

New Phytologist Supporting Information

Article title: Targeted plant hologenome editing for plant trait enhancement

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The following Supporting Information is available for this article:

Fig. S1 The concentration of ethylene, Fe, Zn, and Cu in the shoot of *Arabidopsis thaliana* Col-0 (a) and *eto1* (b) inoculated with the bacterial treatment. Treatments were: inoculation with a non-inoculated control (Ctrl), wildtype *Pseudomonas putida* UW4 (WT), and ACC deaminase-deficient mutant (AcdS⁻). The differences between treatments were analyzed by one way ANOVAs complemented with Tukey's range test ($p < 0.05$). Error bars show \pm SE.

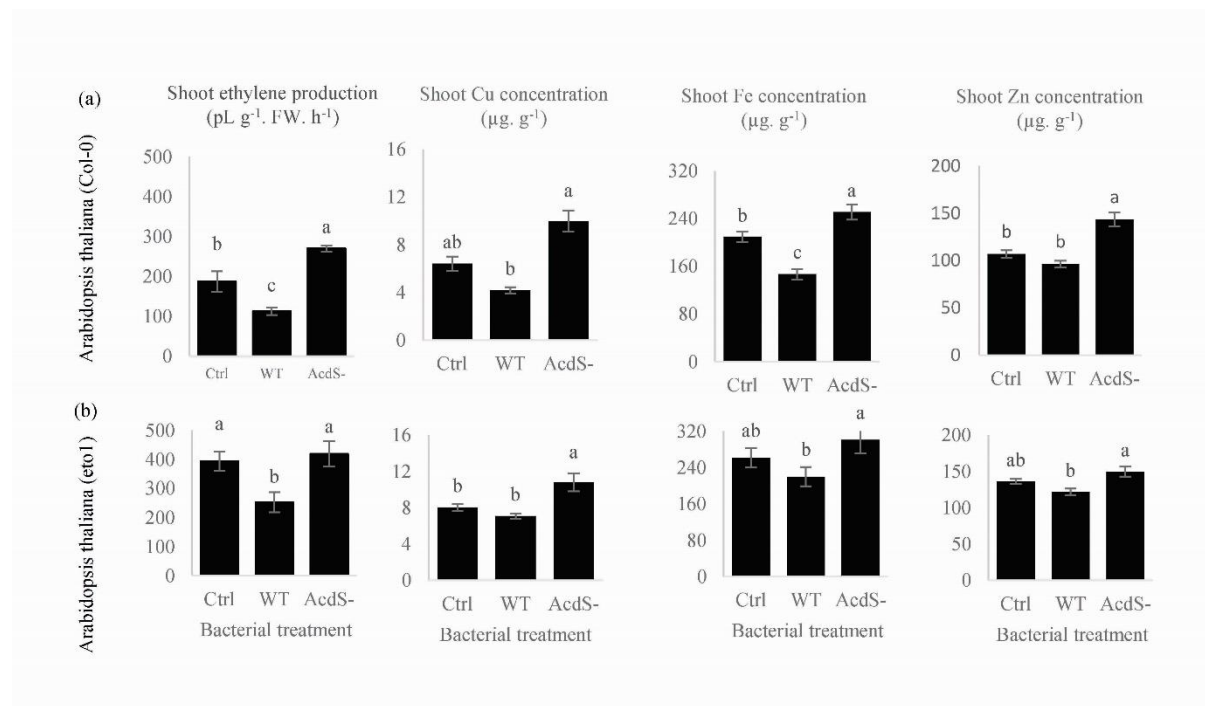


Fig. S2 (a) Correlation between ethylene level and phosphorus (P) concentration in the shoot of *Arabidopsis thaliana* in non-bacterized Col-0 (light red circles) or the ethylene overproducer *eto1* (dark red circles), and Col-0 plants bacterized with *Pseudomonas putida* UW4 (light blue circle) or its ACC deaminase-deficient mutant (*AcdS*-) (closed blue circle). Two separate regressions were calculated to highlight the similarity between the effects of mutations in the plant (red line) and bacterial genome (blue line). We split the results between mutations in the plant and bacterial genomes. b) effect of mutations in the plant genome: non-bacterized Col-0 and ethylene-overproducer genotype *eto1*. (c) effect of mutations in the bacterial genome: *A. thaliana* Col-0 inoculated with *Pseudomonas putida* UW4 (wildtype; WT) or its ACC deaminase-deficient mutant (*AcdS*-). Error bars show \pm SE. Columns with asterisks are significantly different according to a t-test. **; $P < 0.001$).

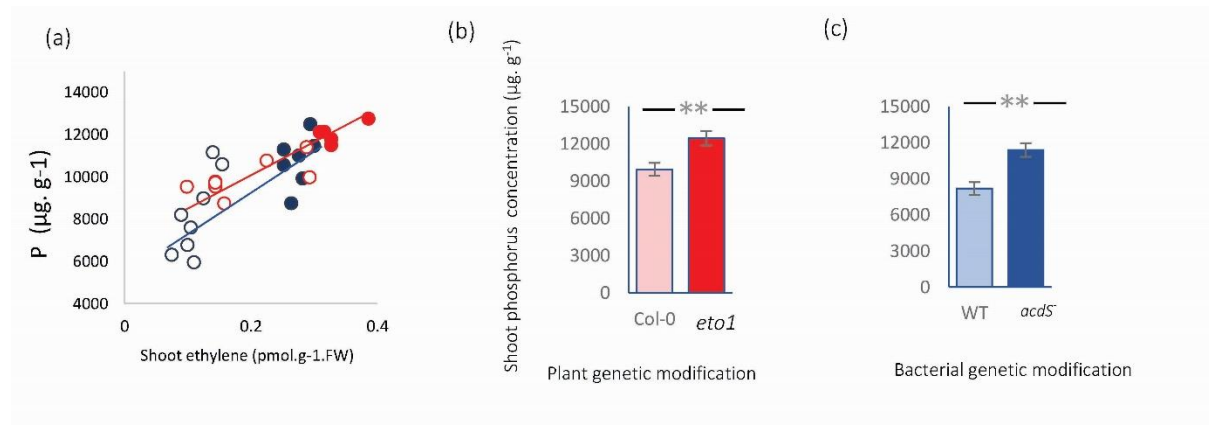


Fig. S3 Shoot dry weight of *Arabidopsis thaliana* Col-0 (a) and *eto1* (b) inoculated with the bacterial treatment. Treatments were: inoculation with a non-inoculated control (Ctrl), wildtype *Pseudomonas putida* UW4 (WT), and ACC deaminase-deficient mutant (*AcdS*-). The differences between treatments were analyzed by one way ANOVAs complemented with Tukey's range test ($p < 0.05$). Error bars show \pm SE.

