

Article

# BnA.JAZ5 Attenuates Drought Tolerance in Rapeseed through Mediation of ABA–JA Crosstalk

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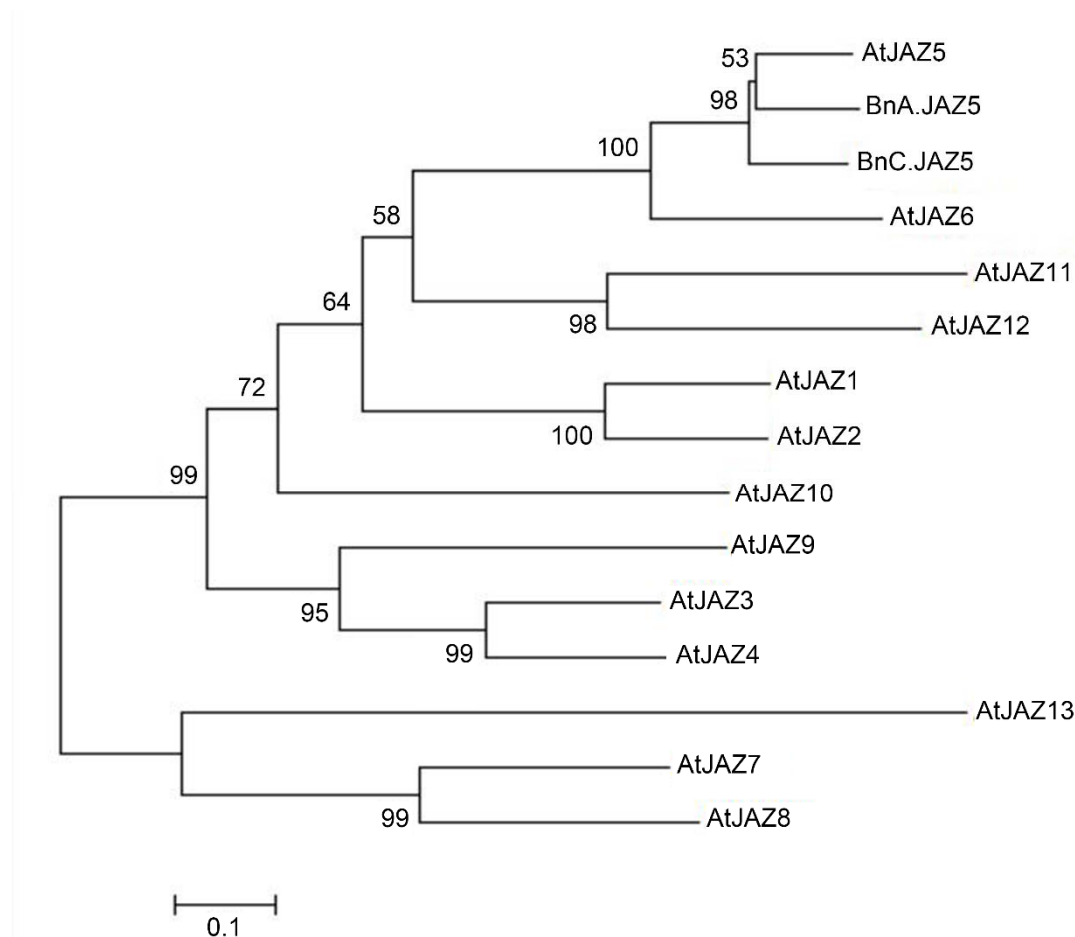
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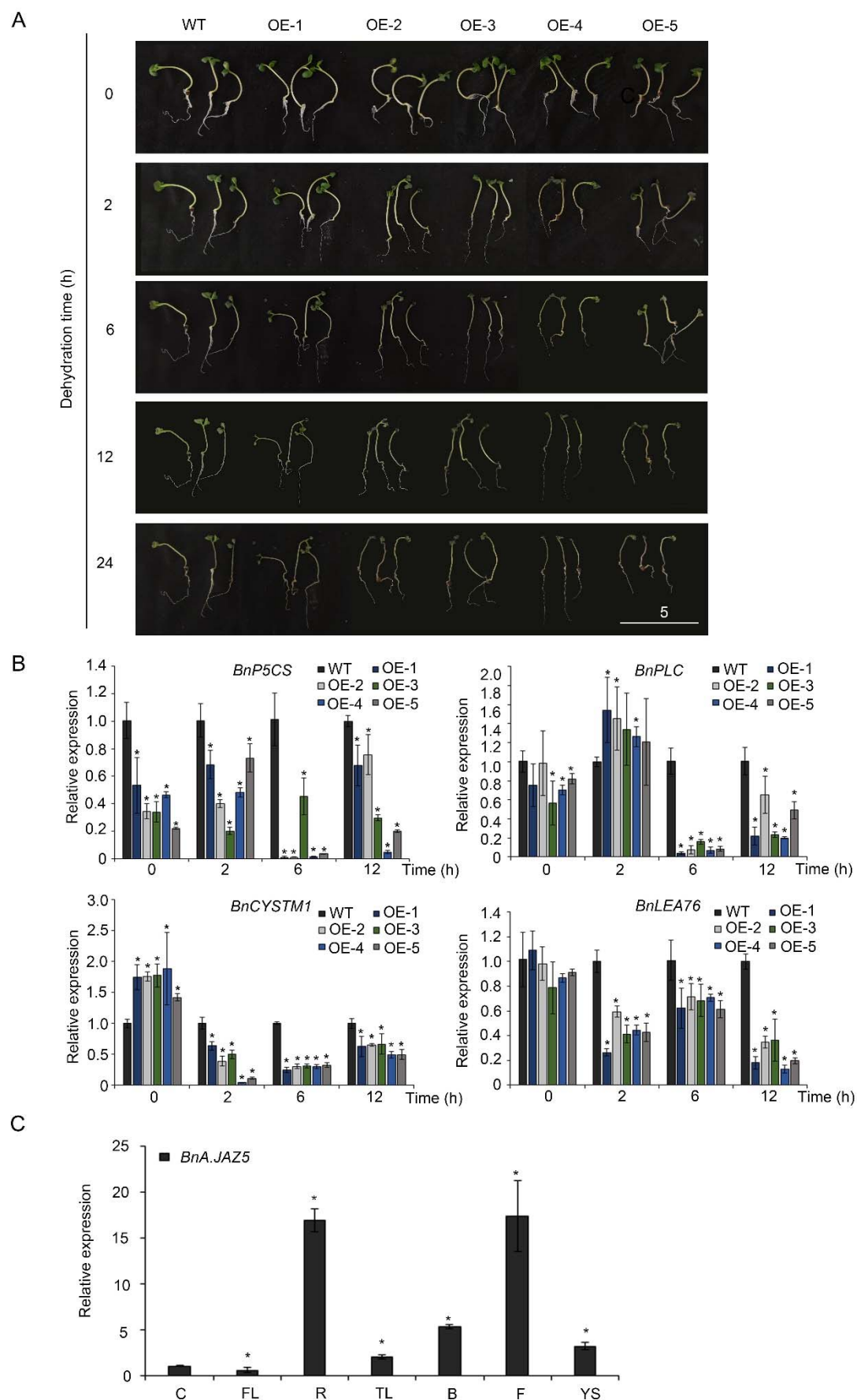
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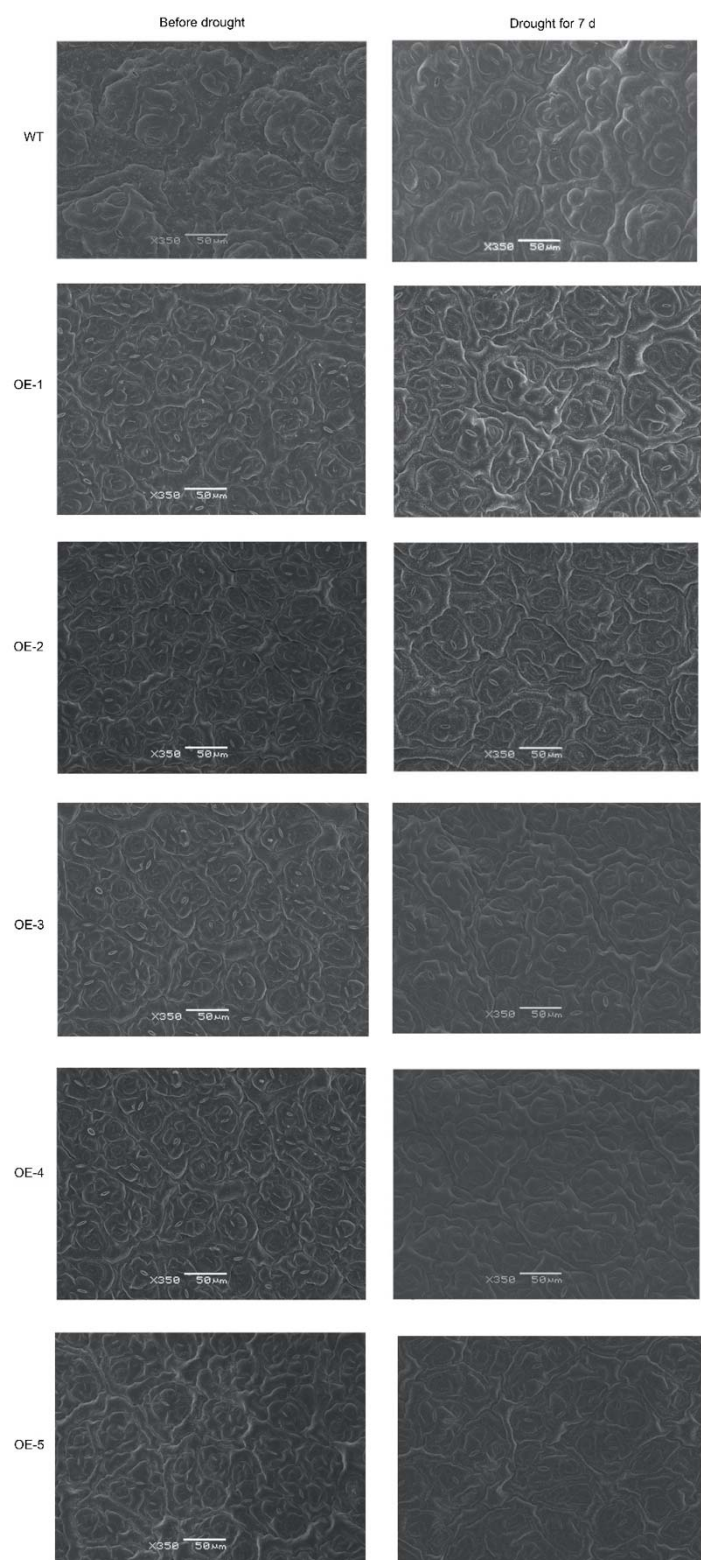


**Figure S1.** Phylogeny tree of rapeseed BnA.JAZ5 (GSBRNA2T00103000001) and BnC.JAZ5 (GSBRNA2T00089260001) with Arabidopsis JAZ families.

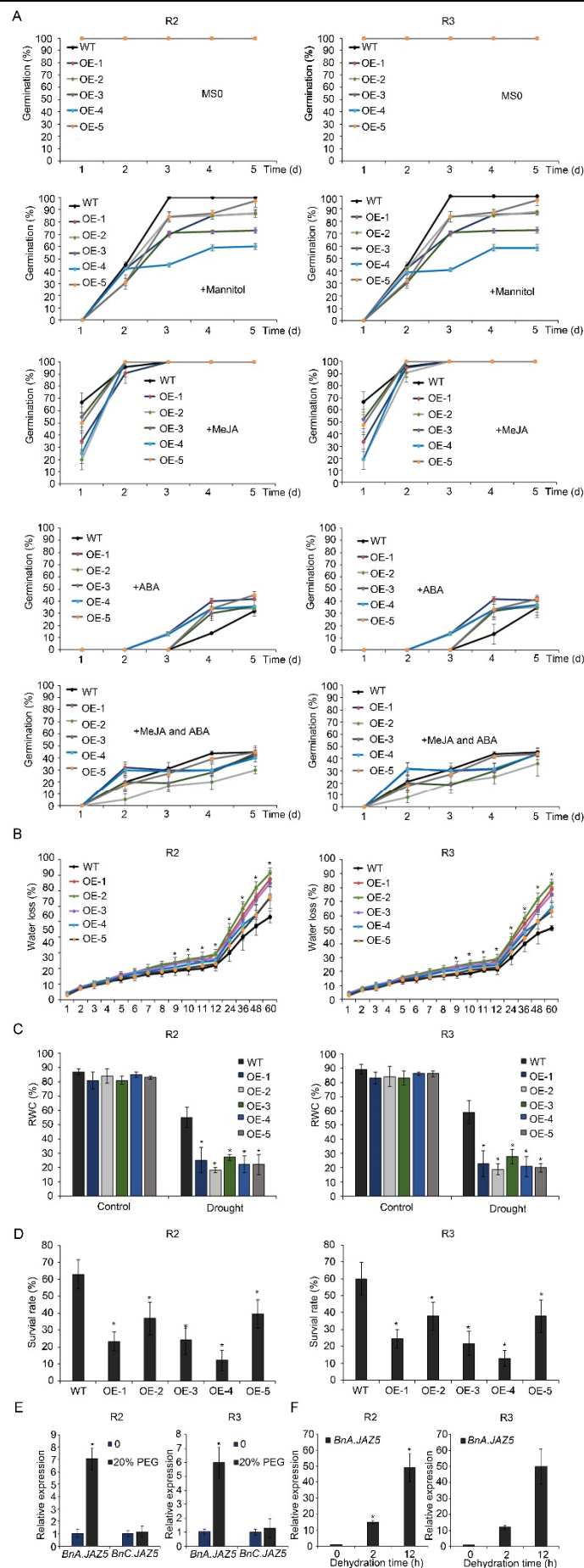




**Figure S2. (A)** The phenotype of 7-day-old OE-1, OE-2, OE-3, OE-4, OE-5 lines and wild-type seedlings dehydration. **(B)** Expression patterns of stress-responsive genes under drought stress. The relative transcript level of each gene was normalized to that of *BnUBC21* cDNA for quantification. Error bars indicate standard errors. The average and significance were calculated over three biological replicates by analyzing seeds of different batches. Each batch of seeds for each genotype was pooled from at least 15 independent plants. For every biological replicate, we examined the seeds from the same batch at least three times as technical replicates. The value of each biological replicate was the average calculated over three technical replicates by analyzing more than 150 seeds. **(C)** Expression levels of *BnA.JAZ5* at different growth and developmental stages. C, FL, R, TL, B, F and YS represents cotyledon first true leaf, root (five-leaf stage), third leaf (five-leaf stage), bud, flower, and young silique samples, respectively. Asterisks indicate significant differences between WT and *p35S::BnA.JAZ5* line ( $P < 0.05$ , Student's t-test). WT, accession K407; OE-1, OE-2, OE-3, OE-4 and OE-5, *p35S::BnA.JAZ5* transgenic lines. Scale bar in (A), 5 cm.



**Figure S3.** SEM images showing adaxial epidermal cells of OE-1, OE-2, OE-3, OE-4 and OE-5 lines at 350× magnification.





**Figure S4.** The molecular data of another two biological replicates per experiments. **(A)** Seed germination rate of five overexpressing lines under 400 mM mannitol, 50  $\mu$ M MeJA, 9  $\mu$ M ABA or both 50  $\mu$ M MeJA and 9  $\mu$ M ABA treatments. **(B)** The WLR of five overexpressing lines. Water loss was measured at the indicated time points. Asterisks indicate significant differences between wild-type and *p35S::BnA.JAZ5* lines ( $P < 0.05$ , Student's *t*-test). **(C)** The RWC of five overexpressing lines under drought stress treatment. Error bars represent standard errors. Asterisks indicate significant differences between control and drought stress. **(D)** Survival rates of five overexpressing lines after 3-day recovery from drought stress treatment. Asterisks indicate significant differences between wild-type and *p35S::BnA.JAZ5* lines. **(E)** Expression levels of *BnA.JAZ5* and *BnC.JAZ5* under 20% PEG-6000. **(F)** Expression levels of *BnA.JAZ5* under dehydration stress. Detached leaves of five-leaf-stage plants were subjected to dehydration treatment for 2 and 12 h. Error bars indicate standard errors. Asterisks indicate significant differences between control and drought stress ( $P < 0.05$ , Student's *t*-test). WT, accession K407; OE-1, OE-2, OE-3, OE-4 and OE-5, *p35S::BnA.JAZ5* transgenic lines. R2, biological replicate 2. R3, biological replicate 3.