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have recently done a detailed mycological survey. *Tamarix gallica*, various species of *Fagaceae*, *Acacia* and *Prunus* were found to host similar agents of white rots on living or dead woody matrices. Several species of *Phellinus, Fomitiporia* and other closer genera of *Hymenochaetales* were isolated and compared with isolates from cultivated crops, e.g. grapevine. Carpophores were not always found on symptomatic trees, especially in urban ornamental stands since, often, the formation of fruiting bodies takes place many years after infection. Even if olive trees should be involved, neither carpophores nor detectable infections of the above fungi on this host were found in the area. Information on association or exclusion of ascomycetes and basidiomycetes is also given.

PHYSIOLOGICAL, BIOCHEMICAL AND BIOLOGICAL CHARACTERIZATION OF NOVEL *TRICHODERMA* STRAINS WIDELY APPLIED IN COSTA RICA. R. Ciliento[1], S.L. Woo[1], P. Marinelli[1], B. Navarra[1], M. Siena[1], R. Marra[1], F. Vinale[1], S. Ferraioli[1], P. Ambrosino[1], I. Soriente[1], M. Ruocco[2], D. Turrà[1], S. Lanzuise[1], M.A. Obregon Gomez[3] and M. Lorito[1-2]. *[1]Dipartimento di Arboricoltura, Botanica e Patologia Vegetale, Università degli Studi di Napoli Federico II, 80055 Portici (NA), Italy. [2]Istituto per la Protezione delle Piante (IPP), CNR, 80055 Portici (NA), Italy. [3]Instituto Nacional de Aprendizaje, Costa Rica. E-mail: lorito@unina.it*

Trichoderma spp. are cosmopolitan in all soil types and frequently represent one of the main component of the soil microflora. This is attributed to their diverse biological activities, aggressiveness and competitive nature. We characterized physiologically, biochemically and biologically seven *Trichoderma* strains isolated in Costa Rica and widely used in Central America as biopesticides. In all tests, the strains were grown on PDA or minimal medium containing sucrose as the only carbon source, at temperatures of 25° or 30°C in comparison with the strain P1 of *T. atroviride*. We measured mycelial growth, sporulation time and quantity of conidia produced. Strains Bulgvir, Harz, TF, PB17 grew faster and with more spores productions than P1 when grown at 30°C. Biochemical analysis indicated that TF and PB17 in comparison to P1 accumulated in culture filtrates higher endo- and exo-chitinase and similar glucanase and xylanase activity. *In vitro* confrontation assays were performed against the pathogens *Rhizoctonia solani* and *Botrytis cinerea*. Strains Bulgvir, Harz, Exc, TF, PB17 were able to control both pathogens more effectively than P1. In summary, our results demonstrate that the tested strains from Costa Rica exhibited a much higher fitness, enzyme production and antifungal activity, especially when grown at temperature of 30°C instead of 25°C in comparison to the well-known strain P1 of *T. atroviride*. Species identification, proteome analysis and application of these strains as biopesticides in a mediterranean climate zone are being carried out.

***BURKHOLDERIA GLADIOLI*, A BIOCONTROL AGENT AGAINST GREEN AND BLU MOLD OF FRUITS. G. Cirvilleri[1], A. Bonaccorsi[1], G. Scuderi[1], S. Stefani[2], M. Santagati[2], A. Vitale[1], I. Castello[1] and G. Polizzi[1].** *Dipartimento di Scienze e Tecnologie Fitosanitarie, sezione di Patologia Vegetale, Università degli Studi di Catania, Via S. Sofia 100, 95123 Catania, Italy. [2]Dipartimento di Scienze Microbiologiche e Ginecologiche, sezione di Microbiologia, Università degli Studi di Catania, Via Androne 81, 95124 Catania, Italy. E-mail: gcirvil@unict.it*

Burkholderia gladioli (formerly named *Pseudomonas gladioli*) has attracted attention as an antagonist in the biocontrol of *Botrytis cinerea*. In this study, three Italian strains of *B. gladioli* isolated from leaves of *Strelitzia reginae* plants grown in a nursery of eastern Sicily were evaluated for their ability to control *Penicillium digitatum* and *P. expansum* on Tarocco oranges, Femminello lemons and Golden Delicious apples. Bacteria and culture filtrates strongly inhibited growth of several phytopathogenic fungi during *in vitro* screening. Partial control of green and blue mold was obtained on citrus and apple wounds protected with culture filtrates. Control of mould was obtained on wounds co-inoculated with cell of *B. gladioli* (10^8 CFU ml^{-1}) at a pathogen inoculum level of 10^6 CFU ml^{-1} Two strains, DISTEF-ST and DISTEF-G, strongly decreased the incidence of diseases on oranges, lemons and apples. *B. gladioli* type strains LMG 18920^T (ex *P. antimicrobica* antagonistic strain), LMG 2216^T, and *B. cepacia* LMG 1222 ^{T} were not as effective as the Italian strain DISTEF-G. PCR analysis of fragments obtained by using species-specific primers designed on the 16S rDNA unambiguously showed that strains B, G, and ST were *Burkholderia gladioli*. Using fluorescent amplified fragment length polymorphism (fAFLP), the patterns of the Italian and reference strains were similar but, following numerical analysis, two separate clusters formed, one including the Italian strains and the other including the type strains. The possibility to distinguish between the *B. gladioli* isolates potentially useful for biocontrol purposes and those capable of causing infections in compromised human hosts is of extreme importance and must be considered with caution when strains are used as biological control agents.

MOLECULAR STUDIES OF *ROSELLINIA NECATRIX* ISOLATES FROM SOUTHERN ITALY. L. Colatruglio[2], I. Camele[1], M.L. Raimondo[2], A. Carlucci[2], F. Lops[2], C. Marcone[1] and S. Frisullo[2]. *[1]Università degli Studi della Basilicata, Dipartimento di Biologia, Difesa e Biotecnologie Agro-Forestali, Viale dell'Ateneo Lucano, 10, 85100 Potenza, Italy. [2]Università degli Studi di Foggia, Dipartimento di Scienze Agro-Ambientali, Chimica e Difesa Vegetale, Via Napoli, 25, 71100 Foggia, Italy. E-mail: s.frisullo@unifg.it*

Rosellinia necatrix is a soil-borne plant pathogen that causes white root rot disease on a wide range of plant species. In this work, *R. necatrix* isolates, which had previously been identified in southern Italy by traditional methods, were characterized using PCR assays with species-specific primers as well as sequence analysis of PCR-amplified nuclear rDNA. Seventy-one isolates of *R. necatrix*, maintained in pure culture, were examined. The universal primer pair ITS5/ITS4 which amplifies a ribosomal fragment that extends from the 3'-end of the 18S rRNA gene to the 5'-end of the 28 rDNA, thus including the ITS1 and ITS2 regions and the 5.8 rDNA, from many eukariotes and the primer pair R2/R8 that specifically amplifies rDNA of *R. necatrix*, were used. For sequencing, the ITS5/ITS4 PCR products obtained from seven isolates were electrophoresed. Fragments with sizes corresponding to the expected amplified sequences were excised from the gel and eluted. With universal and species-specific primer pairs mentioned above, all isolates tested positive and yielded an amplification product of about 600 and 500 bp, respectively. Nucleotide sequence analysis showed that the southern Italian isolates (among these one was deposited in GenBank under accession number AJ972672) shared a sequence similarity at ITS1, 5.8S and ITS2 region level which ranged from 99 to 100% with two isolates of *R. necatrix* and one of *R. arcuata*, all from Japan. Although detection and characterization of *R. necatrix* isolates in southern Italy through PCR assays using species-specific primers have already been reported, this is the first evidence of sequence analysis of *Rosellinia* rDNA from Italy and/or Europe.