GATERSLEBEN LECTURE

Speaker: **Prof. Dr. Maria von Korff**
Institute of Plant Genetics,
Heinrich-Heine-University,
Cluster of Excellence on Plant Sciences (CEPLAS)
Duesseldorf, Germany

Title: **Inflorescence development and floral abortion under stress in barley**

Time: **Tuesday, April 25, 2023, 2 pm**

Place: VCS Zoom: https://ipk-gatersleben-de.zoom.us/j/67341060821?pwd=cklZNHhLSTBQb25nMmU4NjAxNDBIQT09
Meeting-ID: 673 4106 0821 Kenncode: 649510

Skype for Business: https://ipk-gatersleben-de.zoom.us/skype/67341060821

Abstract:
An increase in global average temperature and the occurrence of extreme temperature events threaten crop productivity worldwide. Abiotic stresses, such as heat and drought, are particularly critical during plant reproductive development and affect inflorescence development and morphology, flower fertility and seed set. Barley is characterized by a high degree of genetic diversity and plasticity in response to abiotic stresses. However, the genetic underpinnings of spike development in response to stress are not well understood. We aimed to identify natural genetic variation for developmental plasticity in response to stress in a germplasm collection of elite cultivars and landrace genotypes from the Middle East. We found that the developmental plasticity and spike development strongly differed between elite and landrace barley genotypes. Using global transcriptome profiling of developing shoot apical meristems under abiotic stress in genotypes with different stress responses we identified genes and gene networks controlling spike development, floret fertility and grain set under stress. We present and discuss the possible functions of these genes in controlling spike development and fertility in barley.

Education:

Oct 2005	PhD "Detection of QTL for agronomic traits and disease resistance in two advanced backcross populations derived from a wild barley accession (*Hordeum vulgare* ssp. *spontaneum*)", Prof. J. Léon, University of Bonn, Institute for Plant Breeding, Germany
1994-2000	Studies of Biology, Münster (G), Oxford (GB), Bayreuth (G), Diploma degree in Biology

Positions:

Since 2016	Professor (W2), Institute for Plant Genetics, Heinrich Heine University Düsseldorf, Germany
2013-2016	Junior Professor for Plant Genetics, Heinrich Heine University Düsseldorf, Germany
2008-2013	Research Group leader Max Planck Institute for Plant Breeding Research, Cologne, Germany
2006-2008	Postdoc at the International Center for Agricultural Research in the Dry Areas (ICARDA), Aleppo, Syria
2005-2006	Research Assistant at the Chair for Genetics, Institute for Biochemistry and Biology University of Potsdam, Germany
2001-2005	Research Assistant at the Chair for Plant Breeding, Institute of Crop Science and Resource Conservation INRES, Rheinische Friedrich Wilhelms University of Bonn, Germany
2001	Research Assistant at the International Center for Agricultural Research in the Dry Areas (ICARDA), Aleppo, Syria

Prof. Dr. Nils Stein *(Organizer)* **Prof. Dr. Thorsten Schnurbusch** *(Host)*