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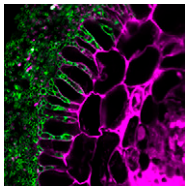
ON THE COVER



This image depicts a partial view from transverse cross section of a *Populus* tree root colonized by the ectomycorrhizal fungus *Laccaria bicolor*. The fungus is a symbiont that colonizes the plant in order to obtain photosynthetically-derived carbon from the plant in exchange for mineral nutrients that the fungus mines from the soil. Upon colonizing the plant, the fungus surrounds the outside of the root, forming a "mantle", and then penetrates between root epidermal cells in order to form a bi-directional nutrient exchange site known as the Hartig net that is shared by the two symbionts. The sample for this image was stained with wheat germ agglutinin alexa-fluor 488 (green) and propidium iodide (magenta), which stain fungal and plant cell walls, respectively. Next, it was imaged on a Zeiss LSM780 confocal microscope at 40x magnification. This imaging method allows for detailed analysis of both the anatomy and colonization efficiency of ectomycorrhizal fungi with their host plant.

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