

A THC-dominant chemovar



CBD-dominant chemovar



B



C

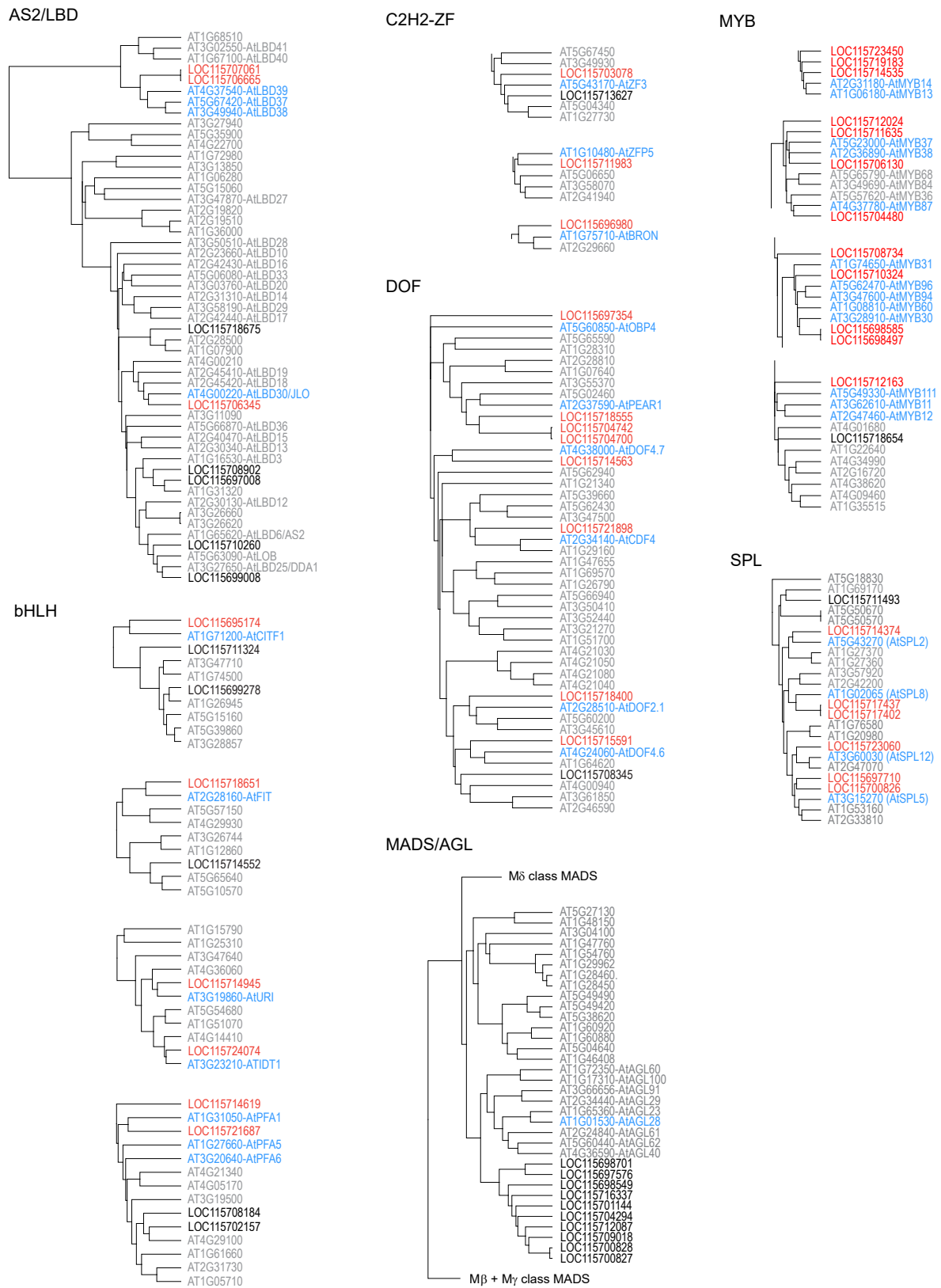


D



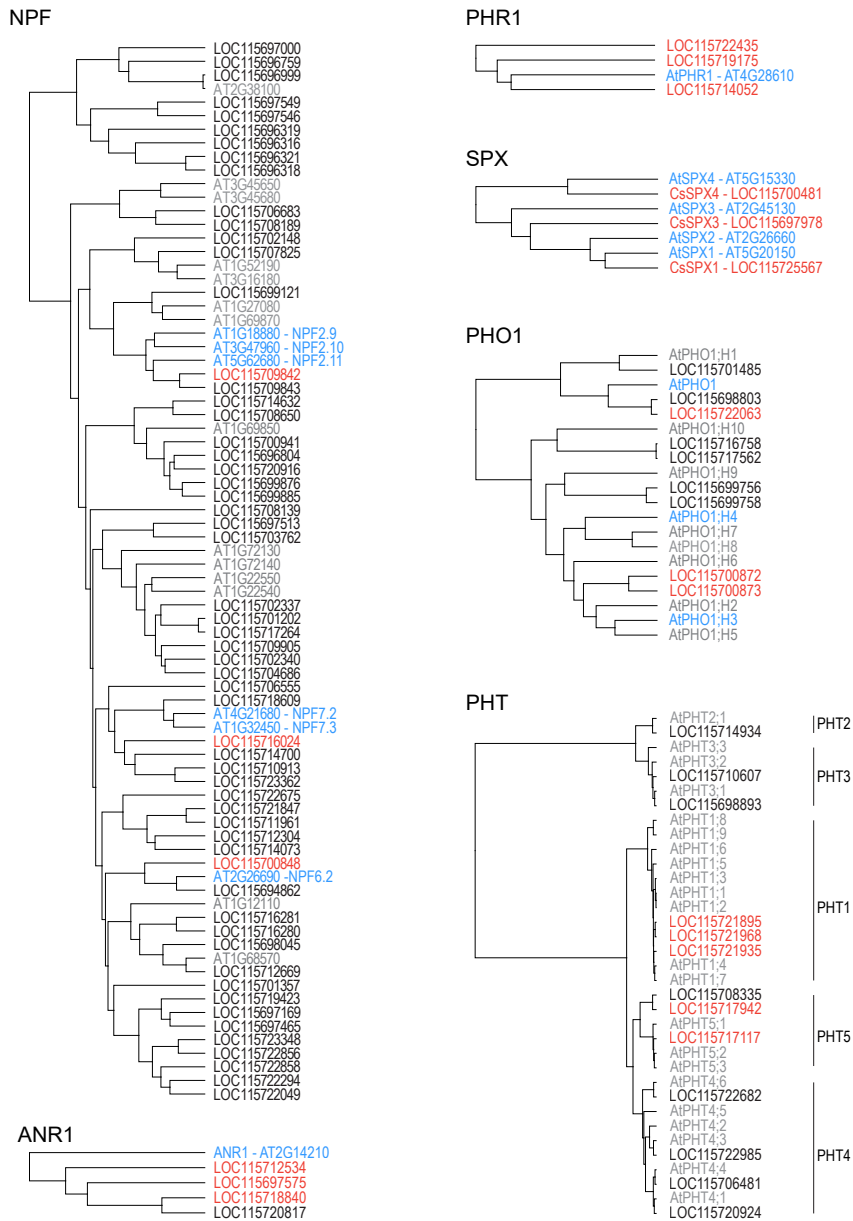
Supplementary Figure 1: At flower maturity, the two chemovars differ in their overall growth habit.

(A) Whole plant anatomy for the two chemovars. The THC-dominant chemovar shows an erect, compact habit, while the CBD-dominant chemovar has a weeping habit with long branches. (B) The racemose inflorescence of the THC-dominant chemovar is densely packed. The CBD-dominant chemovar shows a looser stacking of individual flowers. (C) In contrast to the THC-dominant chemovar, fan leaves of the CBD-dominant chemovar are yellow with purple intercostal areas. (D) The THC-dominant chemovar has a well developed root system with long lateral and fine roots, while roots of the CBD-dominant chemovar are less developed.



Supplementary Figure 2: Sequence comparisons for Cannabis and Arabidopsis transcription factors

Protein sequences for members of the transcription factor families shown in Figure 8B were aligned before tree construction (see methods for details). Transcription factors discussed in the main text are highlighted in red for cannabis and in blue for Arabidopsis, while all others are in black and grey text, respectively. Due to number of family members and page size limitation, only relevant subclades are shown for the bHLH, C2H2-ZF, MADS/AGL and MYB families. Abbreviations for transcription factor families: AS2/LBD, ASYMMETRIC LEAVES 2/LOB DOMAIN; bHLH, BASIC HELIX-LOOP-HELIX; bZIP, BASIC LEUCINE-ZIPPER; C2H2-ZF, C2H2-LIKE ZINC FINGER; C3H-ZF, CYS3-HIS ZINC FINGER DOMAIN; DOF, DNA BINDING WITH ONE FINGER; MADS/AGL, MADS-BOX/AGAMOUS-LIKE; MYB, MYB DOMAIN; SPL, SQUAMOSA PROMOTER BINDING-LIKE.



Supplementary Figure 3: Sequence comparisons for Cannabis and Arabidopsis genes involved in nitrate and phosphate assimilation

Protein sequences for members of the indicated gene families and shown in Figure 9 were aligned before tree construction (see methods for details). Genes discussed in the main text are highlighted in red for Cannabis and in blue for Arabidopsis, while those not discussed are indicated by black and grey text, respectively. Abbreviations for gene families: ANR1, ARABIDOPSIS NITRATE REGULATED 1; NPF, NITRATE TRANSPORTER 1 (NRT1)/PEPTIDE TRANSPORTER (PTR) FAMILY; PHO1, PHOSPHATE 1; PHR1, PHOSPHATE STARVATION RESPONSE 1; PHT, PHOSPHATE TRANSPORTER; SPX, SPX DOMAIN PROTEIN .