

German Plant Breeding Conference

28.02. – 02.03.2018



Program Leveraging the value of genomic information

Wednesday, February 28, 2018

12:50 **Opening**

Session 1: Conservation and Characterization of Plant Genetic Resources

Chair: Andreas Graner

13:00 **Susan McCouch**

CU, Ithaca, New York, US
The future of gene banks

13:40 **Frank Begemann**

BLE, Bonn, GE
Implications of the access and benefit-sharing framework on research and breeding in Germany

14:05 **Nils Stein**

IPK, Gatersleben, GE
Genebank Genomics – “collecting stamps” or service to research and application?

14:30 **Frank Ordon**

JKI, Quedlinburg, GE
Harnessing genetic diversity for improving resistance in cereals

14:55 **Coffee Break and Poster Session**

16:00 **Artem Pankin**

HHU, Duesseldorf, GE
Exploring allelic diversity in wild and cultivated barley genomes: selection scans and domestication model

Session 2: Trait Mapping/Gene Discovery (I)

Chair: Milena Ouzunova

16:20 **Rod Snowdon**

JLU, Giessen, GE
To see or not two C? That is the QTL!

16:45 **Maria von Korff Schmising**

HHU, Duesseldorf, GE
Identification and functional characterisation of novel genes controlling inflorescence development in barley

17:10 **Hermann Bürstmayr**

BOKU, Vienna, AT
Genomics assisted improvement of *Fusarium* head blight resistance in bread wheat, durum wheat and triticale

17:35 **Coffee Break and Poster Session**

Evening lecture

18:30 **Achim Dobermann**

RR, Harpenden, UK
Challenges and opportunities of crop improvement – an agronomist's view

19:10 **Reception**

Thursday, March 1, 2018

Session 2: Trait Mapping/Gene Discovery (II)

Chair: Maria von Korff Schmising

8:30 **Brande Wulff**

JIC, Norwich, UK
Harnessing genetic variation in the immune system of wild wheats

09:10 **Rajeev Varshney**

ICRISAT, Patancheru, IN
4Gs in crop breeding

09:50 **Ivan F. Acosta**

MPIPZ, Cologne, GE
Molecular mechanisms of anther opening in barley

10:10 **Smit Shah**

CAU, Kiel, GE
Identification and characterization of flowering time genes in oilseed rape through mutant and transcriptome analysis

10:30 **Coffee Break and Poster Session**

Session 3: Yield potential

Chair: Christian Jung

11:30 **Robert Sharwood**

ANU, Canberra, AU
Improving crop productivity by building resilience to future climates through exploiting natural diversity in photosynthetic CO₂ fixation

12:10 **Thorsten Schnurbusch**

IPK, Gatersleben, GE
Genetic regulation of spike shape and grain number in temperate cereal crops

12:35 **Felix Seifert**

UHH, Hamburg, GE
Small RNA-based prediction of hybrid performance in maize

12:55 **Andreas Maurer**

MLU, Halle/Saale, GE
Footprints of selection derived from heterozygosity patterns in a barley NAM population

13:15 **Lunch**

Session 4: Advances in Breeding

Chair: Jochen C. Reif

14:45 **Chris-Carolin Schön**

TUM, München, GE
Main drivers of genomic prediction accuracy in plant populations

15:25 **Albrecht Melchinger**

UH, Hohenheim, GE
Libraries of doubled haploid lines from landraces: a new tool for seed banks, breeding and genetic research

16:05 **Delphine van Inghelandt**

HHU, Duesseldorf, GE
Prospects and potential uses of genomic prediction of key performance traits in tetraploid potato

16:25 **Annaliese Sarah Mason**

JLU, Giessen, GE
Allohexaploid *Brassica*: problems, processes and potential

16:45 **Coffee Break**

Session 5: Biotechnology (I)

Chair: Jochen Kumlehn

17:30 **Paul Christou**

UdL, Lleida, ES
High carotenoid cereals: A plant biotechnology product portfolio for human and animal health and nutrition

18:10 **Poster Session & GPZ Membership Assembly**

19:45 **Conference Dinner**

Friday, March 2, 2018

Session 5: Biotechnology (II)

Chair: Jochen Kumlehn

08:30 **Christian Jung**

CAU, Kiel, GE
Increasing genetic variation in rapeseed: a critical assessment of random mutagenesis and CRISPR/Cas triggered mutagenesis

08:55 **Götz Hensel**

IPK, Gatersleben, GE
Generation of new barley mutant alleles of LIPOXYGENASE 1 using CRISPR RNA/Cas9-endonuclease technology

Session 6: Future Challenges

Chair: Martin Ganal

09:15 **Edward Souza**

Bayer Crop Science, Beaver Crossing, Nebraska, US
Genomics enabled breeding 2.0: incremental or disruptive?

09:55 **Paul Schulze-Lefert**

MPIPZ, Cologne, GE
Plant microbiota assembly and functions in plant health

10:35 **Coffee Break**

11:20 **Thomas Altmann**

IPK, Gatersleben, GE
Plant phenotyping reveals genetic and physiological factors of plant performance and is a powerful tool for deep characterization of plant genetic resources

11:45 **Karin Iris Köhl**

MPI-MP, Potsdam, GE
Can omic marker-assisted selection replace phenotyping in drought stress experiments in potato breeding?

12:05 **Poster Awards**

Closing Lecture

12:25 **Ed Buckler**

USDA-ARS, Ithaca, New York, US
On the road to Breeding 4.0: Filtering through the good, the bad, and the boring of crop quantitative genomic variation

13:05 **Closing Remarks**

13:15 **Afternoon Program**

Excursion to IPK Gatersleben visiting the Genebank, Plant Phenotyping Systems or Sequencing platform and the European Wheat Breeding Center Gatersleben/BAYER AG

17:00 **Ending in Gatersleben**

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Science For A Better Life



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We are looking forward to welcome you in Wernigerode.