



We would like to thank the participants, speakers, sponsors and partners for joining us.

The event gathered 80 participants from 17 countries, including 20% early-career scientists. 70% of participants presented their work through short talks and poster presentations.

The topics covered included:

- Gene editing in crop breeding
- Plant diseases and pests
- Biologicals in agriculture
- Biotechnology for smart agriculture
- Indoor farming
- Waste utilisation

MAIN WORKSHOP SPONSORS



Co-funded by
the European Union



Institute of Experimental Botany
of the Czech Academy of Sciences



Palacký University
Olomouc

PLATINUM SPONSOR



ELSEVIER

GOLD SPONSOR



PHOTON
SYSTEMS
INSTRUMENTS

SILVER SPONSOR



Rovensa
Next

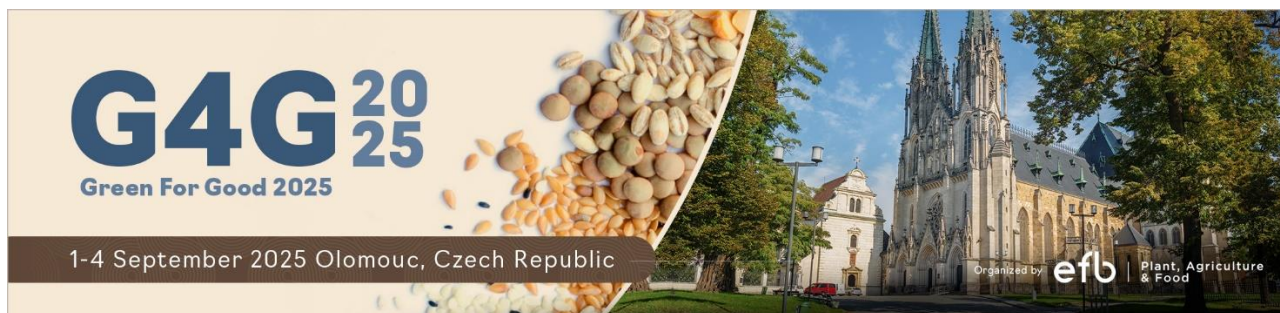
BRONZE SPONSOR



CONFERENCE PARTNER



Embassy
of the Federal Republic of Germany
Prague



Monday 1st September

12:00 18:00 Registration: [*The Arts Centre of Palacký University Olomouc*](#)
([*GPS 49.595260, 17.255508*](#))

OPENING SESSION

16:00 16:30 **Welcome by organizers:** [*Ivo Frébort*](#) (CATRIN UP/EFB), [*Jaroslav Doležel*](#)
(IEB ASCR/TANGENC Project), *et al.*

16:30 17:15 **OPENING LECTURE: Bioengineering for future crops,** [*Tomáš Čermák*](#)
([*Ball Horticultural Company*](#), USA)

17:15 18:00 **PLENARY LECTURE: Towards the functional analysis of barley and its
wild relatives,** [*Aleš Pečinka*](#), (IEB ASCR, Czechia)

18:00 21:00 *Welcome reception (on-site)*

Tuesday 2nd September

SESSION 1

INNOVATIVE PLANT BREEDING, Chair: [Jaroslav Doležal](#) (IEB ASCR, Czechia)

09:00 09:30 Keynote lecture: **Optimizing canopy photosynthesis in barley: identifying optimal allelic variants within the [BEST-CROP project](#)**, [Paolo Pesaresi](#) (University of Milan, Italy)

09:30 09:45 Flash talks **Group 1**

09:45 10:00 Short talk: **Widespread horizontal gene transfer in Hordeum**, [Marek Szecówka](#), (IEB ASCR, Czechia)

10:00 10:15 Short talk: **What's broken needs fixing: *in-vivo* analysis of DNA repair in plants using microirradiation and time-lapse imaging techniques**, [Michal Franek](#) (CEITEC, Czechia)

10:15 10:45 *Coffee break*

SESSION 2

DISEASE AND PEST SHIFTS, Chair: [Gary Vallad](#) (University of Florida, USA)

10:45 11:15 Keynote lecture: **Early blight disease - new global threats with natural breeding solutions**, [Remco Stam](#) (Kiel University, Germany)

11:15 11:30 Flash talks **Group 2**

11:30 11:45 Short talk: **Suck it up! A new spin on bioaerosol collection for tracking plant pathogens**, [Gary Vallad](#) (University of Florida, USA)

11:45 12:00 Short talk: **Effect of 1,3-diaminopropane priming on somatic memory, photosynthesis, and stomatal dynamics under abiotic and biotic stress**, [Francisco Ignacio Jasso Robles](#) (CATRIN UP, Czechia)

12:00 13:30 *Lunch, networking, poster viewing*

SESSION 3

BIOLOGICALS IN AGRICULTURE, Chair: [Sebastian Wendeborn](#) (FHNW, Switzerland)

13:30 14:00 Keynote lecture: **Priming technologies for sustainable agriculture**, [Vasileios Fotopoulos](#) (Cyprus University of Technology)

14:00 14:15 Flash talks **Group3**

14:15 14:30 Short talk: **Training soil microbiomes for sustainable agriculture**, [Adam Ossowski](#) (University of Malaga, Spain)

14:30 14:45 Short talk: **Elevated cytokinin levels can increase thermotolerance of rice plants**, [Sylva Přerostová](#) (IEB ASCR, Czechia)

14:45 15:15 *Coffee break*

POSTER SESSION

15:15 16:30 Poster viewing (odd numbers) and discussion

THE EXHIBITION SUSTAINABILITY & CIVILISATION (<https://medialogue.cz/expositions/103>)

16:30 17:30 *Guided walk, The Upper Square in Olomouc* ([GPS 49.594032, 17.251519](#))

Wednesday 3rd September

SESSION 4		INDUSTRY MEETS ACADEMIA I – BIOTECHNOLOGICAL SOLUTIONS FOR SMART AGRICULTURE , Chair: Riccardo Aversano (<i>University of Naples, Italy</i>)
09:00	09:30	Keynote lecture: CRISPRing barley for sustainable beer production , Goetz Hensel (<i>HHU Düsseldorf, Germany</i>)
09:30	09:45	Short talk: Sunlit insights: transferring hyperspectral imaging from lab to field , Ivan Kashkan (<i>Photon System Instruments, Czechia</i>), GOLD SPONSOR
09:45	10:00	Short talk: From algae to crops: tracing gene regulatory elements in plant genomes with GOLEM , Petra Procházková Schrumpfová (<i>Masaryk University, Czechia</i>)
10:00	10:15	Short talk: Bacterial membranes for smart agriculture , Sagar Sanjay Arya (<i>CATRIN UP, Czechia</i>)
10:15	10:45	<i>Coffee break</i>
SESSION 5		INDUSTRY MEETS ACADEMIA II – EU REGULATION OF NEW GENOMIC TECHNIQUES , Chair: Goetz Hensel (<i>HHU Düsseldorf, Germany</i>)
10:45	11:15	Keynote lecture: EU-SAGE contribution in the current development on the regulation on plants obtained by certain new genomic techniques , Oana Dima (<i>EU-SAGE, Belgium</i>)
11:15	11:30	Short talk: Public perception of plant breeding techniques for the sustainable production of feed and food in the Czech Republic , Ivo Frébort (<i>CATRIN UP, Czechia</i>)
11:30	12:00	Panel debate of the participants
12:00	13:30	<i>Lunch. networking, poster viewing</i>
SESSION 6		INDUSTRY MEETS ACADEMIA III - INNOVATIONS IN INDOOR FARMING - ENHANCING AGRICULTURAL EFFICIENCY , Chair: Lydia Ugena (<i>Rovensa Next, Spain</i>)
13:30	14:00	Keynote lecture: From challenges to solutions: innovative strategies in agriculture , Camila Levy (<i>Rovensa Next, Spain</i>), SILVER SPONSOR
14:00	14:10	Short talk: Presentation of local hi-tech greenhouse growers , Tereza Schlattauerová (<i>AGRO Haná, Czechia</i>)
14:10	14:20	Short talk: Presentation of local Cannabis growers , Adam Nastoupil (<i>Geschur Medical, Czechia</i>)
14:20	14:35	Short talk: Soil as a living system: advancing agroecological resilience with LANDLIFE , Cristina Sudiro (<i>Landlab, Italy</i>)
14:35	14:50	Short talk: Opportunities for Agro-Food sciences in Horizon Europe programme , Nad'a Koníčková (<i>Technology Centre Prague, Czechia</i>)
14:50	15:20	<i>Coffee break</i>
POSTER SESSION		
15:20	17:00	Poster viewing (even numbers) and discussion
18:00	21:00	<i>Networking with refreshments (on-site)</i>

Thursday 4th September

SESSION 7

WASTE UTILISATION, Chair: [Wolfram Brück](#) (HES-SO Valais Wallis, Switzerland)

09:00	09:30	Keynote lecture: VALUABLE - Valorisation of fungal biomass using novel enzymatic technology , Michael Paper (Technical University of Munich, Germany)
09:30	09:45	Short talk: Precision fermentation of agro-industrial by-products , Wolfram Brück (HES-SO Valais Wallis, Switzerland)
09:45	10:00	Short talk: Recycling Annurca apple peel through plant cell cultures for functional food applications , Carmen Laezza (University of Naples Federico II / Immunoveg s.r.l., Italy)
10:00	10:30	Coffee break

AGRICULTURAL CROPS FOR THE 21ST CENTURY (German Embassy Highlight Event)

Chair: [Filip Rambousek](#) (German Embassy Prague)

10:30	11:15	Keynote lecture: How can we improve the acclimation capacity of plants to environment and climate change? Karin Krupinska (Kiel University)
11:15	12:00	Panel debate with invited guests: Aleš Pečinka , (IEB ASCR, Czechia), Gary Vallad (University of Florida, USA)

CLOSING SESSION

12:00	12:30	Closing remarks
-------	-------	-----------------