



**Supplementary Figure S1. Zebularine-induced *TS-GUS* reactivation is not transmitted to naïve tissues or the next generation in wild type plants. (A)** GUS staining of cauline leaves and inflorescences from *TS-GUS* plants treated with 20 μM zebularine for 2 weeks and recovered without the drug for 3 weeks (Same as in figure S3A). **(B)** GUS staining in S1 seedlings obtained by selfing of zebularine-treated *TS-GUS* wild type plants. **(C)** Southern blot detection of zebularine-induced DNA demethylation at centromeric 180 bp repeats in cotyledons and true leaves dissected from 14 days-old mock- or 20 μM zebularine-treated seedlings without or with subsequent recovery. The *ddm1* mutant serves as de-methylation control. **(D)** Analysis of chromocenter decondensation by fluorescence *in situ* hybridization with a probe for the centromeric 180 bp repeats in mock- and zebularine-treated cotyledons and true leaves (100 nuclei scored each).