

Abstract Submitted
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Ultraweak bioluminescence dynamics and singlet oxygen correlations during injury repair in sweet potato MARIUS HOSSU, LUN MA, WEI CHEN, UT Arlington — Ultraweak bioluminescence at the level of hundreds of photons per second per square centimeter after cutting injury of sweet potato was investigated. A small emission peak immediate after cutting and a later and higher peak were observed. Selective singlet oxygen inhibitors and sensors have been use to study the contribution of singlet oxygen during the curing process, demonstrating increased presence of singlet oxygen during and after the late bioemission peak. It was confirmed that singlet oxygen has direct contribution to ultraweak bioluminescence but also induces the formation of other excited luminescent species that are responsible for the recorded bioluminescence.

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