[P1.14]

Interaction between Hypholoma fasciculare and the ectomycorrhizal fungus Pisolithus tinctorius

P. Baptista*[1], P. Guedes de Pinho[2], R. Malheiro[1], R. Tavares[3], T. Lino-Neto[3]
[1]Instituto Politécnico de Bragança, Portugal, [2]Porto University, Portugal, [3]Universidade do Minho, Portugal

In the past few years, cord-forming basidiomycetes have received considerable attention in their growth strategies in the presence of other fungi (saprotrophic and pathogenic). In the present study, the in vitro interaction between the cord-forming basidiomycete Hypholoma fasciculare and the ectomycorrhizal fungus Pisolithus tinctorius was studied. Dual-cultures were established and the radial fungal growth, hyphae morphology and production of volatile compounds were evaluated during interaction. Growth of P. tinctorius is severely inhibited by H. fasciculare even before mycelia contact, suggesting a mechanism of antagonism at a distance. Following contact with H. fasciculare mycelia, P. tinctorius displayed distinctive hyphal interference with collapsed or atypical hyphae. Alteration in the production of volatile compounds, distributed in several chemical classes (alcohols, ketones, aldehydes, terpenes, among others) was also detected over the time course of interaction. Sesquiterpenes compounds with putative antifungal properties were the most abundant before fungal contact and their possible role during interaction will be discussed.

Keywords: Hypholoma fasciculare, Pisolithus tinctorius, Volatile compounds, fungal interaction