

# PHYTOHORMONES AND RELATED SUBSTANCES, BIOSTIMULANTS AND PLANT BIOTECHNOLOGIES 2025

(May 25 - 27, Červenohorské sedlo)

## --- SCIENTIFIC PROGRAM ---

SUNDAY, May 25, 2025

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### Session 1 (14:00-15:00)

**Kateřina Cermanová**

*Polyamine and ethylene biosynthesis dynamics in Arabidopsis thaliana and Solanum lycopersicum*

**Jakub Lemberk**

*From organelle to organelle – plant hormone distribution at the subcellular level*

**Natálie Zemánková**

*Analysis of the barley and its mutant chlorina f2<sup>f2</sup> chloroplast proteome*

**Beata Budíková**

*Study of salicylic acid metabolism in plants using mass spectrometry*

--- Coffee Break ---

### Session 2 (15:30-16:45)

**Ludmila Včelařová**

*The endoplasmic reticulum: Master regulator of auxin metabolism and transport*

**Hana Bendová**

*Optimization of the direct injection method for the determination of auxins in plant material using HPLC-MS*

**Ivan Filipský**

*Effects of smoke-water, seaweed extract, vermicompost leachate, and their synergistic interaction on maize germination*

**Jan Strnad**

*Development of coupled gas chromatography and photoacoustic detection methods for measuring endogenous ethylene in plants*

**Barbora Slovjaková**

*Sugar flow under control: A new era in agriculture*

--- Dinner ---

### Evening program (19:30-21:00)

Guest Presentation (in Czech)

**Barbora Jakešová: Základy zdravého stravování aneb jak se projíst ke zdraví**



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MONDAY, May 26, 2025

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*Session 1 (8:45-10:00)*

**Markéta Fuksová**

*Development of a new generation of plant growth retardants*

**Beáta Kubaláková**

*Technologically efficient approaches to the preparation of cytokinin conjugates with anti-senescence effects and potential application in human skin models*

**Helena Kordinová**

*From SH-SY5Y to stem cells: towards better screening of neuroprotectants*

**Chiara Miele**

*Exploring the potential of microalgal extracts for mitigating salt stress in tomato plants*

*Sponsor presentation: **KRD***

--- Coffee Break ---

*Session 2 (10:30-11:45)*

*Sponsor presentation: **NGS Geeks***

**Marek Bařina**

*3H-pyrazolo[4,3-f]quinoline-based compounds as novel kinase inhibitors against FLT3-driven leukemia*

**Dominika Trofimenková**

*Novel selenium-based compounds and their role in cytoprotection against ferroptosis*

**Kristýna Šomodiová**

*The study of the effects of heavy metals on the astrocyte-like cells*

*Sponsor presentation: **Chromservis***

--- Lunch ---

*Free Time (14:00-18:00)*

--- Dinner ---

*Evening program (19:30-21:00)*

*Film projection*



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TUESDAY, May 27, 2025

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*Session 1 (8:45-10:00)*

**David Šimek**

*Transcriptomic analysis of aquaporin gene expression in response to various light conditions and abiotic stress during tomato seed germination*

**Petra Bublavá**

*Interaction of light and ABA signaling in plant responses to salt stress*

**Tereza Mikšteinová**

*Using hormone biosensors to investigate the response to osmotic stress*

**Jakub Bělíček**

*Regulation of ALDH6 enzymes across species: structural insights and effects of protein interaction*

*Sponsor presentation: **BioRad***

--- Coffee Break ---

*Session 2 (10:30-11:30)*

**Anita Ament**

*GH3-Mediated Auxin Modulation Fine-Tunes Seed Germination through Hormonal Cross-Talk*

**Veronika Kábrtová**

*Cytokinin down-regulates photosystem II photochemistry during prolonged darkness in a phytochrome B-dependent manner*

**Martin Hudeček**

*Equilibrative Nucleoside Transporter 1 drives cytokinin riboside uptake in Arabidopsis roots*

**Mersa Darbandsari**

*Effect of stress on ethylene and other phytohormone levels in Arabidopsis*

--- Lunch ---



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**SMART**

Plant Biotechnology  
for Sustainable Agriculture

*The conference is supported from European Regional Development Fund-Project  
„SMART Plant Biotechnology for Sustainable Agriculture“ (No. CZ.02.01.01/00/23\_020/0008497).*



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