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Salinity tolerance in barley during germination—homologs and potential genes

Key words: Genetics, Barley, Quantitative trait locus (QTL), Germination, Salinity tolerance, Homologous gene, Diversity

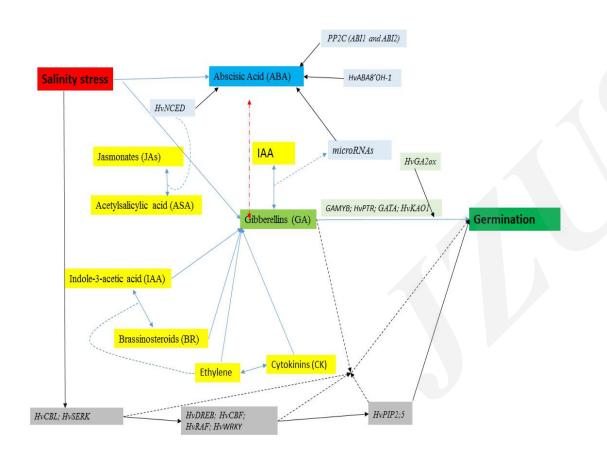
Review summary

In the paper we focused on salinity tolerance in barley during germination stage.

- Summarized reported quantitative trait loci (QTLs) and functional genes for salinity tolerance in barley.
- Blasted and mapped the homologs of candidate genes for salinity tolerance from *Arabidopsis*, soybean, maize, wheat and rice on the barley reference genome.
- Diversity of 3 salt tolerance genes in barley during germination, namely dehydration-responsive element binding (DREB) proteins, somatic embryogenesis receptor-like kinases and aquaporin genes, is discussed.

Key areas

Hormones and gene regulatory pathways in barley germinating under salinity stress



Hormones and genes regulating germination process play a role in salinity stress alleviation.

Mechanisms, indicators, signalling pathways, molecules, transcriptional regulation and gene expression were summarised for salinity tolerance during germination in barley.