innes Centre, Norwich, United Kingdom***P-02-05****Transcriptional analysis reveals key roles of sugars and cytokinins in triggering axillary bud outgrowth after decapitation**Tinashe Chabikwa, Milos Tanurdzic, Christine Beveridge*School of Biological Sciences, University of Queensland, St Lucia, Australia***P-02-06****Molecular insights into auxin effect on PIN polarity**Jakub Hajný¹, Tomáš Prat¹, Wim Grunewald², Klára Hoyerová³, Jiří Friml¹*¹Friml group, IST, Klosterneuburg, Austria; ²VIB, Ghent, Belgium; ³Institute of Experimental Botany, ÚEB AV, Praha, Czech Republic*

**P-02-07****Brassinosteroids mediated regulation of ABI3 is involved in high-temperature induced early flowering in plants**Hong Jeongeui, Hojin Ryu*Biology, Chungbuk national university, Cheongju, Republic of Korea***P-02-08****Functional characterization of gibberellin receptors in *Panax ginseng***Jinsoo Kim, Hojin Ryu*Biology, Chungbuk national univ., Chungju, Republic of Korea***P-02-09****A non-canonical auxin-signalling mechanism regulates gene expression by affecting chromatin state**André Kuhn, Lars Østergaard*Department of Crop Genetics, John Innes Centre, Norwich, United Kingdom***P-02-10****Auxin rapid inhibition on root growth in *Arabidopsis***Lanxin Li*Austria Institute of Science and Technology, Klosterneuburg, Austria***P-02-11****Bioactivity of *N*⁶-benzyladenine derivatives assayed by interaction with the cytokinin receptors *in planta*, *in vitro*, and *in silico***Ekaterina Savelieva¹, Vladimir Oslovsky², Dmitry Karlov³, Nikolay Kurochkin², Irina Getman¹, Lomin Sergey¹, Sergey Mikhailov², Dmitry Osolodkin⁴, Georgy Romanov¹¹Institute of Plant Physiology RAS, Moscow, Russian Federation; ²Institute of Molecular Biology RAS, Moscow, Russian Federation;³Institute of Science & Technology, Skolkovo Innovation Center, Skolkovo, Russian Federation; ⁴Institute of Pharmacy & Translational Medicine, 1st State Medical University, Moscow, Russian Federation**P-02-12****Cytokinin perception beyond flowering plants**Sergey Lomin¹, Ekaterina Savelieva¹, Yulia Myakushina¹, Pavel Pashkovsky¹, Alexander Heyl², Georgy Romanov¹¹Institute of Plant Physiology RAS, Moscow, Russian Federation; ²Biology Department, Adelphi University, New York, United States**P-02-13****Shaping signalling landscape during organ formation**Milica Nenadic¹, Joop Vermeer¹, Bruno Mueller²¹Department of Plant and Microbial Biology, University of Zurich, Zurich, Switzerland; ²Seed Development, Leibniz Institute of Plant Genetics and Crop Plant Research, Gatersleben, Germany**P-02-14****Diversity of auxin responsive cis-regulatory elements**Daria Novikova¹, Victoria Mironova², Dolf Weijers¹, Nadya Omelyanchuk³¹Department of Biochemistry, Wageningen University and Research, Wageningen, Netherlands; ²Department of Systems Biology, Institute of Cytology and Genetics, Novosibirsk, Russian Federation; ³Department of Natural Sciences, Novosibirsk State University, Novosibirsk, Russian Federation



P-02-15

Preparation and perception of fluorescently labeled isoprenoid cytokinins

Lucie Plíhalová^{1,2}, Karolina Kubiasová³, Václav Mik², Jaroslav Nisler¹, Martin Höning^{2,1}, Alexandra Husičková⁴, Lukáš Spíchal², Zuzana Pěkná², Olga Šamajová⁵, Ondřej Plíhal³, Eva Benková⁶, Karel Doležal^{1,2}, Miroslav Strnad¹

¹Laboratory of Growth Regulators, Centre of the Region Haná for Biotechnological and Agricultural Research, Faculty of Science, Palacký University & Institute of Experimental Botany CAS, Šlechtitelů 27, Olomouc 783 71, Czech Republic; ²Department of Chemical Biology and Genetics, Centre of the Region Haná for Biotechnological and Agricultural Research, Faculty of Science, Palacký University in Olomouc, Olomouc 78371, Czech Republic; ³Department of Molecular Biology, Centre of the Region Haná for Biotechnological and Agricultural Research, Šlechtitelů 27, Palacký University, Olomouc 78371, Czech Republic; ⁴Department of Biophysics, Centre of the Region Haná for Biotechnological and Agricultural Research, Faculty of Science, Palacký University in Olomouc, Olomouc 78371, Czech Republic; ⁵Department of Cell Biology, Centre of the Region Haná for Biotechnological and Agricultural Research, Šlechtitelů 27, Palacký University, Olomouc 78371, Czech Republic; ⁶Institute of Science and Technology (IST), Klosterneuburg, Austria

P-02-16

Selective auxin agonists induce specific AUX/IAA protein degradation to modulate plant development

Thomas Vain¹, Sara Raggi¹, Noel Ferro², Deepak Kumar Barange^{1,3}, Martin Kieffer⁴, Qian Ma¹, Siamsa Doyle¹, Mattias Thelander⁵, Barbora Pařízková⁶, Ondřej Novák^{1,6}, Alexandre Ismail⁷, Per Anders Enquist⁸, Adeline Rigal¹, Małgorzata Łangowska¹, Sigurd Ramans Harborough⁴, Yi Zhang⁹, Karin Ljung¹, Judy Callis¹⁰, Fredrik Almqvist³, Stefan Kepinski⁴, Mark Estelle⁹, Laurens Pauwels^{11,12}, Stéphanie Robert¹

¹Department of Forest Genetics and Plant Physiology, Swedish University of Agricultural Sciences, Umeå Plant Science Centre, Umeå, Sweden; ²Institute of Physical and Theoretical Chemistry, University of Bonn, Bonn, Germany; ³Department of Chemistry, Umeå University, Umeå, Sweden; ⁴Centre for Plant Sciences, University of Leeds, Leeds, United Kingdom; ⁵Department of Plant Biology, Swedish University of Agricultural Sciences, the Linnean Centre for Plant Biology in Uppsala, Uppsala, Sweden; ⁶Laboratory of Growth Regulators, Centre of the Region Haná for Biotechnological and Agricultural Research, Faculty of Science of Palacký University & Institute of Experimental Botany, Olomouc, Czech Republic; ⁷Sup'Biotech, IONIS Education Group, Villejuif, France; ⁸Laboratories for Chemical Biology Umeå, Chemical Biology Consortium Sweden, Department of Chemistry, Umeå University, Umeå, Sweden; ⁹University of California San Diego and Howard Hughes Medical Institute, La Jolla, United States; ¹⁰Department of Molecular and Cellular Biology, University of California, Davis, United States; ¹¹Department of Plant Biotechnology and Bioinformatics, Ghent University, Ghent, Belgium; ¹²VIB Center for Plant Systems Biology, Ghent, Belgium

P-02-17

Role of auxin response factor genes in stem cutting of poplar during adventitious root development. Digging into cambium transcriptional sequencing

Alok Ranjan¹, Irene Perrone², Sanaria Alalaaq¹, abdellah lakehal¹, Annegret Kohler³, Valérie Legue³, Francis Martin³, Catherine Bellini^{1,4}

¹Department of Plant Physiology, Umeå Plant Science Centre, Umeå University, Umeå, Sweden; ²Department of Agricultural, Forest and Food Sciences, University of Torino, Grugliasco, Italy; ³INRA/Lorraine University 1136 Interactions Arbres/Micro-organismes, INRA-Centre de Nancy, France, INRA/Lorraine University, Nancy, France; ⁴Institut Jean-Pierre Bourgin, INRA, AgroParisTech, CNRS, France, Université Paris-Saclay, Versailles, France

P-02-18

A new class of compounds specifically induce adventitious roots in Arabidopsis hypocotyls

Sébastien Schotte¹, Hoang Khai Trinh¹, Inge Verstraeten¹, Thomas Heugebaert², Christian Stevens², Danny Geelen¹

¹Plants and Crops, Ghent University, Ghent, Belgium; ²Green Chemistry and Technology, Ghent University, Ghent, Belgium

**P-02-19****Mechanisms promoting high-affinity interaction of auxin-responsive transcription factor with *cis*-regulatory elements**

Keita Tanaka¹, Alejandra Freire-Rios², Victoria Mironova³, Roeland Boer⁴, Dolf Weijers¹

¹Laboratory of Biochemistry, Wageningen University & Research, Wageningen, Netherlands; ²Laboratory of Cell Biology, Wageningen University & Research, Wageningen, Netherlands; ³Department of Systems Biology, Institute of Cytology and Genetics, Novosibirsk, Russian Federation; ⁴Alba Synchrotron, Barcelona, Spain

P-02-20**Auxin and cytokinin-associated gene expression profile mediated by a redox active molecule nitric oxide in *Arabidopsis thaliana***

Byung-Wook Yun¹, Sang-Uk Lee¹, Bong-Gyu Mun¹, Adil Hussain², Qari M Imran¹

¹School of Applied Biosciences, Kyungpook National University, DAEGU, Republic of Korea; ²Department of Agriculture, Abdul Wali Khan University Mardan, Mardan, Pakistan

P-02-21**New fluorescently labeled auxins display promising anti-auxin activity**

Asta Žukauskaitė¹, Kristýna Bielezová¹, Barbora Pařízková¹, Martin Kubeš¹, Alexandra Husičková², Martin Kubala², Michaela Sedlářová³, Karel Doležal¹, Miroslav Strnad¹, Ondřej Novák¹

¹Laboratory of Growth Regulators & Department of Chemical Biology and Genetics, Palacký University & Institute of Experimental Botany CAS, Olomouc, Czech Republic; ²Department of Biophysics, Palacký University, Olomouc, Czech Republic; ³Department of Botany, Palacký University, Olomouc, Czech Republic

04. Transport**P-04-01****Arp2/3-dependent auxin transporter trafficking**

Judith Garcia-Gonzalez¹, Štěpánka Kebrlová¹, Jana Krtková¹, Adriana Jelínková², Jan Petrášek^{2,1}, Kateřina Schwarzerová¹

¹Department of Experimental Plant Biology, Faculty of Science, Charles University, Prague, Czech Republic; ²Institute of Experimental Botany CAS, Prague, Czech Republic

P-04-02**A novel cytokinin transporter controls legume-*Rhizobium* symbiosis**

Karolina Jarzyniak¹, Joanna Banasiak², Tomasz Jamruszka², Martin Di Donato³, Markus Geisler³, Michal Jasinski^{2,1}

¹Department of Biochemistry and Biotechnology, Poznan University of Life Sciences, Poznan, Poland; ²Department of Plant Molecular Physiology, Institute of Bioorganic Chemistry, Poznan, Poland; ³Department of Biology, University of Fribourg, Fribourg, Switzerland

P-04-03**Silver ions increase plasma membrane permeability for various substances including auxins**

Petr Klíma¹, Martina Laňková¹, Filip Vandenbussche², Dominique Van Der Straeten², Jan Petrášek^{3,1}

¹Laboratory of Hormonal Regulations in Plants, Institute of Experimental Botany of the Czech Academy of Sciences, Prague, Czech Republic; ²Laboratory of Functional Plant Biology, Ghent University, Ghent, Belgium; ³Department of Experimental Plant Biology, Faculty of Science, Charles University, Prague, Czech Republic

**P-04-04****Unravelling the mechanism of PIN-mediated auxin transport**

Radek Lefnar¹, Judith García González¹, Jan Petrášek^{1,2}

¹Department of Experimental Plant Biology, Faculty of Science, Charles University, Prague 2, Czech Republic; ²Institute of Experimental Botany CAS, Prague 6, Czech Republic

P-04-05**Does differential plasma membrane distribution of *Nicotiana tabacum* PIN auxin efflux carriers defines their auxin transport function?**

Kateřina Malínská¹, Martina Laňková¹, Ayoub Stelate², Karel Müller¹, Jan Petrášek^{1,2}

¹Laboratory of Hormonal Regulations in Plants, Institute of Experimental Botany, the Academy of Sciences of the Czech Republic, Prague, Czech Republic; ²Department of Experimental Plant Biology, Faculty of Science, Charles University, Prague, Czech Republic

P-04-06**Biological characterization of new fluorescently labeled auxins**

Barbora Pařízková^{1,2}, Asta Žukauskaitė^{1,2}, Thomas Vain³, Peter Grones³, Martin Kubeš², Martin Kieffer⁴, Karel Doležal^{1,2}, Stefan Kepinski⁴, Miroslav Strnad¹, Stéphanie Robert³, Ondřej Novák¹

¹Laboratory of Growth Regulators, Centre of the Region Haná for Biotechnological and Agricultural Research, Faculty of Science, Palacký University and Institute of Experimental Botany, Academy of Sciences of the Czech Republic, Olomouc, Czech Republic; ²Department of Chemical Biology and Genetics, Centre of the Region Haná for Biotechnological and Agricultural Research, Faculty of Science, Palacký University, Olomouc, Czech Republic; ³Department of Forest Genetics and Plant Physiology, Umeå Plant Science Centre, Swedish University of Agricultural Sciences, Umeå, Sweden; ⁴Centre for Plant Sciences, University of Leeds, Leeds, United Kingdom

P-04-07**ABP1 plays a role in post-transcriptional control of PIN3 plasma membrane localization in roots of *Arabidopsis thaliana***

Milada Čovanová, Karolína Holečková, Jozef Lacek, Katarzyna Retzer, Jan Petrášek

Institute of Experimental Botany of the Czech Academy of Sciences, Prague, Czech Republic

P-04-08**Study of the vacuolar and secreted cytokinin dehydrogenases of *Arabidopsis thaliana*, their influence on the cytokinin distribution in vacuoles and on the root system architecture**

Ondřej Plíhal¹, Martina Kostková¹, Ondřej Novák², Karel Doležal¹

¹CRH, Department of Molecular Biology, Palacký University, Olomouc, Czech Republic; ²Laboratory of Growth Regulators, Institute of Experimental Botany CAS, Olomouc, Czech Republic

P-04-09**CRK5 kinase function in *Arabidopsis thaliana***

Gábor Rigó¹, Lilla Koczka², László Szabados³, Zsuzsanna Darula⁴, Katalin Medzihradszky⁴, Csaba Koncz^{5,3}, Ágnes Cséplő³

¹Department of Plant Biology, University of Szeged, Szeged, Hungary; ²Developmental and Cell Biology of Plants, CEITEC Masaryk University, Brno, Czech Republic; ³Institute of Plant Biology, Biological Research Centre, Hungarian Academy of Sciences, Szeged, Hungary; ⁴Laboratory of Proteomics Research, Biological Research Centre, Hungarian Academy of Sciences, Szeged, Hungary; ⁵Department of Plant Developmental Biology, Max-Planck Institut für Züchtungsforschung, Köln, Germany



P-04-10

PHOT1 phosphorylates PIN-LIKES to steer phototropic growth

Sascha Waidmann, Jürgen Kleine-Vehn

DAGZ, University of Natural Resources and Life Sciences, Vienna, Austria

P-04-11

Conserved tyrosine residues in the PIN central cytosolic loop are important for PIN polarity maintenance

Yao Xiao, Remko Offringa

Plant Developmental Genetics, Institute of Biology Leiden, Leiden University, Leiden, Netherlands



POSTER SESSION 2

Wednesday July 4, 16:45–19:30

03. Development

P-03-01

Characterization of adventitious root formation in *Populus* species and Norway spruce

Sanaria Alallag¹, Abdellah Lakehal¹, Federica Brunoni^{1,2}, Ondrej Novák³, Catherine Bellini^{1,4}

¹Department of Plant Physiology, Umea University, Umea, Sweden; ²Department of Forest Genetics and Plant Physiology, Swedish University for Agricultural Sciences, Umea, Sweden; ³Centre of the Region Haná for Biotechnological and Agricultural Research, Palacký University, Olomouc, Czech Republic; ⁴Institut Jean-Pierre Bourgin, INRA, AgroParisTech, CNRS, Université Paris-Saclay, Versailles, France

P-03-02

Can auxin-mediated competition fine-tuned by other players regulate pea axillary bud outgrowth?

Jozef Balla^{1,2}, Petr Kalousek², Vilém Reinöhl¹, Stanislav Procházka¹

¹CEITEC MENDELU, Brno, Czech Republic; ²Department of Plant Biology, MENDELU, Brno, Czech Republic

P-03-03

Organogenic activity of the *pin1* mutant inflorescence meristem.

Alicja Banasiak, Magdalena Biedroń, Alicja Dołzblasz

Department of Plant Developmental Biology, University of Wrocław, Wrocław, Poland

P-03-04

Effect of exogenous auxins on somatic embryo formation and plant regeneration in spring barley anther culture in vitro

Olena Bilynska

Genetics, biotechnology and quality, Yuriev plant production institute of the National Academy of Agrarian Sciences of Ukraine, Kharkiv, Ukraine

P-03-05

Auxin and cytokinin signaling in the regulation of cambium activity in *Arabidopsis* root

Tiina Blomster^{1,2}, Riccardo Siligato^{1,2}, Omid Safronov², Kamil Růžička³, Jarkko Salojärvi^{2,4}, Ari Pekka Mähönen^{1,2}

¹Institute of Biotechnology, University of Helsinki, Helsinki, Finland; ²Faculty of Biological and Environmental Sciences, University of Helsinki, Helsinki, Finland; ³Department of Functional Genomics and Proteomics, Central European Institute of Technology, Masaryk University, Brno, Czech Republic; ⁴School of Biological Sciences, Nanyang Technological University, Singapore, Singapore

P-03-06

Chemical screening reveals a role for ABA signalling in 2,4-D-induced somatic embryogenesis

Baojian Chen¹, Martijn Fiers¹, Wilco Ligterink¹, Jian-Kang Zhu², Tom Stekelenburg¹, Sean Cutler³, Gerco Angenent¹, Yang Zhao², Kim Boutillier¹

¹Wageningen University & Research, Wageningen, Netherlands; ²Purdue University, West Lafayette, United States; ³University of California at Riverside, Riverside, United States

**P-03-07****The MADS-box transcription factor SEEDSTICK (STK) directly activates CKX7 controlling fruit elongation**

Maurizio Di Marzo¹, Stefan de Folter², Ignacio Ezquer Garin¹, Marta Adelina Mendes¹, Lucia Colombo¹

¹Dipartimento di Bioscienze, Università degli Studi di Milano, Milan, Italy; ²Unidad de Genómica Avanzada (LANGEBIO), Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional (CINVESTAV-IPN), Irapuato, Guanajuato, Mexico

P-03-08**Cytokinins control apical-basal developmental gradient in Arabidopsis via NAC SECONDARY WALL THICKENING PROMOTING FACTORS**

Vojtech Didi¹, Anna Bilkova², Radek Jupa³, Radim Cegan⁴, Jana Vasickova¹, Mariana Benitez⁵, Faride Unda⁶, Tereza Dobisova¹, Willi Riber¹, Zuzana Dostalova¹, Shawn Mansfield⁶, Ondrej Novak⁷, Miroslav Strnad⁷, Roman Hobza⁴, Vit Gloser³, Eva Budinska², Jan Hejatk¹

¹CEITEC - Central European Institute of Technology and National Centre for Biomolecular Research, Masaryk University, Brno, Czech Republic; ²Research Centre for Toxic Compounds in the Environment (RECETOX), Masaryk University, Brno, Czech Republic; ³Department of Experimental Biology, Faculty of Science, Masaryk University, Brno, Czech Republic; ⁴Department of Plant Developmental Genetics, Institute of Biophysics of the CAS, Brno, Czech Republic; ⁵Laboratorio Nacional de Ciencias de la Sostenibilidad, Instituto de Ecología, Universidad Nacional Autónoma de México, Mexico, Mexico; ⁶Department of Wood Science, University of British Columbia, Vancouver, Canada; ⁷Institute of Experimental Botany CAS and Palacky University, Olomouc, Czech Republic

P-03-09**Regulation of fruit-shape formation in *Capsella rubella* reveals 'heart-breaking' details of hormonal and genetic interactions under tight control**

Yang Dong, Lars Østergaard

Crop Genetics Department, John Innes Centre, Norwich, United Kingdom

P-03-10**Auxin and melatonin regulate the growth of wheat seedlings**

Irina Golovatskaya, Ekaterina Boyko, Marina Efimova

Department of Plant Physiology and Biotechnology, National Research Tomsk State University, Tomsk, Russian Federation

P-03-11**Interaction AGAMOUS-cytokinin in the control of floral meristem determinacy and gynoecium development in *Arabidopsis thaliana***

Andrea Gómez-Felipe, Stefan de Folter

Advanced Genomics Unit, Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional, Guanajuato, Mexico

P-03-12**Physiological phenotyping of *Abies nordmanniana* as a basis for developing phytohormone-based strategies to improve Christmas tree production**

Dominik K. Großkinsky, Rebecca Dölker, Thomas Roitsch, Bjarke Veierskov

Department of Plant and Environmental Sciences, University of Copenhagen, Frederiksberg, Denmark

P-03-13**Auxin role in tissue pattern restoration after single-cell elimination in *Arabidopsis* root meristem**

Lukas Hoermayer, Petra Novakova, Saiko Yoshida, Jiří Friml

Institute of Science and Technology Austria, 3400 Klosterneuburg, Austria

**P-03-14****Kinetin derivatives with UVA and UVB photoprotective affect defend *Caenorhabditis elegans* against oxidative stress**

Martin Hönig^{1,2}, Lucie Plíhalová^{1,2}, Lukáš Spíchal¹, Jiří Grúz², Alena Kadlecová², Jiří Voller²,

Alena Rajnochová Svobodová³, Jitka Vostálová³, Jitka Ulrichová³, Karel Doležal^{1,2}, Miroslav Strnad²

¹Department of Chemical Biology and Genetics, Centre of the Region Haná for Biotechnological and Agricultural Research, Palacký University, Olomouc, Czech Republic; ²Laboratory of Growth Regulators, Centre of the Region Haná for Biotechnological and Agricultural Research, Palacký University & Institute of Experimental Botany CAS, Olomouc, Czech Republic; ³Department of Medical Chemistry and Biochemistry, Faculty of Medicine and Dentistry, Palacký University, Olomouc, Czech Republic

P-03-15**Comparative analysis of plant DRL1/EL04 and its yeast ortholog Kti12**

Sang Eun Jun¹, Ji Young Hwang¹, Jin Young Moon¹, Thien Tu Huynh Le¹, John L. Bowman², Raffael Schaffrath³, Gyung-Tae Kim¹

¹Department of Molecular Genetics, Donga-A University, Busan 604-714, Republic of Korea; ²School of Biological Sciences, Monash University, Melbourne, Victoria 3800, Australia; ³Institut für Biologie, FG Mikrobiologie, Universität Kassel, 34132 Kassel, Germany

P-03-16**RNA methylation modulating cytokinin responsiveness**

Donghwi Ko¹, Raili Ruonala^{1,2}, Eva Hellmann¹, Hanna Help-Rinta-Rahko², Huili Liu¹, Ykä Helariutta^{1,2}

¹Sainsbury Laboratory, University of Cambridge, Cambridge, United Kingdom; ²Department of Biosciences, University of Helsinki, Helsinki, Finland

P-03-17**Association mapping of shoot-regenerative potential reveals natural variation in WUS and other hormone-mediated genes**

Robin Lardon, Danny Geelen

Plants and Crops, Ghent University, Ghent, Belgium

P-03-18**Dissection of the polycomb response element of paternally imprinted *UPWARD CURLY LEAF1* during *Arabidopsis* endosperm development**

Jooyeon Hong, Yeonhee Choi, Jong Seob Lee

School of Biological Sciences, Seoul National University, Seoul, Republic of Korea

P-03-19**The role of CKX-interacting HIPP proteins in regulating plant development and cytokinin responses in *Arabidopsis***

Georgeta Leonte¹, Henriette Weber¹, Lisa Theisl², Tomáš Werner²

¹Institute of Biology/Applied Genetics, Freie Universität Berlin, Berlin, Germany; ²Institute of Plant Sciences, University of Graz, Graz, Austria

P-03-20**The role of auxin in baby-boom-mediated somatic embryogenesis**

Mengfan Li¹, Anneke Horstman¹, Baojian Chen¹, Justyna Wrobel², Iris Heidmann¹, Gerco Angenent¹, Kim Boutillier¹

¹Wageningen University and Research, Wageningen, Netherlands; ²University of Silesia in Katowice, Śląskie, Poland

**P-03-21****Investigating the role of the cuticle during apical hook development**Sara Raggi, Sijia Liu, Stéphanie Robert*Umeå Plant Science Centre, Forest Genetics and Plant Physiology, Swedish University of Agricultural Sciences, Umeå, Sweden***P-03-22****The role of Purine Permeases in defining spatio-temporal cytokinin responses**Bruno Müller¹, Evelyne Zürcher²*¹Seed development, Leibniz-Institut für Pflanzengenetik und Kulturpflanzenforschung, Seeland, Germany; ²Institute for Plant and Microbial Biology, University of Zurich, Zurich, Switzerland***P-03-23****Dynamic response and functional significance of hormones during rice adventitious root development**Ananya Neogy, Zeenu Singh, Khrang K Mushahary, Nikita Yadav, Shri Ram Yadav*Biotechnology, Indian Institute of Technology, Roorkee, Uttarakhand, India***P-03-24****Auxin signaling repressor Aux/IAA12 is involved in root and leaf development in *Arabidopsis***Thi Nhan Nguyen, Sun Ho Kim, Sunghwa Bahk, Woo Sik Chung*Division of Applied Life Science (BK21plus program), Plant Molecular Biology and Biotechnology Research Center, Gyeongsang National University, Jinju, Republic of Korea***P-03-25****Cytokinin signalling regulates organ identity via AHK4 receptor in *Arabidopsis***Markéta Pernisová^{1,2}, Martina Grochová¹, Tomáš Konečný¹, Lenka Plačková³, Marcus G. Heisler², Ondřej Novák³, Jan Hejátko¹*¹CEITEC and Functional Genomics and Proteomics, NCBR, Faculty of Science, Masaryk University, Brno, Czech Republic; ²European Molecular Biology Laboratory, Heidelberg, Germany; ³Laboratory of Growth Regulators, Centre of the Region Haná for Biotechnological and Agricultural Research, Institute of Experimental Botany CAS and Faculty of Science, Palacký University, Olomouc, Czech Republic***P-03-26****Cytokinin influences phytochrome-dependent seed germination in *Arabidopsis thaliana***Daniela Pezzetta, Jan Erik Leuendorf, Stefanie Zintl, Michael Riefler, Thomas Schmülling*Institute of Biology/ Applied Genetics, Free University, Berlin, Germany***P-03-27****Root cap-derived cytokinin plays a role in determining root meristem size and lateral root initiation in *Arabidopsis***Eswarayya Ramireddy^{1,2}, Pruthvi Vittal², Ondřej Novák³, Thomas Schmülling²*¹Biology Division, Indian Institute of Science Education and Research (IISER) Tirupati, Mangalam, Tirupati-517507, India; ²Institute of Biology/ Applied Genetics, Dahlem Centre of Plant Sciences, Freie Universität Berlin, Albrecht-Thaer-Weg 6, 14195 Berlin, Germany; ³Laboratory of Growth Regulators and Institute of Experimental Botany, Palacký University, Slechtitelu 11, CZ-78371 Olomouc, Czech Republic***P-03-28****Investigating the role of cytokinin-inducible *EXPANSINs* in the control of cell wall properties and development in *Arabidopsis*.**Marketa Samalova, Jan Hejatko*CEITEC MU, Masaryk University, Brno, Czech Republic*

**P-03-29****Nodules and lateral roots share developmental programs during initiation**

Katharina Schiessl, Jodi Lilley, Ioannis Tamvakis, Giles Oldroyd

Oldroyd Group, Sainsbury Laboratory Cambridge University, Cambridge, United Kingdom

P-03-30**Thidiazuron Improves Shoot Regeneration of *Campanula* Species**

Margrethe Serek

Natural Sciences, Leibniz University Hannover, Hannover, Germany

P-03-31**Identification of novel transcriptional regulators of local auxin biosynthesis during embryo and fruit morphogenesis in *Arabidopsis thaliana***

Andrea Simeunovic¹, Helene Robert Boisivon¹, Lenka Patkova¹, Karin Ljung², Roger Granbom²

¹*Genomics and Proteomics of Plant Systems, Central European Institute of Technology, Masaryk University, Brno, Czech Republic;*

²*Umea Plant Science Center, Swedish University of Agricultural Sciences, Umeå, Sweden*

P-03-32**Multifaceted activity of cytokinin in leaf development shapes its size and structure in *Arabidopsis***

Jan Skalák¹, Liesbeth Vercauysen^{2,3}, Hannes Claeys^{2,3}, Jana Hradilová¹, Martin Černý¹, Ondřej Novák⁴, Iñigo Saiz-Fernández¹, Patricie Skaláková¹, Frederik Coppens^{2,3}, Stijn Dhondt^{2,3}, Šárka Koukalová¹, Jan Zouhar¹, Dirk Inzé^{2,3}, Břetislav Brzobohatý¹

¹*Department of Molecular Biology and Radiobiology, Mendel University in Brno, Brno, Czech Republic;* ²*Department of Plant Biotechnology and Bioinformatics, Ghent University, Ghent, Belgium;* ³*VIB Center for Plant Systems Biology, Ghent, Belgium;*

⁴*Laboratory of Growth Regulators and Development of Chemical Biology and Genetics, Centre of the Region Haná for Biotechnological and Agricultural Research, Institute of Experimental Botany CAS and Faculty of Science of Palacký University, Olomouc, Czech Republic*

P-03-33**Auxin response in the desmidian alga *Closterium***

Roman Skokan^{1,2}, Stanislav Vosolsobě¹, Henrik Buschmann³, Jan Petrášek^{1,2}

¹*Department of Experimental Plant Biology, Charles University, Faculty of Science, Prague, Czech Republic;* ²*Laboratory of Hormonal Regulations in Plants, Czech Academy of Sciences, Institute of Experimental Botany, Prague, Czech Republic;* ³*Department of Biology and Chemistry, Osnabrück University, Osnabrück, Germany*

P-03-34**Light quality affects auxin and cytokinin responses in meristematic regions.**

Kiki Spaninks, Remko Offringa

IBL - Plant Developmental Genetics, Leiden University, Leiden, Netherlands

P-03-35**Strigolactones: from tree architecture to wood formation**

Chang Su¹, Juha Immanen¹, Juan Alonso-Serra¹, Melis Kucukoglu¹, Kaisa Nieminen², Ykä Helariutta³

¹*University of Helsinki, Helsinki, Finland;* ²*Natural Resources Institute Finland, Helsinki, Finland;* ³*University of Cambridge, Cambridge, United Kingdom*

**P-03-36****Control of Stem cell division by fine-tuning Cyclin-dependent kinase activity**Teruki Sugiyama, Hiroto Takatsuka, Masaaki Umeda*Nara Institute of Science and Technology, Takayama-cho, Ikoma, Japan***P-03-37****Broad spectrum developmental role of Brachypodium AUX1**Aija van der Schuren¹, Catalin Voiniciuc², Jennifer Bragg³, Karin Ljung⁴, John Vogel³, Markus Pauly², Christian S. Hardtke¹*¹Department of Plant Molecular Biology, University of Lausanne, Biophore Building, Lausanne, Switzerland; ²Institute for Plant Cell Biology and Biotechnology, Heinrich-Heine University, Duesseldorf, Germany; ³DOE Joint Genome Institute, Walnut Creek, United States; ⁴Umeå Plant Science Centre, Department of Forest Genetics and Plant Physiology, Swedish University of Agricultural Sciences, Umeå, Sweden***P-03-38****Auxin impacts cell wall integrity by regulating xyloglucan composition in *Arabidopsis thaliana* hypocotyls**Silvia Melina Velasquez, Jürgen Kleine-Vehn*Department for Applied Genetics and Cell Biology, BOKU, Vienna, Austria***P-03-39****Lush Spike - understanding the role of phytohormones during spikelet survival in barley**Thirulogachandar Venkatasubbu, Ravi Koppolu, Twan Rutten, Thorsten Schnurbusch*Leibniz Institute of Plant Genetics and Crop Plant Research, Gatersleben, Germany***P-03-40****Hormone regulation of leaf morphology in rice**Quan Wang, Guosheng Xiong*Agricultural Genomics Institute at Shenzhen, Chinese Academy of Agricultural Science, Dapeng New District, Shenzhen, Guangdong, China***P-03-41****Auxin is a main hormonal factor of petunia pollen tube growth**Lidija Kovaleva¹, Ekaterina Zakharova^{2,3}*¹Timiryazev Institute of Plant Physiology, Russia, Moscow, Russian Federation; ²Russian State Agrarian University, Russia, Moscow, Russian Federation; ³All-Russia Research Institute of Agricultural Biotechnology, Moscow, Russian Federation***05. Interactions and cross-talk****P-05-01****Sugars trigger axillary bud outgrowth by impairing strigolactone perception in axillary buds**Tinashe Chabikwa, Christine Beveridge*School of Biological Sciences, University of Queensland, St Lucia, Australia***P-05-02****Ethylene-independent promotion of photomorphogenesis by cytokinin requires a functional cytokinin and light signaling pathway**Anne Cortleven, Stephanie Ehret, Henrik Johansson, Thomas Schmölling*Institute of Biology/Applied Genetics, Dahlem Centre of Plant Sciences (DCPS), Freie Universität Berlin, Berlin, Germany*

**P-05-03****Dissecting the mechanism of cytokinin-ethylene crosstalk in the control of multistep phosphorelay signaling and its role in the root development**

Abigail Cuyacot¹, Markéta Žďárská¹, Martin Trtílek², Jan Hejátko¹

¹Central European Institute of Technology (CEITEC), Masaryk University, Brno, Czech Republic; ²Photon Systems Instruments (PSI), Drasov, Czech Republic

P-05-04**Brassinosteroids regulate expression of primary response genes to cytokinins in plants**

Marina Efimova¹, Natalia Kudryakova², Vladimir Khripach³, Liliya Shmidt¹, Victor Kusnetsov²

¹Department of Plant Physiology and Biotechnology, National Research Tomsk State University, Tomsk, Russian Federation; ²Laboratory of plant genome expression, Institute of Plant Physiology Russian Academy of Science, Moscow, Russian Federation; ³Laboratory of Steroid Chemistry National Academy of Sciences of Belarus, Institute of Bioorganic Chemistry NAN Belarus, Minsk, Belarus

P-05-05**Chemical Spaces of Small Signal Molecules Inducing Biological Activity**

Noel Ferro¹, Thomas Bredow²

¹Ferro CBM, Chemical and Biological Metrics, Buchholz (By Hamburg), Germany; ²Mulliken Center for Theoretical Chemistry, Institut für Physikalische und Theoretische Chemie, University of Bonn, Bonn, Germany

P-05-06**Auxin Down-regulates *BAS1* Expression to Increase Endogenous Brassinosteroids in *Arabidopsis thaliana***

Seong-Ki Kim, Ji Hyun Youn, Jeehee Roh

Department of Life Science, Chung-Ang University, Seoul, Republic of Korea

P-05-07**Hormonal status and responsiveness to auxin and cytokinin of transgenic potato plants harboring *tms1* gene driven by tuber-specific promoter**

Oxana Kolachevskaya¹, Lidiya Sergeeva², Kristyna Floková², Irina Getman¹, Sergey Lomin¹, Georgy Romanov¹

¹Institute of Plant Physiology RAS, Moscow, Russian Federation; ²Wageningen University, Wageningen, Netherlands

P-05-08**Importance of sensitivity to ethylene for the control of auxin and cytokinins content and growth of *Arabidopsis* plants**

Alla Korobova, Anna Vasinskaya, Lidiya Vysotskaya, Guzel Kudoyarova

Ufa Institute of Biology, Ufa Federal Research Centre, Russian Academy of Sciences, Ufa, Russian Federation

P-05-09**The effect of GR24 on physiological responses of *Arabidopsis thaliana* in dependence on phosphate nutrition**

Barbara Kramna^{1,2}, Sylva Prerostova^{1,2}, Eva Kobzova¹, Alena Gaudinova¹, Vojtech Knirsch¹, Radomira Vankova¹

¹Department of Hormonal Regulations in Plants, Institute of Experimental Botany CAS, Prague 6, Czech Republic; ²Department of Experimental Biology of Plants, Charles University in Prague, Faculty of Science, Prague 2, Czech Republic

**P-05-10****Metabolism and transport of cytokinins in stressed plants and importance of abscisic acid for their control**

Guzel Kudoyarova¹, Lidiya Vysotskaya¹, Alla Kurobova¹, Stanislav Veselov²

¹Plant Physiology, Ufa Institute of Biology, Russian Academy of Sciences, Ufa, Russian Federation; ²Biology, Bashkir State University, Ufa, Russian Federation

P-05-11**Linking the *Arabidopsis* response regulator proteins to the transcriptional network**

Jan Erik Leuendorf, Mhyeddeen Halawa, Thomas Schmülling

Institute of Biology/Applied Genetics, Freie Universität Berlin, Berlin, Germany

P-05-12**Changes in the light spectral quality affects cytokinin homeostasis, regulating the senescence rate in wheat leaves exposed to shading stress**

Cintia Florencia Marchetti¹, Petr Galuszka¹, Humberto Fabio Causin²

¹Department of Molecular Biology, Palacký University, Olomouc, Czech Republic; ²Institute of Biodiversity and Experimental Biology (IBBEA-DBBE), University of Buenos Aires, C.A.B.A., Argentina

P-05-13**Identification and quantitative measurement of proteins of biosynthesis and signaling plant hormones concerning apical dominance using MRM assays by mass spectrometry**

Hitoshi Mori

Bioagricultural Sciences, Nagoya University, Nagoya, Japan

P-05-14**Cytokinin production in soybean roots differs between soybean cyst nematode susceptible and resistant cultivars**

Tamzida Rahman, R J Neil Emery

Biology, Trent University, Peterborough, Canada

P-05-15**Methylation of mRNA is required for auxin dependent processes**

Kamil Ruzicka^{1,2}, Ales Pencik^{3,4}, Ondrej Novak^{3,4}, Yka Helariutta⁵, Jan Hejatkó¹, Jan Petrasek², Elena Zemlyanskaya¹

¹CEITEC, Masaryk University, Brno, Czech Republic; ²Institute of Experimental Botany, Academy of Sciences of the Czech Republic, Prague, Czech Republic; ³Institute of Experimental Botany, Czech Academy of Sciences, Olomouc, Czech Republic; ⁴Laboratory of Growth Regulators, Centre of the Region Haná for Biotechnological and Agricultural Research, Faculty of Science of Palacký University, Olomouc, Czech Republic; ⁵Sainsbury Laboratory, University of Cambridge, Cambridge, United Kingdom

P-05-16**Heat-induced male sterility is reversed by cytokinin, mediated by sucrose and expression of sugar transporter AtSweet 7**

RONALD SALZMAN^{1,2}, Valeria Selva³, Bill Weir⁴, Jerry Stoller², Keyan Zhu-Salzman¹

¹Department of Entomology, Norman Borlaug Center For Southern Crop Improvement, Texas A&M University, College Station, United States; ²Stoller Enterprises, Houston, United States; ³Stoller Argentina, Cordoba, Argentina; ⁴UC Cooperative Extension, University of California, Merced, United States

**P-05-17****Molecular mechanisms of cytokinin-regulated endomembrane trafficking to coordinate plant organogenesis**

Hana Semeradova¹, Natalia Nikonorova^{2,3}, Ive De Smet^{2,3}, Eva Benkova¹

¹Institute of Science and Technology Austria, Klosterneuburg, Austria; ²Department of Plant Biotechnology and Bioinformatics, Ghent University, Ghent, Belgium; ³VIB Center for Plant Systems Biology, Ghent, Belgium

P-05-18**Targeted plant hormone analysis in sorted cell populations – method development**

Jan Šimura¹, Ioanna Antoniadis¹, Ondřej Novák², Karin Ljung¹

¹Department of Forest Genetics and Plant Physiology, Umeå Plant Science Centre, Swedish University of Agricultural Sciences, Umeå, Sweden; ²Laboratory of Growth Regulators, Centre of the Region Haná for Biotechnological and Agricultural Research, Faculty of Science, Palacký University & Institute of Experimental Botany CAS, Olomouc, Czech Republic

P-05-19**Functional and structural insights into the mechanism of ETR1-mediated cytokinin-ethylene crosstalk**

Agnieszka Szmitkowska, Zuzana Jaseňáková, Blanka Pekárová, Jan Komárek, Josef Houser, Lukáš Židek, Michaela Wimmerová, Jan Hejátko

Central European Institute of Technology (CEITEC), Masaryk University, Brno, Czech Republic

P-05-20**Study of isoprenoid-derived plant signalling molecules during the ontogenesis of spinach (*Spinacia oleracea* L.)**

Danuše Tarkowská¹, Hana Mašková¹, Pavel Kopecký², Petr Tarkowski²

¹Laboratory of Growth Regulators, Centre of the Region Haná for Biotechnological and Agricultural Research, Institute of Experimental Botany the Czech Academy of Sciences & Faculty of Science, Palacký University, Olomouc, Czech Republic; ²Crop Research Institute, Olomouc, Czech Republic

P-05-21**The crosstalk between phytohormones and polyamines regulate plant stress tolerance**

Lydia Ugena, Kateřina Podlešáková, Magdaléna Bryksová, Lukáš Spíchal, Karel Doležal, Nuria De Diego

Department of Chemical Biology and Genetics, Centre of the Region Haná for Biotechnological and Agricultural Research, Faculty of Science, Palacký University, Olomouc, Czech Republic

P-05-22**Auxin and cytokinin metabolic profiling of tomato flower and early fruit development**

Sayantan Panda¹, Irina Panizel¹, Andrii Vainer¹, Adi Faigenboim², Asaph Aharoni¹, Hagai Yasuor³

¹Department of Plant and Environmental Sciences, Weizmann Institute of Science, Rehovot, Israel; ²Department of Vegetable and Field Crops Research, Agriculture Research Organization, Beit Dagan, Israel; ³Department of Vegetable and field Crops, Gilat Research Center, Gilat, Israel

P-05-23**A reverse genetics approach to discover novel regulators of cytokinin biosynthesis and signaling in the shoot apical meristem of *Arabidopsis thaliana***

Sonal Yadav, Ram Kishore Yadav

Department of Biological Sciences, Indian Institute of Science Education and Research Mohali, Mohali, India

**P-05-24****ETR1 and ARR3 interconnects ethylene and cytokinin into a single multistep phosphorelay pathway to control root growth**

Marketa Zdarska¹, Paul Tarr², Abigail Cuyacot¹, Vendula Hrdinova¹, Amel Yamoune¹, Zuzana Gelova¹, Elliot Meyerowitz², Jan Hejatko¹

¹Functional Genomics and Proteomics of Plants, Central European Institute of Technology and National Centre for Biomolecular Research, Masaryk University, Brno, Czech Republic; ²Division of Biology and Biological Engineering 156-29, California Institute of Technology, Pasadena, United States

06. Interaction with the environment**P-06-01*****U. maydis* proteins induce auxin signaling by targeting a key regulator of auxin signaling**

Janos Bindics, Simon Uhse, Benjamin Kogelmann, Martin Alejandro Darino, Fernando Navarrete, Armin Djamei
Gregor Mendel Institute of Molecular Plant Biology, Djamei group, Vienna, Austria

P-06-02**The role of cytokinin in the response to altered photoperiod stress**

Manuel Frank, Anne Cortleven, Thomas Schmülling

Institute of Biology/Applied Genetics, Freie Universität Berlin, Berlin, Germany

P-06-03**Characterization of the impact of stress targeting and acclimation on heat shock response**

Alena Gaudinova¹, Petre Dobrev¹, Barbara Kramna^{1,2}, Sylva Prerostova^{1,2}, Vojtech Knirsch¹, Joseph Kieber³, Radomira Vankova¹

¹Department of Hormonal Regulations in Plants, Institute of Experimental Botany of the Czech Academy of Sciences, Prague, Czech Republic; ²Department of Experimental Plant Biology, Faculty of Science, Charles University, Prague, Czech Republic; ³Department of Biology, University of North Carolina, Chapel Hill, United States

P-06-04**The interplay of light, cytokinins and cytokinin receptors during senescence of detached leaves**

Alexandra Husičková¹, Helena Melkovičová¹, Ursula Ferretti¹, Maroš Přčina¹, Lenka Plačková^{2,3}, Pavel Pospíšil¹, Karel Doležal^{2,3}, Eva Pilařová³, Martina Špundová¹

¹Department of Biophysics, Centre of the Region Haná for Biotechnological and Agricultural Research, Faculty of Science, Palacký University, Olomouc, Czech Republic; ²Department of Chemical Biology and Genetics, Centre of the Region Haná for Biotechnological and Agricultural Research, Faculty of Science, Palacký University, Olomouc, Czech Republic; ³Laboratory of Growth Regulators, Faculty of Science, Palacký University & Institute of Experimental Botany CAS, Olomouc, Czech Republic

P-06-05**Characterisation of *Medicago truncatula* root specific ABC transporter modulating lateral root density and nodule number**

Tomasz Jamruszka¹, Karolina Jarzyniak², Michal Jasinski^{1,2}

¹Department of Plant Molecular Physiology, Institute of Biorganic Chemistry, Polish Academy of Sciences, Poznan, Poland; ²Department of Biochemistry and Biotechnology, Poznan University of Life Sciences, Poznan, Poland



P-06-06

Cytokinin-producing, drought-tolerant *Methylobacterium* improves growth and yield characteristics of lentil (*Lens culinaris*) under water stress conditions

Anna Kisiala, Erin Morrison, Gabriel Lemes, Megan Aoki, Neil Emery

Department of Biology, Trent University, Peterborough, Canada

P-06-07

Growth optimization of a heterotrophic protist *Euglena gracilis* using a recycled fermentation approach

Alexandra M. Kuhne¹, Adam J. Nobel², Neil R.J. Emery³

¹Environmental and Life Sciences Graduate Program, Trent University, Peterborough, Canada; ²Noblegen Inc, Trent University, Peterborough, Canada; ³Biology Department, Trent University, Peterborough, Canada

P-06-08

Influence of high temperatures on seed development of *Brassica napus* cultivars

Kateřina Mácova^{1,2}, Lenka Patkova¹, Helene Robert¹

¹Hormonal Crosstalk in Plant Development, CEITEC Masaryk University, Brno, Czech Republic; ²Laboratory Functional Genomics and Proteomics (FGP)-National Centre for Biomolecular Research (NCBR), Faculty of Science, Masaryk University, Brno, Czech Republic

P-06-09

Electronic noses detect volatile signatures of responses to auxin herbicides

Richard Napier¹, James Covington², Emma Daulton², Jun Li³, Alonso Pardal Bermejo¹

¹School of Life Sciences, University of Warwick, Coventry, United Kingdom; ²School of Engineering, University of Warwick, Coventry, United Kingdom; ³College of Plant Protection, Nanjing Agricultural University, Nanjing, China

P-06-10

Assessing the implications of cytokinins for mammalian cells

Muhammad Naseem¹, Thomas Dandekar²

¹Department of Life and Environmental Sciences, College of Natural and Health Sciences, Zayed University, Abu Dhabi, United Arab Emirates; ²Department of Bioinformatics, University of Wuerzburg, Wuerzburg, Germany

P-06-11

Short term salinity response of selected Brassica crops

Iva Pavlovic¹, Aleš Pencık², Danuše Tarkowska², Jana Okleštkova², Selma Mlinaric³, Hrvoje Lepeduš⁴, Valerija Vujcic⁵, Sandra Radic Brkanac⁵, Ondřej Novak², Branka Salopek Sondi¹

¹Department of Molecular Biology, Ruđer Boškovic Institute, Zagreb, Croatia; ²Laboratory of Growth Regulators, Centre of the Region Hana for Biotechnological and Agricultural Research, Institute of Experimental Botany CAS & Faculty of Science of Palacky University, Olomouc, Croatia; ³Department of Biology, Josip Juraj Strossmayer University of Osijek, Osijek, Croatia; ⁴Faculty of Humanities and Social Sciences, Josip Juraj Strossmayer University of Osijek, Osijek, Croatia; ⁵Division of Botany, Department of Biology, Faculty of Science, University of Zagreb, Zagreb, Croatia

P-06-12

Low light mitigate cold stress response of *Arabidopsis*

Sylva Prerostova^{1,2}, Barbara Kramna^{1,2}, Eva Kobzova¹, Vojtech Knirsch¹, Alena Gaudinova¹, Ilja Prasil³, Jan Skalak⁴, Bretislav Brzobohaty⁴, Radomira Vankova¹

¹Department of Hormonal Regulations in Plants, Institute of Experimental Botany of the Czech Academy of Sciences, Prague, Czech Republic; ²Department of Experimental Plant Biology, Faculty of Science, Charles University, Prague, Czech Republic; ³Plant Stress Biology and Biotechnology, Crop Research Institute, Prague, Czech Republic; ⁴Department of Molecular Biology and Radiobiology, Mendel University in Brno & CEITEC - Central European Institute of Technology, Brno, Czech Republic

**P-06-13****Root engineering in barley and maize causes mineral enrichment in leaves and seeds and enhanced drought tolerance**

Eswarayya Ramireddy^{1,2}, Seyed A Hosseini³, Hilde Nelissen⁴, Kai Eggert³, Sabine Gillandt¹, Heike Gnad⁵, Dirk Inzé⁴, Nicolaus von Wirén³, Thomas Schmölling¹

¹Institute of Biology/Applied Genetics, Dahlem Centre of Plant Sciences, Freie Universität Berlin, Albrecht-Thaer-Weg 6, 14195 Berlin, Germany; ²Biology Division, Indian Institute of Science Education and Research (IISER) Tirupati, Mangalam, Tirupati-517507, India;

³Molecular Plant Nutrition, Leibniz-Institute of Plant Genetics and Crop Plant Research, Corrensstr. 3, D-06466 Stadt Seeland OT Gatersleben, Germany; ⁴Department of Plant Systems Biology, Belgium Department of Plant Biotechnology and Bioinformatics, VIB, Ghent University, 9052 Gent, Belgium; ⁵Betriebsstätte Biotechpark Gatersleben, Saaten-Union Biotec GmbH, Am Schwabeplan 6, D-06466 Stadt Seeland OT Gatersleben, Germany

P-06-14**Comparison of intracellular trafficking pathways of auxin carrier depending on light growth conditions of *Arabidopsis thaliana* root**

Katarzyna Retzer, Jozef Lacey, Jan Petrášek

Laboratory of Hormonal Regulations in Plants, Institute of Experimental Botany CAS, v. v. i., Prague, Czech Republic

P-06-15**Genome-wide transcriptomic analysis of BR-deficient Micro-Tom reveals correlations between drought stress tolerance and Brassinosteroid signaling in tomato**

Hojin Ryu, Jinsu Lee

Biology, Chungbuk National University, Cheongju, Republic of Korea

P-06-16**The expression and function of *Oryza sativa* pseudo-histidine phosphotransfer protein 3 in response to light**

Yu-Chang Tsai, Chia-Yun Lee

Department of Agronomy, National Taiwan University, Taipei, Taiwan

P-06-17**Hormonal dynamics in cold and frost stress responses in monocots**

Radomira Vankova¹, Petre Dobrev¹, Jan Simura², Ivan Petrik², Sylva Prerostova^{3,1}, Ilja Tom Prasil⁴, Klara Kosova⁴, Vojtech Knirsch¹, Alena Gaudinova¹, Ivo Nasinec⁵, Ondrej Novak²

¹Department of Hormonal Regulations in Plants, Institute of Experimental Botany of the Czech Academy of Sciences, Prague, Czech Republic; ²Laboratory of Growth Regulators, Centre of the Region Haná for Biotechnological and Agricultural Research, Faculty of Science of Palacký University & Institute of Experimental Botany CAS, Olomouc, Czech Republic; ³Department of Experimental Plant Biology, Faculty of Science, Charles University, Prague 2, Czech Republic; ⁴Division of Crop Genetics and Breeding, Laboratory of Plant Stress Biology and Biotechnology, Crop Research Institute, Prague, Czech Republic; ⁵Oseva UNI, Breeding Station Vetrov, Milevsko, Czech Republic

P-06-18**Searching for functions of cytokinins in the streptophyte alga *Klebsormidium nitens***

Klaus von Schwartzberg¹, Sebastian Bartels¹, Hong Zhou¹, David Kopečný²

¹Biocenter Klein Flottbek, University of Hamburg, Hamburg, Germany; ²Department of Protein Biochemistry and Proteomics, Centre of the Region Haná, Faculty of Science, Palacký University, Olomouc, Czech Republic



REGISTRATION

Registration Hours

Registration desk is located on the first floor of the hotel Vienna House Diplomat Prague****

Saturday, June 30, 2018	16:00-20:00
Sunday, July 1, 2018	08:00-18:00
Monday, July 2, 2018	08:00-18:00
Tuesday, July 3, 2018	08:30-16:00
Wednesday, July 4, 2018	08:30-17:00
Thursday, July 5, 2018	08:30-15:30

On-site Registration Fee

Delegate	650 €
Student	380 €
Accompanying person	120 €

Registration fees include 21% VAT.

Regular/ Student's Registration Fee Includes:

- Admission to the scientific symposium programme including the poster sessions and the exhibition
- Symposium materials
- Coffee-breaks during the Symposium
- Lunches during the Symposium
- Welcome Cocktail and Farewell Party

Accompanying Person's Fee Includes:

- Sightseeing Tour of Prague - Prague Castle, July 3, 2018, 9:30
- Welcome Cocktail and Farewell Party

Badges

DELEGATE	STUDENT
SPONSOR/EXHIBITOR	ACCOMPANYING PERSON
GUEST	ORGANIZER



INSTRUCTIONS FOR SPEAKERS

Presentation Upload

We kindly ask you to bring your presentation on USB (memory stick) to the main **Symposium Hall**, at **least 30 minutes** prior the start of your session. In this hall the technicians will upload your presentation into the PC. If you would like to work on your presentation and if you need any help with editing your presentation you can use the Presentation Editing Room. Your own laptop can be used only if inevitable and after the discussion with the technicians in the main **Symposium Hall**.

Presentation Editing Room

All speakers are asked to upload their presentation in the main **Symposium Hall** however you can also use the **Presentation Editing Room** (located in room Paris) for editing your presentation.

Opening Hours of the Presentation Editing Room

Saturday, June 30, 2018	16:00–20:00
Sunday, July 1, 2018	08:00–18:00
Monday, July 2, 2018	08:00–18:00
Tuesday, July 3, 2018	08:30–16:00
Wednesday, July 4, 2018	08:30–17:00
Thursday, July 5, 2018	08:30–15:30



POSTER PRESENTATIONS

Poster Area

Posters will be on display in the Poster Area, which is located in the Cracow I and Cracow II Halls.

Posters mounting

Saturday, June 30, 2018	16:00–20:00
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Posters removal

Thursday, July 5, 2018	15:00–16:00
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BOOK OF ABSTRACTS

To be downloaded on the [Symposium website](#).

Password: `acpd-prague-2018`



SOCIAL EVENTS

Welcome Cocktail

Date: July 1, 2018
Time: 18:00-20:00
Place: Vienna House Diplomat Prague****

Symposium Dinner

Date: July 3, 2018
Time: 19:30-23:30
Place: Old Town Hall
Address: Staroměstské náměstí 1/3, Praha 1
Price: EUR 45/ per person
No transportation will be provided

Old Town Hall

The Old Town Hall was established in 1338 as the seat of the Old Town administration. The oldest part of the complex consists of a beautiful Gothic tower with a bay chapel and a unique astronomical clock – known as the Orloj – where, every hour between 9 am and 11 pm, the twelve apostles appear. The Gothic Revival eastern wing of the Town Hall was destroyed during the Prague Uprising on May 8, 1945 and was never rebuilt. The dinner will take place in two historical halls – Brožík Hall and Jiřík Hall. Participants of the evening are honoured to dine in those historical halls which are not usually opened to such as activities.



Farewell Party

Date: July 5, 2018
Time: 17:00-19:30
Place: Kaiserstejn Palace
Address: Malostranské náměstí 23/37, Praha 1
No transportation will be provided

Kaiserstejn Palace

Baroque building in the middle of the Lesser Town Square is used nowadays as a venue for different cultural and social events. Previously it was owned by family Petzold. Ema Destinnová or Joachim Barrande used to stay here.





SIGHTSEEING TOUR

Prague Castle – walking tour

Did you know that according to the Guinness book of records, the Prague Castle is considered the large in the world? Join us on a tour of the castle's Gothic, Renaissance, Baroque and Roman history and architecture.

In the Castle, you will enjoy a visit to the Cathedral of St. Vitus, the Roman Basilica of St. George and the Golden Lane where, according to a tradition, alchemists from the Middle Ages tried to create gold and the Philosopher's Stone for the Emperor Rudolph II, and formerly home to Franz Kafka. From the Prague Castle you can admire a beautiful view of Prague.

Date: July 3, 2018

Time: 09:30–12:30 (3 hours)

Meeting point: Vienna House Diplomat Prague****

Tour end: Vienna House Diplomat Prague****

Price: 32 EUR per person **(free for registered accompanying persons)**

Tour includes: English speaking guide, one Prague Castle circle (Old Royal Palace, Basilica of St. George, St. Vitus Cathedral, Rosenberg Palace and Golden Lane)

No transfer will be arranged





INTERNET

Free Wi-Fi will be available in the symposium venue.

Network name: Diplomat by Vienna House

Password: no password



GOOD TO KNOW

Climate

The climate is a mixture of ocean and continental influences. The month of July is characterized by gradually rising daily high temperatures, with daily highs increasing from 20°C to 25°C over the course of the month, exceeding 28°C. The average probability that some form of precipitation will be observed in a given day is 60%, with little variation over the course of the month. Throughout July, the most common forms of precipitation are moderate rain, thunderstorms, and light rain.

You can find the current weather at <http://www.weather.com/>

Currency and Banking

Czech Crowns are the official currency in the Czech Republic. Foreign currency exchange is available at Václav Havel Airport Prague and at most hotels, banks and exchange offices throughout the city. International credit cards are accepted for payment in hotels, restaurants and shops. Paying by cash in Euro is also possible in some restaurants and shops.

For the official exchange rates on the website of the www.cnb.cz.

Electricity

The Czech Republic uses a 230 volt 50 Hz system. Sockets are the standard European type (two-prong round pin plugs with a hole for a male grounding pin are standard). To use electric appliances from your country you may need a special voltage converter with an adapter plug.

Time Zone

The Czech Republic one hour ahead of GMT and at the time of the symposium this will be GMT +2 due to Summer Daylight Saving Time.

Official Language

The official language of the Conference is English. The speeches will be translated into the Czech language.

Programme Changes

The organisers cannot assume liability for any changes in the programme due to external or unforeseen circumstances.



Liability and Insurance

The organisers do not accept responsibility for individual medical, travel or personal insurance. All participants are strongly advised to take out their own personal insurance before travelling to the Conference.

Health Care

Vaccinations are not required to enter the Czech Republic. An individual travel and health insurance is recommended.

Shopping

Most shops in Prague are open from 9:00 to 18:00, Monday till Saturday. Shops in the city centre are usually open from 9:00 to 20:00, Monday till Sunday.

Tipping

Service is usually included in the bill in bars and restaurants but tips are welcome. If you consider the service good enough to warrant a tip, we suggest about ten percent.

Czech language

Even though at all the hotels, shops and restaurants in Prague are English spoken, we include a few basic Czech words and sentences that can be useful during your stay in Prague.

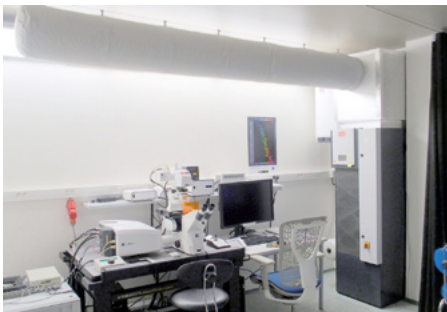
Slovník	Vocabulary
Ahoj	Hi
Dobrý den	Hello
Dobrý večer	Good evening
Dobrou noc	Good night
Jak se máte?	How are you?
Mám se dobře.	I am fine.
Děkuji	Thank you.
Kolik to stojí?	How much is it?
Nechceš jít na pivo?	Would you like to go for a beer?
Pivo	Beer
Jeden	One
Dva	Two
Tři	Three
Deset	Ten



NOTES

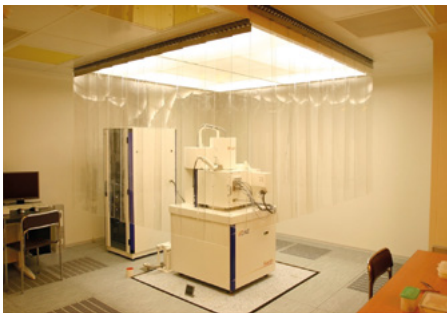
A series of horizontal dotted lines for taking notes.

Precision climate control for laboratories, clean rooms and server rooms



Institute of Experimental Botany CAS

Laboratory of Confocal Microscopy – STULZ precision air-conditioning units, for optimal supply air distribution are used textile diffusers Clean room with close temperature control ± 1 °C.



Institute of Physics CAS

Centre for Electron Beam Nanolithography – several clean rooms in cascade from Class 100 000 up to laminar flow room Class 100. Close environment control: temp $\pm 0,5$ °C (during standard operation reached $\pm 0,2$ °C), ± 5 % relative humidity, max. noise level 40 dB(A), no additional electromagnetic field dissipation.

Wide range of products, team of qualified engineers,
customized solution, 20 years experience.



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