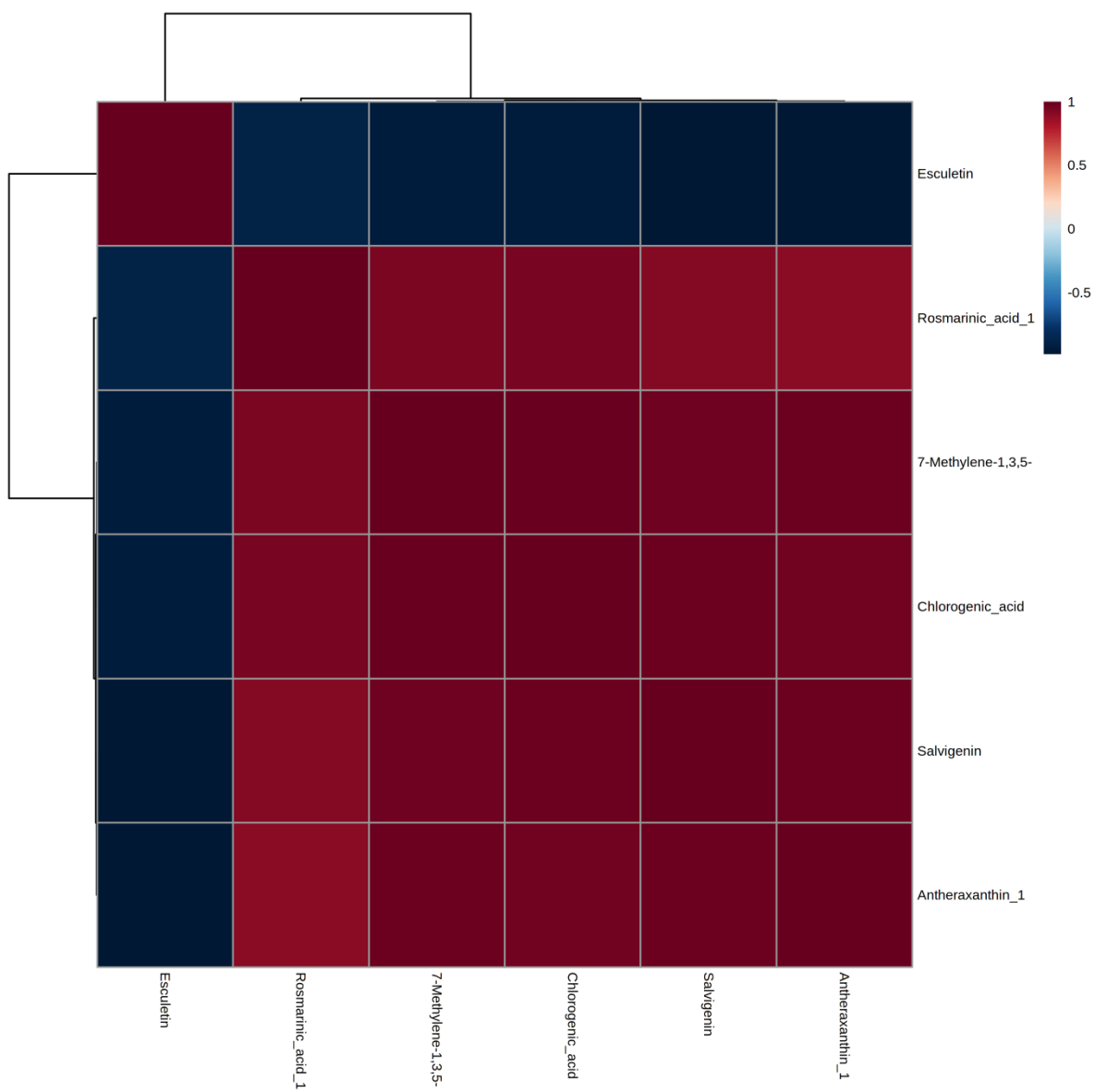**Figure S1.** Average monthly climatic conditions of the cultivation areas of the commercial products of *Mentha spicata* L. evaluated. a. Average maximum and minimum temperature; b. Average monthly rain precipitation; c. Average daylight hours; d. Average monthly wind speed; and. e. Cumulative average growing degree days are defined as the thermal integral with a base temperature of 10 °C.

Figure 2. Pearson correlation analysis of the top 6 discriminant metabolites in commercial *Mentha spicata* samples.