

# Einladung zum Pflanzenwissenschaftlichen Kolloquium

**Freitag, den 28. April, 12 c.t.**

Nussallee 4, Hörsaal Botanik

**Referent: Prof. Dr. John McKay**

*College of Agricultural Sciences, Colorado State University*

**Thema: „Genetics of adaptation to variable environments in crops and natural populations“**

The long-term goal of my research is to provide detailed functional knowledge of mechanisms and mutations regulating genotype by environment interactions underlying adaptation. I have largely focused on drought responses in plants, including water use physiology and the sensitivity of growth, fitness and yield to variation in available soil moisture. My study systems range from natural populations, to landraces to elite varieties of crops. My research combines field trials, high-throughput and detailed physiological screens in segregating families with statistical and evolutionary genomics to identify causal polymorphisms underlying differences in drought adaptation. We also use genome-wide polymorphism data to perform “selection scans”, such as Fst. For natural populations and landraces, we can also use historical climate or environment data to try to identify agents of natural selection. I will discuss ongoing research on several plant species and insights we have made on evolution and genetics.

**Diskussionsleitung:** Prof. Dr. Frank Hochholdinger, INRES - Crop Functional Genomics, Universität Bonn

Zu diesem Vortrag und zu einer evtl. Nachsitzung sind Sie herzlich eingeladen