

BEP - the Barley Epigenome Platform of the ScienceCampus Halle

Klaus Humbeck

Institute for Biology, Martin-Luther-University Halle-Wittenberg, Weinbergweg 10, D-06120 Halle, Germany

E-mail: klaus.humbeck@pflanzenphys.uni-halle.de

Plant development and responses to environmental stresses are based on coordinated reprogramming of gene expression. Recent findings show that epigenetic control levels play an important role in this process. Epigenetic control via dynamic and specific histone and DNA modifications affects chromatin structure at certain genes and thereby influences expression. The talk will focus on epigenetic control of normal and stress-induced leaf senescence as a

major developmental step, which determines yield in crop plants. Techniques to analyze local and global histone and DNA modifications will be presented. A novel project, the establishment of the Barley Epigenome Platform (BEP) at Martin-Luther University in cooperation with IPK Gatersleben, for analyses of genome-wide epigenetic mechanisms in crops will be presented. This project is funded by the ScienceCampus Halle.