

Supplementary Figure S1. Comparison of the number of the related specialized metabolites in Arabidopsis.

The box plots present the number of the related specialized metabolites of mQTGs in *Arabidopsis thaliana*. mQTGs without CNVs, metabolic quantitative trait genes without copy number variants. mQTGs with CNVs, metabolic quantitative trait genes with copy number variants. In each box plot, the box represents the 25%–75% range, the middle line represents the median, the dotted line represents the 1%–99% range, and the outer circles are outliers. *P* values were calculated by Wilcoxon rank sum test.

$P < 2.2 \times 10^{-16}$ P = 0.913.0 0 0 2.5 ŝ o 2.0 dN_{SNP}/dS_{SNP} 000 1.5 0 0 1.0 Ь. o. Random CNVS CNVS Random CNVS CNVS RandTGS with CNVS not GS with CNVS 0.0

Supplementary Figure S2. Comparison of the functional divergence in Arabidopsis.

The box plots present the dN_{SNP}/dS_{SNP} ratios of *Arabidopsis thaliana* accessions. Random, 10,000 randomly selected genes; non-mQTGs with CNVs, non metabolic quantitative trait genes with copy number variants; mQTGs with CNVs, metabolic quantitative trait genes with copy number variants. In each box plot, the box represents the 25%–75% range, the middle line represents the median, the dotted line represents the 1%–99% range, and the outer circles are outliers. *P* values were calculated by Wilcoxon rank sum test.

Wilcoxon rank sum test