

Research Paper

***In vitro* evaluation of nematophagous activity of fungal isolates**

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Four filamentous fungi associated with nematodes were isolated and identified from litter samples collected in the Integral Natural Reserve "Bosco Siro Negri" (PV, Italy): *Arthrobotrys dactyloides*, *Arthrobotrys oligospora* var. *oligospora*, *Pochonia bulbillosa*, and *Pochonia chlamydosporia* var. *catenulata*. Their capacity to break down the nematode population was evaluated *in vitro* by means of simple and reproducible multiwell plates method. All fungal strains were able to cause a death-rate significantly different from the controls ($p < 0.05$). Precisely, *A. dactyloides* caused, on average, a 26% death rate increase in the nematode population compared to the control, *A. oligospora* var. *oligospora* 25%, *P. bulbillosa* 12%, and *P. chlamydosporia* var. *catenulata* 17%. The method has also allowed to determine the more active fungi as regards the prey's life cycle stage. The most active strains against nematodes (adults) were *A. dactyloides* and *A. oligospora* var. *oligospora*, known to attack adults or larval stages by means of tridimensional traps. On the contrary *P. bulbillosa* and *P. chlamydosporia*, known to attack mainly the nematode life stage of cysts, showed lower activity against adult nematodes.