Overcoming taint from vineyard exposure to bushfire smoke

Project ID: ICHDR9 (PhD)

Bushfire frequency and severity have increased due to climate warming. Taint from vineyard exposure to smoke remains an issue of major concern for grape and wine producers worldwide, and an ongoing threat to long-term economic viability, despite significant scientific progress over the past decade.

In this project, field trials will occur in Australian and USA vineyards to: evaluate sensors and develop methods for monitoring vineyard smoke exposure; identify physiological factors that influence smoke uptake by grapevines; and build on current work to develop strategies for mitigating/remediating the sensory effects of smoke taint. Producers will benefit from faultless wines and consumers can enjoy wines uncompromised by smoke taint.

We seek a highly motivated PhD candidate with a high level Honours or Masters qualification or equivalent in chemistry or plant biochemistry. The project will be based at the Waite campus of The University of Adelaide, with time to be spent working alongside research staff from the Australian Wine Research Institute (in Adelaide) and the E&J Gallo Winery (in California). The candidate will develop skills/techniques in experimental design, plant biochemistry, analytical chemistry, synthetic chemistry, sensory analysis and statistical analysis.

References

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