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Mycorrhizal Networking: Evidence from Mycoheterotrophic Plants

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Message from the Guest Editors

Dear Colleagues,

Plants and root-associated mycorrhizal fungi create complex underground networks in which photosynthetically fixed carbon is exchanged for soil nutrients. This interaction is one of the most ancient and widespread symbioses on Earth. Although resource exchange in mycorrhizal networks is mostly mutualistic, dozens of non-related plant lineages have evolved strategies to obtain carbon from associated mycorrhizal fungi—a phenomenon known as “mycoheterotrophy”. Most mycoheterotrophic plants use the underground mycorrhizal network to acquire photosynthetically fixed carbon from surrounding plants. In extreme cases, mycoheterotrophy replaces their photosynthetic function completely. Mycoheterotrophy has fascinated biologists for centuries, yet much remains to be discovered. This Special Issue of *Plants* will highlight the ecology and evolution of mycoheterotrophy in mycorrhizal networks, and its role in our understanding of mycorrhizal interactions.



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Special Issue



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Message from the Editor-in-Chief

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