

Procyanidin A1 (pme0431)

Figure S1.Representative MS/MS spectra for metabolites identification.

m/z, Da

111.0 115.1 132.2.135.

78.8

0.0



Figure S2. Extracted ion chromatograms (XICs) for detection of multimodal maps



**Figure S3**. Relative accumulation levels of anthocyanins across 11 tea cultivars. Variations in relative accumulation levels of anthocyanins (Z-score, scale shown in the right) are indicated in color, where red indicate higher accumulation level, and blue regions indicate lower accumulation.



**Figure S 4**. Hierarchical clustering dendrogram showing gene coexpression modules identified using WGCNA. Modules correspond to branches and are labeled by colors as indicated by the first color band underneath the tree. Remaining color bands reveal highly correlated (red) or anti-correlated (blue) genes for the particular cultivar.



**Figure S5**. Orthogonality of 'guilt-by-association' principle-based gene coexpression network to other molecular data in STRING database.



Figure S6. qRT-PCR validation of the coexpression relationships.