Steve Babben, MSc

Education

Oct 2009 – Jan 2012 **Martin Luther University Halle-Wittenberg**
Master of Science, Crop Sciences
Halle (Saale), Germany

Master thesis Creation of a barley NAM population in the BC_1S_0 generation and their genetic characterization by using SSR marker

Oct 2006 – Sep 2009 **Martin Luther University Halle-Wittenberg**
Bachelor of Science, Agricultural Sciences
Halle (Saale), Germany

Bachelor thesis Candidate gene mapping of *Soilborne Cereal Mosaic Virus* (SBCMV) resistance in wheat

Research Experience

Oct 2015 – present **Research Associate**
Quint Lab
Martin Luther University Halle-Wittenberg, Institute of Agricultural and Nutritional Sciences
Halle (Saale), Germany

Jan 2012 – Sep 2015 **Research Associate**
Julius Kühn-Institut, Institute for Resistance Research and Stress Tolerance
Quedlinburg, Germany

Project Evaluation of wheat prebreeding germplasm for frost tolerance via a genome wide and candidate gene based approach: FROWHEAT.
Frost is an important abiotic factor limiting winter wheat (*Triticum aestivum* L.) production especially in parts of Eastern Europe and North America with continental climate. Frost stress affects plant growth and productivity by causing cellular damage, dehydration and reduced metabolism. In order to study frost tolerance of wheat on the gene level, an analysis of six groups of candidate genes is conducted. These groups include vernalization genes (*VRN*), tandem duplicated C-repeat Binding Factors (*CBF*), Inducers of *CBF* Expression (*ICE*) genes, 5A cold inducible genes (*Triticum aestivum* cold-regulated gene *Tacr7*, Defective embryo and meristem genes *Dem* and calcium-binding EF protein *Cab*), members of the cold-inducible dehydrin (*Dhn*) gene family and photoperiod response (*Ppd*) genes. For 23 candidate genes were developed specific primers, sequenced amplicons and identified polymorphisms in a set of 276 genotypes. Following an association genetics studies will be conducted based on phenotypic data on frost tolerance obtained in Germany and Russia.

Memberships in Scientific Societies

German Society for Plant Breeding (GPZ)

Journal Publications

Babben S, Perovic D, Koch M, Ordon F (2015) An Efficient Approach for the Development of Locus Specific Primers in Bread Wheat (*Triticum aestivum* L.) and Its Application to Re-Sequencing of Genes Involved in Frost Tolerance.
PLoS ONE 10: e0142746

Keilwagen J, Kilian B, Ozkan H, Babben S, Perovic D, Mayer KFX, Walther A, Poskar CH, Ordon F, Eversole K, Börner A, Ganal M, Knüpffer H, Graner A, Friedel S (2014) Separating the wheat from the chaff - A strategy to utilize plant genetic resources from ex situ genebanks.
Scientific Reports 4, 5231