

The logo for the School of Plant Sciences Seminar is a circular emblem with a light green background and a dark green border. The text "SCHOOL OF PLANT SCIENCES SEMINAR" is written in a bold, black, sans-serif font, arranged in three lines. A dark green ribbon banner is positioned at the bottom of the circle, containing the text "TUESDAYS 4:00PM" in a white, sans-serif font. The background of the entire slide is a dark green, textured pattern of leaves.

SCHOOL OF PLANT SCIENCES SEMINAR

TUESDAYS
4:00PM

Tuesday, September 7, 2021

The role of plastid heat shock proteins during singlet oxygen induced chloroplast stress

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Abstract

Plants are sessile organisms and thus must acclimate to changes in their surrounding environment in order to survive. Plants first sense these changes through flux alterations in chloroplasts. A consequence of these alterations is the production of singlet oxygen (1O_2), which then elicits cellular changes. Small heat shock proteins (sHSPs) have been shown to play a role in the molecular response to 1O_2 . Using a genetics approach, we have shown that sHSPs may protect chloroplastic proteins during medium to extreme photooxidative stress. Knowing how individual chloroplasts communicate and mitigate stress can not only help us further understand interorganelle signaling, but can also provide insight into photosynthetic flux and thus further inform future crop engineering and farming practices.

Bio

Marta was born in Warsaw, Poland and grew up in Warsaw and Bucharest, Romania. She completed her BSc in Biochemistry at the University of Edinburgh, where she worked on the Rubisco small subunits as a synthetic biology platform to improve photosynthesis. She is an MSc student currently working in the Woodson lab on plastid localized small heat shock proteins and their involvement in singlet oxygen response and signaling. In her free time, she likes to travel, embroider, take photos of the wonderful Arizona scenery, and spend time with her pet cockatiel, Bartek.

This seminar is a hybrid event

Marta Kozłowska will be presenting via Zoom - <https://arizona.zoom.us/j/88431130345>
Password: spls2021

Live broadcast is available in Marley 230 – refreshments will be provided