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BOOK OF ABSTRACTS

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P227. Molecular and proteomic identification of *Neoscytalidium dimidiatum* as onychomycosis and dermatomycosis etiologic agent

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The Botryosphaeriaceae family includes genera frequently related with plant diseases. Nevertheless, human infections caused by fungal plant pathogens are becoming more frequent. *Neoscytalidium* species are mainly phytopathogenic but cases of phaeohyphomycosis have been reported. Within this genus, four species are currently recognized: *N. dimidiatum*, *N. orchidacearum*, *N. novaehollandiae*, and *N. oculus*. Although *N. dimidiatum* is frequently found in soil, it has been identified as an etiologic agent of onychomycosis or dermatomycosis. On the other hand, *N. oculus* was isolated and identified as an etiologic agent of an ocular lesion. All these species are very similar with regard to their macroscopic and microscopic traits, which lead to complex and imprecise identification based on morphological traits alone.

In this study, 34 isolates of *Neoscytalidium* spp. collected from onychomycosis or dermatomycosis cases in Medellín (Colombia) were identified at the species level using sequencing of the ITS nuclear rDNA region and MALDI-TOF mass spectrometry (MS). Molecular based phylogenetic results indicate that all isolates were grouped with *N. dimidiatum* reference strains. A reference *N. dimidiatum* spectrum, in the in-house library, was constructed and validated to identify the clinical isolates by MALDI-TOF MS. Four groups were observed in the dendrogram obtained from the proteins of each isolate profile, with an isolate (Plab-077) being placed alone in a single proteomic group. In conclusion, MALDI-TOF MS and ITS sequencing results are concordant and all isolates so far were identified as *N. dimidiatum*. Notwithstanding this, Plab-077 isolate is now under further study using LSU and TEF1- α regions in order to clarify if it represents a putative cryptic species or an atypical phenotype.