

**Abiotic and Biotic Stress Tolerance Phenotypes in *Arabidopsis*  
Overexpressing the *Multiprotein Bridging Factor 1a* (*MBF 1a*)  
Transcriptional Coactivator Gene**

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We conducted a genetic yeast screen to identify *salt tolerance* (*SAT*) genes in maize kernels cDNA library. During the screening, we identified a maize clone (*SAT41*) that seemed to confer very effective salt tolerance in comparison to control cells. *SAT41* cDNA encoded an 16-kDa protein with 82.4 % identity to *Arabidopsis Multiprotein bridging factor 1a* (*MBF1a*) transcriptional coactivator gene. In an attempt to further understand salinity tolerance in *Arabidopsis*, the *MBF1a* gene was functionally characterized. *MBF1a* is induced by dehydration and glucose (Glc) treatments in plants. Constitutive expression of *MBF1a* cDNA in *Arabidopsis* led to salt tolerance of transgenic lines. Interestingly, it was found that plants overexpressing *MBF1a* exhibited Glc-insensitive and fungal disease resistance phenotypes. Therefore, our results indicate that *MBF1a* in *Arabidopsis* is mediating stress tolerance and involved in ethylene and Glc signaling responses.