



Call for Contributions
Special Issue: “Microbial Interactions in the plant-soil continuum”
For works presented at the Workshop:
“Mycorrhizal Symbiosis in the Southern Cone of South America”

The Southern Cone of South America sustains old-growth temperate rainforests that account for more than half of the southern hemisphere's temperate rainforests. The soil of these forests has unique characteristics such as a high retention of organic matter and low plant available phosphate. Patagonian temperate rainforests are characterized by low levels of atmospheric pollution, and since the Holocene the floristic composition has been stable. Southern South American temperate rainforests are located within the Chilean Coastal Range and the Andes Range, two mountain systems that have contrasting geological histories. The Coastal Range bedrock is highly weathered with important oceanic atmospheric nutrient influence. In contrast, young volcanic ash deposits and weathered basaltic volcanic scoria are found in steep slopes of the Andes Range, which mostly contribute to nutrient input dynamics. There are different types of mycorrhizal associations in these forests. In *Nothofagus* forests, ectomycorrhizal (EM) forms are the dominant, while arbuscular mycorrhizal (AM) associations are found in conifer forests. Overall, however, soil fungal communities have been poorly studied in North-Patagonian temperate rainforests, as well as in the southern cone of South America in general. The first mycorrhizal studies in Chile determined the mycorrhizal dominance of conifer trees and *Nothofagus* species as well as the mycotrophic status of the vascular flora of several forests types. Some recent molecular studies have been focused on the study of soil fungi assemblages in North-Patagonia, specifically EM fungi in Chilean and Argentinean *Nothofagus* forests. Recent global studies have also included Chilean and Argentinean coniferous forests, comparing all fungal associations and specifically AM fungal communities. Arbuscular mycorrhizal (AM) association plays a key role in the sustainability of terrestrial plant ecosystems, in particular those presenting limitations for the establishment and subsequent growth of plants. In Chile, more than 50% of arable soils are originated from volcanic ashes, showing in general several constraints to crop production, such as low pH, high exchangeable aluminum content and low levels of available P. Under these conditions, the management of AM fungal propagules using adequate cultural management practices and biotechnological advances emerges as a successful alternative in order to maximize the positive effects of AM symbiosis on plant growth.

This workshop is aimed at establishing the status of knowledge of mycorrhizal symbiosis in the Southern Cone of South America. It is also aimed at facilitating collaboration between researchers, students, and the mycorrhizal scientific community. **More information:** <https://mycorrhizal.wordpress.com/>

Unpublished and original works presented either in an oral or poster format in the *Mycorrhizal Symbiosis in the Southern Cone of South America* workshop, are invited to be submitted at this Special Issue of the *Journal of Soil Science and Plant Nutrition* (<http://cl.submission.scielo.org/>) until **April 10, 2017**.

With kind regards,

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