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Natural volatile extracts and terpenic hydrocarbons as potential antimicrobial agents for the treatment of *tinea pedis*.**María Carlos Dias¹, Sandra Teixeira¹, Carlos Cavaleiro², Marisa Machado^{1,2}, Nicolina Dias^{1,3}**¹CITS - Centro de Investigação em Tecnologias da Saúde, CESPU, Paredes, Portugal, Portugal;²Centro de Estudos Farmacêuticos / Faculdade de Farmácia. Universidade de Coimbra, Coimbra. Portugal;³IBB/Centre of Biological Engineering, University of Minho, Braga, Portugal

Cutaneous mycoses persist in the XXI century, as the most common infections in humans. Some of these infections, such as *tinea pedis*, can often originate chronic conditions whose clinical disorder may lead to relative immobility of the affected limb and consequent inability to perform daily tasks. Occasionally, they can cause serious infections in immunocompromised patients that have increased over the last few decades. Otherwise, increasing resistance of microorganisms to conventional therapy, low efficacy of drugs, side effects and high costs, makes urgent the development of new antifungal agents. Plant extracts, due the diversity and complexity on secondary metabolites, are valuable collections of compounds for screening biological activities. Particularly, extracts from aromatic plants, are used for centuries for their antimicrobial properties. In this study we have evaluated the effect of a selected group of volatile plant extracts and pure natural compounds in order to establish their effect on the growth and viability of dermatophytes *in vitro*. Plant volatile extracts were isolated by hydrodistillation and analysed by GC and GC/MS. The minimal inhibitory concentration (MIC) and minimal lethal concentration (MLC) were determined against *Trichophyton rubrum* (ATCC MYA-4438) and *Trichophyton mentagrophytes* (ATCC MYA-4439). According to the determined MIC and MLC values, dermatophytes were sensitive to some of the tested extracts, namely from *Juniperus* sp. and *Lavandula* sp., and isolated compounds, monoterpenes mainly (MIC and MLC values ranged from 0.1 to 1.2 mg mL⁻¹). Results confirmed the huge potential of these natural products as antifungal agents and one of the most promising groups of natural products for the development of broad-spectrum, safer and cheaper antifungal agents.