

Mild induction of abiotic stresses such as instantaneous heat shock can improve biosynthesis of phenolic-antioxidants and associated medicinal values in plant based foods, especially in fruits during pre- and post-harvest storage. The cover photo illustrates the application of instantaneous heat shock treatment to grape vines with tractor pulled Agrothermal System equipment (Agrothermal System, Walnut Creek, CA). The Pinot Noir grapes treated with this instantaneous heat shock treatment were used to make red wines and those red wines were evaluated for phenolic antioxidant-linked functionalities targeting early stages type 2 diabetes management. Significant improvement in phenolic bioactive functionalities relevant to management of early stages type 2 diabetes were observed in red wines derived from the instantaneous heat shock treated grapes. The findings of this study conducted by investigators from the North Dakota State University are presented in this issue.

