

PRELIMINARY PROGRAMME OF THE “BOTANIKERTAGUNG 2017”

Chairperson of Symposia

Dirk Albach – Institute of Biology and Environmental Sciences, University of Oldenburg

Wolfgang Bilger – Institute of Botany, CAU Kiel

Daguang Cai – Institute of Phytopathology, CAU Kiel

Alexandra Erfmeier – Institute of Ecosystem Research, CAU Kiel

Barbara Halkier – Department of Plant & Environmental Sciences, University of Copenhagen, DK

Klaus Humbeck - Institute of Biology, University of Halle-Wittenberg

Regine Jahn – Botany Garden and Botany Museum Berlin-Dahlem, FU Berlin

Poul Erik Jensen – Department of Plant & Environmental Science, University of Copenhagen, DK

Christian Jung - Institute of Plant Breeding, CAU Kiel

Frank Kempken - Institute of Botany, CAU Kiel

Wiebke Kirleis - Institute of Prehistoric and Protohistoric Archaeology, CAU Kiel

Wolfgang Kreis - Pharmaceutical Biology, University of Erlangen-Nürnberg

Peter Kroth – Department of Biology, University of Konstanz

Dario Leister – Department of Biology I – Botany, LMU Munich

Karl H. Mühling – Institute of Plant Nutrition, CAU Kiel

Dietrich Ober - Institute of Botany, CAU Kiel

Welmoud Out - Department of Archaeological Science & Conservation, Moesgaard Museum/Aarhus University, DK

Michael Broberg Palmgren - Department of Plant & Environmental Science, University of Copenhagen, DK

Ole Pedersen - University of Copenhagen, DK

Mathias Pribil - Department of Plant & Environmental Science, University of Copenhagen, DK

Thorsten Reusch – Marine Ecology, Geomar Kiel

Margret Sauter - Institute of Botany, CAU Kiel

Dirk Selmar – Institute of Applied Plant Biology, Technical University Braunschweig

Eva Stukenbrock - Institute of Botany, CAU Kiel

Andreas Weber – Institute of Plant Biochemistry, Heinrich Heine University Düsseldorf

PL=Plenary Lectures

SUNDAY, September 17

13:00 Symposium in Memory of Diter von Wettstein

16:00 Registration

18:00 Come together

MONDAY, September 18

8:00 Registration

9:00 Welcome

9:30 Thorsten Reusch, Geomar Kiel, Germany (PL-1)

A return to the sea: evolutionary adaptations in marine angiosperms or seagrasses

10:10 Arthur Grossmann, Stanford University, USA (PL-2)

*Discovering novel photosynthetic functions using the green alga *Chlamydomonas reinhardtii**

10:50 Coffee Break

11:20 Regine Kahmann, MPI Marburg, Germany (PL-3)

The secretome of smut fungi: core effectors and their function

12:00 Julia Bailes-Serres, University of California, Riverside, USA (PL-4)

Exploration of integrative gene regulation in response to water extremes in rice

12:50 Lunch

13:50 **POSTER SESSION 1**

15:00 **SYMPOSIA**

Interactions with the Environment – Biotic Interactions

Chairs: Margret Sauter, Wolfgang Bilger, Ole Pedersen

Ole Pedersen, University of Copenhagen, Denmark

Low and high oxygen stress in plant tissue during flooding

Organization and Expression of Genomes

Chair: Klaus Humbeck

Ortrun Mittelsten-Scheid, Gregor Mendel Institute Molecular Plant Biology, Vienna,

Austria – *Stability and dynamics of chromatin*

Zofia Szwejkowska-Kulinska, AMU Poznan, Poland

The role of microRNAs in tillering regulation in barley plants

Algae and Seagrasses - Molecular Aspects of Environment-driven Reactions in Algae

Chair: Peter Kroth

Peter Kroth, University of Konstanz, Germany

Molecular Responses in diatoms

Claudia Büchel, University of Frankfurt, Germany
CryP, an unusual photoreceptor in diatoms

17:00 Coffee Break

17:30 **SYMPOSIA**

Interactions with the Environment – Abiotic Stress

Chairs: Eva Stukenbrock, Daguang Cai
Alga Zuccaro, University of Cologne, Germany
Plant immunity impacting beneficial interactions

Evolution

Chair: Eva Stukenbrock
Laura Rose, University of Düsseldorf, Germany – *Interplay of Phytophthora, microRNAs, and regulation of resistance genes in tomatoes*

Algae and Seagrasses – Ecology and Evolution of Marine Macrophytes

Chair: Thorsten Reusch
Florian Weinberger, Geomar Kiel, Germany – *Stress resistance selection in an invasive seaweed*

20:00 **Public Lecture:** Andreas Graner, IPK Gatersleben, Germany
Können wir mit unseren Nutzpflanzen in 20 Jahren noch die Welt ernähren?

TUESDAY, September 19

8:00 Steve Long, University of Illinois, USA (PL-5)
Increasing crop productivity by engineering improved photosynthetic efficiency

8:40 Beat Keller, University of Zurich, Switzerland (PL-6)
Molecular and evolutionary analysis of the wheat-powdery mildew interaction

9:20 Eva Stukenbrock, CAU Kiel, Germany (PL-7)
Genetic variation, recombination and adaptation of fungal pathogens in managed and natural ecosystems

10:00 Coffee Break

10:20 Doris Wagner, Pennsylvania University, USA (PL-8)
Transcriptional and epigenetic regulation of developmental transitions

11:00 Liam Dolan, University of Oxford, UK (PL-9)
Development and evolution of land plant rooting systems

11:40 Ceremony of the Strasburger-, Pfeffer- and Wiehe-Awards

12:30 Lunch/Workshops:
Antibody Production & Western Blot – Joanna Porankiewicz-Asplund, Agrisera, Vännäs, Sweden
Next Generation Sequencing – Oliver Goldenberg, Illumina, San Diego, USA

CEUG - Controlled Environments for Plant Experiments – Karin Köhl, MPI Plant Physiology, Potsdam-Golm, Germany

13:30 **SYMPOSIA**

Photosynthesis/Primary Metabolism

Chairs: Mathias Pribil, Andreas Weber

Mathias Pribil, University of Copenhagen, Denmark – *Thylakoid membrane plasticity is required for optimal photosynthetic performance and plant fitness*

Andreas Weber, University of Düsseldorf, Germany

The evolution and function of C4 photosynthesis

Growth and Development – Organ Development

Chair: Margret Sauter

Frank Hochholdinger, University of Bonn, Germany

Genetic and genomic dissection of maize root development

Crop Plants – Archaeo-Botany: Domestication of Crop Plants

Chairs: Wiebke Kirleis, Welmoud Out

Martin Mascher, IPK Gatersleben, Germany

Barley diversity now and 6000 years ago

15:30 Coffee Break

16:00 **SYMPOSIA**

Crop Plants - Research for Breeding

Chair: Christian Jung

Maria von Korff-Schmising, University of Düsseldorf, Germany - *Genetic and environmental control of floret survival in barley*

Jochen Kumlehn, IPK Gatersleben, Germany

Genome engineering in crop plants - from site-directed mutagenesis to precise genome editing

Biotechnology – Synthetic Biology

Chair: Poul Erik Jensen

Poul Erik Jensen, University of Copenhagen, Denmark

Redirecting photosynthetic power by metabolic engineering

Cell Biology – Cell Trafficking and Signalling

Chair: Michael Broberg Palmgren

Anja Fuglsang, University of Copenhagen, Denmark - *Signalling peptides regulate the activity of plasma membrane H⁺ pumps via LRR receptor kinases*

18:00 Meetings of DBG-Sections

19:00 Meeting of DBG-Sections

Workshops:

Plant-Phenotyping – Roland Pieruschka, Research Center Jülich, Germany

Research for Breeding – Jon Falk, Saaten-Union-Biotec, Germany

The Molecular Tool Kit of Model Algae – Maria Mittag, University of Jena, Germany

Workshop 1 für NachwuchswissenschaftlerInnen – Esther Schwarz-Weigg,

Wissensworte, Mistelgau, Germany

WEDNESDAY, September 20

- 8:30 Michael Broberg Palmgren, University of Copenhagen, Denmark (PL-10)
Pumping with plant P-type ATPases
- 9:10 Henrik Vibe Scheller, University of California, Berkeley, USA (PL-11)
Improving cell wall composition of bioenergy crops
- 9:50 Coffee Break
- 10:20 Ian Small, University of Western Australia, Crawley, Australia (PL-12)
What do 1000+ plastid genomes tell us about plastid biogenesis?
- 11:00 Jeffrey L. Caplan, University of Delaware, Newark, USA (PL-13)
Stromule-directed chloroplast movement during plant immunity: does the tail wag the dog?
- 11:40 Sarah O'Connor, John Innes Institute, Norwich, UK (PL-14)
Understanding and elucidating specialized metabolism in medicinal plants
- 12:20 Lunch/Meeting of the DEUTSCHE BOTANISCHE GESELLSCHAFT (DBG)

14:00 SYMPOSIA

Growth and Development – Peptides and Hormones

Chair: Margret Sauter

Melinka Butenko, University of Oslo, Norway

Signalling pathways regulating floral abscission in Arabidopsis

Jürgen Kleine-Vehn, University of Vienna, Austria

Cell size determination and differential growth regulation

Cell Biology – Chloroplasts and Mitochondria

Chairs: Frank Kempken, Dario Leister

Dario Leister, LMU Munich, Germany

How do chloroplasts talk to the nucleus

Natural Compounds and Secondary Metabolism

Chairs: Barbara Halkier, Dietrich Ober, Wolfgang Kreis

Barbara Halkier, University of Copenhagen, Denmark - *How does a plant orchestrate distribution of its defense compounds?*

Meike Burow, University of Copenhagen, Denmark

Glucosinolate related regulatory links between metabolism and development

16:00 POSTER SESSION 2

18:00 Access to the Ship

19:00 Ship Cruising with Music on the Fjord of Kiel

THURSDAY, September 21

9:00 SYMPOSIUM/WORKSHOP

Biodiversity and Ecosystems

Chairs: Andrea Erfmeier, Dirk Albach

Helge Bruehlheide, IDIV Halle – *Mechanisms of biodiversity-ecosystem functioning: insights from Chinese subtropical forests*

Biotechnology – Applied Botany

Chairs: Karl H. Mühling, Dirk Selmar

Dirk Selmar, University of Braunschweig, Germany – *Horizontal natural product transfer – the relevance of the newly discovered phenomenon for applied botany*

Workshop 2 für NachwuchswissenschaftlerInnen – Esther Schwarz-Weigg, Wissenswerte, Mistelgau, Germany

11:00 Coffee Break

11:30 Christian Lexer, University of Vienna, Austria (PL-15)
Evolutionary genomics of plant speciation and species radiations: mind the gap

12:10 Paul Schulze-Lefert, MPI Köln, Germany (PL-16)
Reductionist approaches to explore plant microbiota functions

12:50 Poster Prices

13:30 Farewell

14:00 Lunch/Start of excursions

15:00 Workshop: Biodiversity Data in Ecology and Biogeography – Alexandre Antonelli and Alexander Ziska, University of Gothenburg, Sweden