PALSA 2023



Contribution ID: 68

Type: Poster

Zn2+ ions are concentrated in the Euphorbia peplus laticifer network

Wednesday, July 12, 2023 4:30 PM (1 hour)

Euphorbia peplus (petty spurge, Euphorbiaceae) is an emerging developmental model system for the study of laticifers, the cells that produce and contain plant latex. In other plant families, synchrotron X-ray fluorescence has been used to image laticifers in intact plant leaves, e.g. to study hyperaccumulator species. Previous synchrotron X-ray fluorescence studies on *Euphorbia* latex exuded from a cut plant showed that Zn2+ ions are concentrated in the latex. We wanted to show that this was true *in vivo*, i.e. that Zn2+ ions are concentrated in laticifers in an intact *E. peplus* leaf. We imaged both lyophilized and fresh leaf samples, and confirmed that Zn2+ was concentrated in laticifers in leaves but not cotyledons. This result improves our knowledge of *Euphorbia* laticifers and paves the way for future experiments in hormonally-treated plants and/or transcriptomically silenced plants.

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Session Classification: Poster Session 1

Track Classification: Poster Session