

Dataset Dissertation- Unraveling the Resilience of *Salicornia europaea*: Physiological and Molecular Responses to Combined Environmental Stresses

The dataset contains the following files cited in the Dissertation Jordine (2025): “Unraveling the Resilience of *Salicornia europaea*: Physiological and Molecular Responses to Combined Environmental Stresses”.

File 1: Excel file with protein sequences used for phylogenetic analysis. Amino acid sequences of selected Angiosperm and Gymnosperm species.

File 2: Fasta file with ClustalOmega sequence alignment

File 3: Excel file with RNA Sequencing results for shoot data. The file contains all data raw and analyzed data of the RNAseq analysis. Sheets 'M1_Counts' and 'M1_filtered_Counts' contain raw and filtered read counts for each gene and condition. 'M1_CPM' and 'M1_TPM' include normalized counts for each gene and condition. Sheet 'M2_FC' and 'M2_FC_Anno' harbor calculated log2FoldChanges, baseMeans, lfcSE, pvalue and padj for each gene and condition and their annotation. Loadings from the PCA analysis are summarized in sheet 'M3_loading_table'. Sheet 'M3_FC_Venn_Additive' includes additional information from Venn and additive analysis.

File 4: Excel file with RNA Sequencing results for root data. The file contains all data raw and analyzed data of the RNAseq analysis. Sheets 'M1_Counts' and 'M1_filtered_Counts' contain raw and filtered read counts for each gene and condition. 'M1_CPM' and 'M1_TPM' include normalized counts for each gene and condition. Sheet 'M2_FC' and 'M2_FC_Anno' harbor calculated log2FoldChanges, baseMeans, lfcSE, pvalue and padj for each gene and condition and their annotation. Loadings from the PCA analysis are summarized in sheet 'M3_loading_table'. Sheet 'M3_FC_Venn_Additive' includes additional information from Venn and additive analysis.

File 5: Excel file with hypoxia and salt responsive genes used for additive effect analysis

For citation use the following DOIs:

Unraveling the Resilience of *Salicornia europaea*: Physiological and Molecular Responses to Combined Environmental Stresses

DOI: 10.18154/RWTH-2025-11026

<https://doi.org/10.18154/RWTH-2025-11026>

Dataset Dissertation - Unraveling the Resilience of *Salicornia europaea*: Physiological and Molecular Responses to Combined Environmental Stresses

DOI: 10.18154/RWTH-2026-00483

<https://doi.org/10.18154/RWTH-2026-00483>