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TOMENTELLOID FUNGI: AMONG ONE OF THE MOST ABUNDANT AND DIVERSE ECTOMYCORRHIZAL MYCOBIONTS IN TRUFFLE ORCHARD

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Tomentelloid fungi are a resupinate group of mycobionts belonging to the Thelephoraceae (Basidiomycota) and forming ectomycorrhizae with roots of angiosperm and gymnosperm. These fungi are among all the most abundant and diverse taxa in ectomycorrhizal communities from arctic regions to the tropics. Thelephoraceae species belong to *Tomentella* and *Pseudotomentella* genus were recently shown to be co-occurent of the ectomycorrhizal community proper of cultivated and natural truffle environments. Although their morphotypes should be distinguished by typical morphological-anatomical characteristics (colour; surface network; mantle cells organization; emanating elements; rhizomorphs and cystidia) these traits cannot be even used as reliable indicators because they are very susceptible to change under changing environmental conditions.

Here we report the identification of *Tomentella* and *Pseudotomentella* ectomycorrhizae found in a *Tuber aestivum* Vittad. cultivated orchard by PCR-amplifying and sequencing the ITS nrDNA (internal transcribed spacer nuclear ribosomal DNA). Similarities with known sequences were searched in the National Center for Biotechnology Information (NCBI) database using BLASTN application. All ITS sequences were then aligned with 37 additional congeneric ITS sequences retrieved from GenBank and used for phylogenetic and molecular evolutionary analysis using MEGA version 4 software.

In our case study, with 11 different OTUs out of 29 totally detected, Thelephoraceae spp. are the most diverse and predominant mycobionts of the *T. aestivum* truffle orchard. The NJ (neighbour-joining) tree reported revealed the relationships among the identified *Tomentella* and *Pseudotomentella* lineages.