



8th Conference of the Polish Society of Experimental Plant Biology
Communication in plants: from cell to environment

12-15 September 2017, Białystok, Poland

CONFERENCE PROGRAMME

TUESDAY, 12 SEPTEMBER 2017

12:00-18:00 Registration and poster set up

13.00 – 15.00 PSEPB committee meeting

16:00-18:00 Welcome Reception

18:30-20:30 *Białystok city tour*

WEDNESDAY, 13 SEPTEMBER 2017

09:00-18:00 Registration

9:30-10:00 Opening Ceremony, Welcome speeches

10:00-11:45 Keynote Lectures:

10:00-10:45 **František Baluška** (Germany): Neurobiology view of higher plants

10:45-11:30 **Thorsten Nürnberger** (Germany): NLP cytolysins - microbial virulence factors and host defense activators

11:30-12:00 Coffee break

Session 1: Signalling in plant development and metabolism

Chair: Iwona Cierieszko and Halina Gabryś

12:00-13:30 Invited Speakers:

12:00-12:30 **Sjef Smeekens** (Netherlands): The ribosome as a metabolite sensor: Sucrose regulated protein translation and the control of metabolism and growth in plants

12:30-13:00 **John Lunn** (Germany): A tale of two sugars – the role of trehalose 6-phosphate in sucrose signalling and homeostasis

13:00-13:30 **Jose J. Sanchez Serrano** (Spain): Stem cell renewal or differentiation: a plant's perspective for a crucial decision

13:30-13:45 Coffee break

Session 1: Signalling in plant development and metabolism

Chair: Iwona Cierieszko and Halina Gabryś

13:45-14:15 **Ewa Mellerowicz** (Sweden): Plant responses to altered cell wall structure

Selected talks

14:15-14:30 Dorota Kwiatkowska (Poland): Layers of growing plant cell walls differ in stiffness and/or in-plane tensile stress

14:30-14:45 Milena Kulasek: Expression of Auxin Response Factors (ARF) ARF2, ARF3, ARF4 changes over space and time in yellow lupine

14:45-15:00 Julia Zdzieszńska: The role of CUL4-related proteasomal proteolysis in germinating *Arabidopsis thaliana* seeds

15:00-15:15 Tomasz Sarnowski: The SWI/SNF ATP-dependent chromatin remodelling complexes are involved in the control of metabolic processes in plants and human

15:15-16:15 Lunch provided

Session 2: Symplasmic communication and plant development

Chair: Ewa U. Kurczyńska and Paweł Sowiński

16:15-17:30 Invited Speakers:

16:15 – 16:45 Yoselin Benitez-Alfonso (United Kingdom): New insights on the regulation of plasmodesmata cell walls and their consequences for plant development

16:50 – 17:20 Manfred Heinlein (France): Plant-virus interactions involved in viral cell-to-cell spread.

17:30-17:50 Coffee break

Session 2: Symplasmic communication and plant development

Chair: Ewa U. Kurczyńska and Paweł Sowiński

17:50-19:00 Selected talks

17:50 – 18:05 Justyna Wróbel-Marek: Symplasmic communication during development of *Cyathea delgadii* somatic embryos

18:05 – 18:20 Katarzyna Sokołowska: The conducting parenchyma cells – an important element of symplasmic transport inside feather moss stems

18:20 – 18:35 Łucja Kowalewska: 3D visualization of thylakoid membrane development

18:40 – 19:00 Beata Zagórska-Marek: Chiral events in the development of *Physcomitrella* gametophores.

19:00-20:00 Poster sessions 1-2

20:15-22:00 General Assembly for PSEPB Members

THURSDAY, 14 SEPTEMBER 2017

Session 3: Plants and abiotic stresses

Chair: Agnieszka Sirko and Danuta M. Antosiewicz

9:00-10:30 Invited Speakers:

9:00 – 9:30 Céline Masclaux-Daubresse (France): Autophagy machinery, leaf senescence and nitrogen remobilization in *Arabidopsis thaliana*

9:30 – 10:00 John Hammond (United Kingdom): The role of DNA methylation in regulating plant adaptations to low phosphate availability.

10:00 – 10:30 Ann Cuyper (Belgium): Metal-induced oxidative challenge: from perception and signal transduction to plant acclimation and growth.

10:30 – 12:00 Selected talks

10:30 – 10:45 Arita Kuś: Multicolour FISH-based analysis of the origin of mutagen-induced micronuclei in *Brachypodium distachyon*.

10:45 – 11:00 Rafał Krela: Amino acids motifs responsible for activity properties of S1/P1-like nucleases involved in plant PCD.

11:00 – 11:15 Katarzyna Sala: Apoplast markers of cell differentiation – spatio-temporal analysis of the autografted *Arabidopsis* seedlings.

11:15 – 11:30 Magdalena Krzesłowska: Plant cell wall in Pb accumulation and tolerance.

11:30 – 11:45 Anna Ihnatowicz: Genome-wide association studies of *Arabidopsis thaliana* responses to disturbed iron and manganese homeostasis.

11:45 – 12:00 Aneta Piechalak: Chelant-assisted phytoextraction and accumulation of Zn by *Zea mays*.

12:00 -12:15 Coffee break

Session 3: Plants and abiotic stresses

Chair: Agnieszka Sirko and Danuta M. Antosiewicz

12:15-13:30 Selected talks

12:15 – 12:30 Jarosław Tyburski: Transcriptomic response to a salt stress and salt shock in leaves of sugar beet (*Beta vulgaris*, ssp *vulgaris*) and its halophytic ancestor, *Beta vulgaris* ssp. *maritima*.

12:30 – 12:45 Wojciech Rymaszewski: Coupling high-throughput phenotyping and gene expression analyses to study the natural variation of morpho-physiological and molecular responses to long-term water deficit in *Arabidopsis thaliana*.

12:45 – 13:00 Damian Gruszka: Barley brassinosteroid mutants provide an insight into phytohormonal homeostasis under control condition and during plant reaction to drought stress.

13:00 – 13:15 Michał Rurek: Mitochondrial response to the various water deficiency conditions in three cultivars of cauliflower.

13:15 – 13:30 Marzena Kurowska: The tonoplast intrinsic protein (TIP) gene subfamily of aquaporins in barley: structural features and expression profiles during drought stress.

13:30-14:30 Lunch provided

14:30-15:00 Guest Lecture:

Andrew V. Schally, Ph.D., MDhc (Multi), DSc hc (Head of the Endocrine, Polypeptide and Cancer Institute, South Florida, Professor Division of Hematology/Oncology, Sylvester Professor, Sylvester Comprehensive Cancer Center (SCCC), Miller School of Medicine, University of Miami, FL - **Nobel Prize in Physiology or Medicine, 1977**) - **Hypothalamic hormones: from neuroendocrinology to therapy of cancer and other diseases**

Session 4: Signalling in biotic interactions

Chair: Jacek Hennig and Iwona Morkunas

15:15-17:15 Invited Speakers:

15:15-15:45 Sophien Kamoun (United Kingdom): The long reach of the effectors of plant associated organisms

15:45-16:15 Saskia Hogenhout (United Kingdom): How bacteria hack plant development to attract insect vectors

16:15-16:45 Christina Kühn (Germany): Plant factors affecting the symbiosis between arbuscular mycorrhizal fungi and the host plant root system

16:45-17:15 **Michał Jasiński** (Poland): Cytokinin transporter from the ABC family in legume rhizobia symbiosis

17:15 -17:30 Coffee break

17:30-18:30 Selected talks

17.30 –17.45 **Ton Timmers** (France): Nod factor perception and signal transduction during endosymbiotic interactions of *Medicago truncatula*

17.45-18.00 **Paweł Bednarek** (Poland): Analysis of *gstu13* plants uncouples two putative signaling functions of indole glucosinolate metabolism products in flg22- triggered immune responses in *Arabidopsis*

18.00-18.15 **Agnieszka Woźniak** (Poland): The sequence of enhanced generation of *Pisum sativum* defense signalling molecules in response to pea aphid infestation

18.15-18.30 **Justyna Nawrocka** (Poland): The role of metabolic components, volatile compounds, PR proteins and mechanical strengthening in multilayer protection of cucumber plants against *Rhizoctonia solani* induced by *Trichoderma atroviride* TRS25

18:30-18.45 **Zhimin Yin** (Poland): miRNAs and mRNA targets in potato-PVY pathosystems

18:45-19:45 Poster sessions 3-4

20:30-24:00 Conference Party

FRIDAY, 15 SEPTEMBER 2017

Session 5: Epigenetics and chromatin regulation in plant development

Chair: Piotr Ziółkowski and Marta Koblowska

9:00-10:30 Invited Speakers:

9:00-9:30 **Ian Henderson** (United Kingdom): Chromatin and recombination landscapes in plant genomes

9:30-10:00 **Dao-Xiu Zhou** (France): Interplay between chromatin modification and metabolism to regulate plant growth and tolerance to stress

10:00-10:30 **Artur Jarmołowski** (Poland): Coupling of RNA Polymerase II transcription elongation with pre-mRNA splicing

10:30-10:45 Coffee break

10:45-12:00 Selected talks

10:45-11:00 **Marta K. Koblowska** (Poland): HD2C histone deacetylase binds to SWI/SNF chromatin remodeling complex and act together to regulate *Arabidopsis* heat stress response

11:00-11:15 **Tomasz Bieluszewski** (Poland):: The impact of mutations affecting NuA4 histone acetyltransferase on the life cycle of *Arabidopsis thaliana*

11:15-11:30 **Maciej Lirski** (Poland): Linker histones act as powerful lock of heterochromatin activity in *Arabidopsis*

11:30-11:45 **Weronika Sura** (Poland): H2A.Z impact on gene expression in plant response to stress

11:45-12:00 **Karolina Chwiałkowska** (Poland): Progressive methylome modulation during water-deficiency conditions in barley is coupled with transcriptomic responses

12:00-12:10 Coffee break

Session 6: NO life without RNS/ROS

Chair: Agnieszka Gniazdowska and Jolanta Floryszak-Wieczorek

12:10-14:00 Invited Speakers:

12:10-12:35 **Francisco J. Corpas** (Spain): Nitric oxide in plant peroxisomes under stress conditions

12:35-13:05 **Marek Petřivalský** (Czech Republic): S-nitrosylation as a key component of nitric oxide redox signalling in plant development

13:05-13:35 **Kim H. Hebelstrup** (Denmark): An overview of the control of NO by phytooglobins in plant development and stress responses

13:35-14:00 **Magdalena Arasimowicz-Jelonek** (Poland): New insight into the fate of peroxynitrite in plants

14:00-15:00 Lunch provided

Session 6: NO life without RNS/ROS

Chair: Agnieszka Gniazdowska and Jolanta Floryszak-Wieczorek

15:00-16:00 Selected talks

15:00-15:15 **Jarosław Gzyl** (Poland): Nitric oxide status in roots of soybean seedlings exposed to cadmium

15:15-15:30 **Urszula Krasuska** (Poland): Hydrogen cyanide mimics nitric oxide cellular mode of action

15:30-15:45 **Marta Gietler** (Poland): Proteomic analysis of S-nitrosylated proteins in wheat seedlings with different dehydration tolerances

15:45-16:00 **Marlena Stawska** (Poland): Interactions between light induced signal and reactive oxygen species during light dependent germination of *Arabidopsis thaliana* seeds

16:00-16:20 Coffee break

16:20-17:30 Poster sessions 5-6

17:30-18:00 Closing Ceremony

16 SEPTEMBER 2017

One day trip, to choose from:

- **Białowieża** (Białowieża National Park, lunch)
- **Supraśl** (Museum of Icons, Orthodox Monastery) – Kruszyniany (mosque, lunch in Tatar Jurt – Tatar cuisine)

USEFUL INFORMATION

Conference venue:



University of Białystok,
Faculty of Biology and Chemistry
Institute of Biology
Ciolkowskiego 1J, 15-245 Białystok
POLAND
Lecture hall - 2003



Photo: University of Białystok

Contact to Conference Organisers:

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(only finance)

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