

# Biology Seminar

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## How plants sense and respond to their neighbors: variation on a theme



**Monday, December 4, 2017 | 12:00pm**  
**HCK 132 Refreshments at 11:45am**

Plants rely on light not just for photosynthesis but also for information. Many plants have a sophisticated suite of photoreceptors and responses that allow them to sense and respond to competition for light from their neighbors. Known as the shade avoidance response, the response to neighbor shade can include increased stem elongation, altered branching, and early flowering. Plants undergoing shade avoidance prioritize growth over defense and reduce

allocation to fruit and seed, reducing agronomic yield. Thus, understanding the pathways underlying plant shade avoidance is of strong interest for developmental, ecological, and agricultural reasons.

The shade avoidance pathway has been primarily elucidated in seedlings of the model plant *Arabidopsis*. Julin will discuss his investigations into whether the current pathway model is sufficient to understand shade avoidance at other development stages and in other species. The studies reveal unexpected new connections between light and defense signaling pathways, as well as both conserved and novel genes acting at different developmental stages and among species.

