

SFB 924-/BZR – Kolloquium

Thursday, September 22, 2022

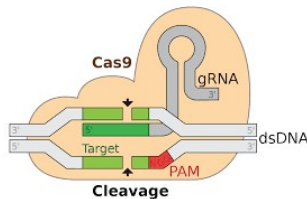
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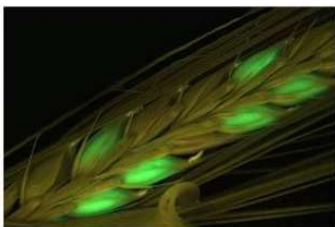
Dr. Jochen Kumlehn

Plant Reproductive Biology
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CAS endonuclease technology in crop plants – from site-directed mutagenesis towards more precise editing



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CGACAACCCGCAGGGCAAAGTCCCGGGC wt
CGACAACCCGCAGGGCAA-TCCCGGGC -1
CGACAACCCGCAGGGCAA-GTCCCGGGC -1
CGACAACCCGCAGGGCAA-TCCCGGGC -2
CGACAACCCGCAGGGC---TCCCGGGC -3
CGACAACCCGCAGG----GTCCCGGGC -4
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CGACAACCCGCAGGGCAAGATCCCGGGC +1
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Site-directed genetic engineering (genome editing) allow for the induction of genetic alterations at user-defined positions in the plant genome. In basic and breeding-oriented research, this technology opens up new possibilities for elucidating gene functions and improving plant traits.

The research group of Jochen Kumlehn establishes principles and methods of transgenesis and genome editing in cereals and dicotyledonous crop plants. His group also dissects and manipulates living plant cells, e.g. to generate fully homozygous lines from haploid cells. Sexual and asexual reproduction of plants, domestication, interactions between plants and pathogens, and the formation of yield components are among Dr. Kumlehns major biological questions. He will report on his application-oriented experimental approaches to improve plant performance.

Host: Prof. Dr. Stefanie Sprunck