

## July 3, Sunday

### 14.00 - 17.00 Registration and poster set up:

University of Latvia, Academic Centre, the House of Nature (Riga, Jelgavas street 1)

**17.30-20.30 Welcome reception:** Radisson Blu Daugava Hotel Riga, (Rīga, Kugu street 24)

## July 4, Monday

### 7:30 - 8:30 Registration and Poster setup:

University of Latvia, Academic Centre, the House of Nature (Riga, Jelgavas street 1)

### OPENING SESSION

#### 8:30 - 9:00 Representatives of

**IBGS13 LOC, IBGS IOC, the Institute of Agricultural Resources and Economics, the Latvia Ministry of Agriculture, University of Latvia, Ministry of Education and Science**

**The barley genome: from reference genome to structure and function** (Chair **Nils Stein**, Gatersleben, DE)

**9:00 - 9:30 Keynote: Martin Mascher**, IPK Gatersleben, Germany - *Pangenomics in barley and beyond*

**9:30 - 9:50 Einar Baldvin Haraldsson** - A new genomic resource for crop improvement: the complete reference genome of *Hordeum erectifolium* using long-read genomic and transcriptomic sequencing

**9:50 - 10:10 Alessandro Tondelli** - A gene duplication at the B1p1 locus is associated with the black grain phenotype in barley

**10:10 - 10:30 Martin Kovacic** - Developing an atlas of gene expression during barley grain development

### 10:30 - 11:00 Coffee break

**Biotic stresses under Climate Change** (Chair **Robert S. Brueggeman**, Washington State University, USA)

**11:00 - 11:30 Keynote: Brian J. Steffenson**, Department of Plant Pathology, University of Minnesota, USA - *Pan-genome enabled disease resistance gene discovery in wild barley*

**11:30 - 11:50 Karl Effertz** - Rpt5 encodes a receptor-like protein that provides the broadest and most effective net form net blotch (*Pyrenophora teres* f. *teres*) resistance in barley

**11:50 - 12:10 Molly Bergum** - Functional diversification of a barley receptor kinase involved in

immunity to wheat stripe rust

**12:10 - 12:30 Ping Yang** - Convergent mechanisms of host susceptibility factors assisting genetic improvement of the bymovirus resistance in barley and wheat

### 12:30 - 13:30 Lunch break

**Abiotic stresses under Climate Change** (Chair **Ernesto Igartua**, EEAD-CSIC, ES)

**13:30 - 14:00 Keynote: Sergey Shabala**, School of Agricultural Science, University of Tasmania, AU - *Cell-based phenotyping approach for improving abiotic stress tolerance in barley*

**14:00 - 14:20 Eyal Fridman** - Needles in the stressed hay: Can wild barley alleles contribute to yield abiotic tolerance?"

**14:20 - 14:40 Agata Dszakowska-Golec** - The transcriptome landscape of barley under drought stress reveals insights into the role of alternative splicing in adaptation to stress

**14:40 - 15:00 Maitry Paul** - Drought response and recovery in barley: a role for autophagy and its link to retrotransposon expression dynamics.

### 15:00 - 15:30 Coffee break

**Barley breeding and New Breeding Techniques (NBTs): a way forward?** (Chairs **Wendy Harwood**, John Innes Centre, UK; **Kevin Smith**, University of Minnesota, USA)

**15:30 - 16:00 Keynote: Dr. Jochen Kumlehn**, IPK Gatersleben, DE - *Site-directed genome modification in barley - methods and applications*

**16:00 - 16:20 Julian Garcia-Maldonado** - Genomic-assisted sparse multi-location testing to increase genetic gain in barley

**16:20 - 16:40 Tom Lawrenson and Wendy Harwood** - New tools for barley genome editing

**16:40 - 17:00 Alan Schulman** - Current status and future prospects for NBT regulation in Europe

**17:00 - 18:00** Poster session I  
Coffee&Snaks

**18.00 - 19.30 EVENING WORKSHOP 1. Funding of a barley research: further strategic directions** (moderator **Alan Schulman**) *Summary on the funding picture going forward beyond the Horizon 2020 and some strategic directions defined by European Plant Science Organisation (EPSO); Barley Community Initiative* (moderator **Robbie Waugh**):

*introduce and discuss the Barley Community Initiative (BCI: <https://wheat.pw.usda.gov/GG3/content/initiative-re-galvanise-international-barley-research-community>) and discuss how our community could actively develop from where we are now. A number of us could certainly give overviews of what's been done so far, stimulate discussion and seek commitment from a 'broader church' than currently subscribe.*

### Dinner (on your own)

## July 5, Tuesday

**Barley breeding: success stories** (Chair **Ahmed Jahoor**, Nordic Seed, DK)

**8:30 - 9:00 Keynote: Birger Eriksen**, Sejet Plant Breeding, DK - *Barley cultivar development in Europe - success in the past and possible changes in the future*

**9:00 - 9:20 Alexander Strube** - New developments in IP in plant breeding - a golden or a dark age for innovation?

**9:20 - 9:40 Emmanuelle Dyrzka** - Breeding for the producibility of female parental lines in hybrid barley

**9:40 - 10:00 Pernille Merete Sarup** - Putting millions of markers and thousands of yield plots to the test: Genomic prediction of 2-row spring barley

### 10:00 - 10:30 Coffee break

**Genetics and breeding of biomass (Resources use efficiency/RUE)** (Chair **Dr. Klaus Pillen**, Martin Luther University, Halle-Wittenberg, Halle, DE)

**10:30 - 11:00 Keynote: Daniel Julio Miralles**, University of Buenos Aires, AR - *What were the physiological attributes modified by the breeders*

**11:00 - 11:20 Lana Shabala** - Physiological and agronomical aspects of potassium use efficiency (KUE) in barley

**11:20 - 11:40 Paolo Pesaresi** - The barley mutant happy under the sun 1 (hus1): An additional contribution to pale green crops

**11:40 - 12:00 Sonia Negrao** - Diving into the genetic diversity of the European Heritage Barley collection (ExHiBiT)

### 12:00 - 13:00 Lunch break

**Barley end uses: from food and feed to malting, brewing, and novel products** (Chairs **Kim Hebelstrup**, Aarhus University, DK; **Christoph**

**Dockter**, Carlsberg Research Laboratory, DK)

**13:00 - 13:30 Keynote: Henrik Brinch Pedersen**, Aarhus University, DK - *New potentials of the barley grain*

**13.30 - 13.50 Markus Herz** - Assessment of winter barley for feeding quality traits to breed for improved protein utilization in pig nutrition

**13.50 - 14.20 Keynote: Christoph Dockter**, Carlsberg Research Laboratory, DK - *Acceleration with a purpose - ultrafast barley trait development for sustainable beer production*

**14:20 - 14.40 Leona Leišová-Svobodová** - Molecular markers for malting barley breeding for PGI Czech beer

### 14.40 - 15.10 Coffee break

### SPONSOR PRESENTATION

**15.10 - 15.40 Miguel Sanchez-Garcia** - The Global Barley Breeding Program in the new OneCGIAR: New strategies to breed barley in and for the Developing World

**Flash & Dash presentations** (Chair **Outi Manninen**, Boreal Plant Breeding Ltd., FI)

**15:40 - 17:00** Short oral presentation from students and postdocs

**17:00 - 18:00** Poster session II  
Coffee&Snaks

**18.00 - 19.30 EVENING WORKSHOP 2. Barley genetic resources. Welcome** (Chair. **Dr. Søren K. Rasmussen**, University of Copenhagen, DK) **Jan T. Svensson**, Nordic Genetic Resource Center, Sweden: *Barley collection at NordGen* **Andrea Visioni**, Rabat, Morocco: *Barley collection at ICARDA* **Nils Stein**, Gatersleben, Germany: *Barley Collection at IPK* **Ernesto Igartua Arregui**, CSIC, Zaragoza, Spain: *Mediterranean landraces*, **GENDIBAR** **Fluturë Novakazi**, SLU, Sweden: *Origin of Icelandic barley germplasm* **Chengdao Li**, Murdoch University, Australia: *Barley germplasm in Australia*

## July 6, Wednesday

**Genetic and database resources: harnessing diversity** (Chairs **Dr. Robbie Waugh**, James Hutton Institute, Dundee, Scotland, UK; **Dr. Mats Hansson**, Lund University, SW)

**8:30 - 9:00 Keynote: Nils Stein**, IPK Gatersleben, DE - *At the dark side of barley diversity - the gap between discovery and user-friendly access*

**9:00 - 9:20 Asis Shrestha** - The double round

robin population unravels the genetic architecture of grain size in barley

**9:20 - 9:40 Outmane Bouhlal** - CGIAR BARLEY BREEDING TOOLBOX: A diversity panel to facilitate breeding and genomic research in the Developing World

**9:40 - 10:00 Ronja Wonneberger**  
- Comprehensive expression atlas of six tissues coupled with high density SNP data provides a resource for studies and characterization of European two-rowed spring barleys and identified a major haplotype switch on chromosome 5H

#### 10.00 - 10.30 Coffee break

**Genetic and database resources: harnessing diversity** (continued)

**10.30 - 10.50 Agatha Walla** - Quest for an elusive developmental gene in barley

**10.50 - 11.10 Congcong Jiang** - A reference-guided TILLING by amplicon-seq platform supports forward and reverse genetics in barley

**Morphology, phenology, and development** (Chair **Dr. Laura Rossini**, University of Milan, Milan, IT)

**11.10 - 11.40 Keynote: Maria von Korff Schmising**, Institute of Plant Genetics, Heinrich-Heine-University, Düsseldorf, DE - *Inflorescence development and floral abortion under stress in barley*

**11:40 - 12.00 Ravi Koppolu** - Spikelet determinacy as a factor for improving grain yield potential in Triticeae crops

#### 12:00 - 13.00 Lunch break

**Morphology, phenology, and development** (continued)

**13.00 - 13.20 Luke Ramsay** - An induced mutation in HvRecq14 increases overall recombination and restores fertility in a barley HvMlh3 mutant background

**13.20 - 13.40 Ivan Acosta** - The role of auxin in the starch production of barley pollen

**13.40 - 14.00 Vanda B. Marosi** - Systematic Comparison of Barley and Wheat Transcriptomes Reveals Evolutionary Insights of Flower Development

**14.00 - 14.20 Silvio Salvi** - Dissecting barley root development and tropism by cloning chemical-induced mutants

#### 14:20 - 15:00 Coffee break

**Baltic and Nordic barley: a regional perspective** (Chair **Søren K. Rasmussen**, University of Copenhagen, DK)

**15.00 - 15.30 Keynote: Therése Bengtsson**, Swedish University of Agricultural Sciences, Alnarp, SE - *Together we are stronger- United forces to promote Nordic pre-breeding in spring barley*

**15.30 - 15.50 Alge Leistrumaite** - Barley in Lithuania: a century long breeding story

**15.50 - 16.10 Mara Bleidere** - Centenary retrospect and outlook of spring barley breeding and research in Latvia

**16.10 - 16.30 Magnus Göransson** - What is unique about Icelandic barley?

**16.30 - 18.00 Poster session III**  
Coffee&Snaks

**18.00 - 19.30 EVENING WORKSHOP 3.**  
*Honoring barley research coryphaei (moderator Mats Hansson); IBGS Business session: IBGS13 statistics&venue of the next symposium (moderators representative from LOC and IOC)*

**Dinner (on your own)**

### July 7, Thursday

**8.00 - 8.15 Boarding busses.** University of Latvia, Academic Centre, the House of Nature (Riga, Jelgavas street 1)

**8.15 - 10.00 Travel to the field day:** Rīga - Priekulji

**IBGS13 Barley Field Day**

**10.00-10.30** Arrival to the field, refreshments

**10.30- 12.30** Tour through the nurseries in groups

**12.30-13.00** Free time to go back to the most interesting material

#### 13.00 - 14.00 Lunch break

**14.00 - 18.00 Excursion:** guided town tour in Cēsis

**18.00 - 22.00 Farewell party:** the Castle of Cēsis

**22.00 - 24.00 Returning to Riga**

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