

Chemical Characterization of Ceramide Monohexosides of *Scedosporium apiospermum* And Its Reactivity With Anti-CMH Antibodies.

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Scedosporium apiospermum (*Pseudallescheria boydii*, its teleomorph) is a filamentous fungus found in soil and water, and it can cause disease in immunocompromised patients [1]. One of the most important glycoconjugates present in these fungi is ceramide monohexoside (CMH), a glycosphingolipid. Previous studies showed that these molecules are responsible for some processes, like adhesion, differentiation and germination [2,3]. Moreover, other studies demonstrated that monoclonal antibodies against CMH can bind to this molecule and inhibit these processes [4,5,6]. In the present study, structure and biological importance of CMH were analyzed. Ceramide monohexosides were obtained by treatment of fungal cell mass with chloroform:methanol 2:1 and 1:2 (v/v), partition according to Folch *et al* [7] and purification through silica-gel columns. Purified CMHs were analyzed by thin layer chromatography (TLC) and mass spectrometry. Two molecular species were observed. A major protonated molecular ion $[M+H]^+$ at m/z 710 and a minor one at m/z 728. Elimination of hexose resulted in ions at m/z 548 and 566, that could be assigned as *N*-2'-hexadecenoyl-9-methyl-4,8-sphingadienine and *N*-2'-hydroxyhexadecanoyl-9-methyl-4,8-sphingadienine, respectively. Biological analysis through immunostaining showed that monoclonal antibodies against CMH of *Fusarium oxysporum* recognized this purified molecule, indicating that CMHs from both fungi are similar to each other. It evidence how conserved these structures are in different fungi, as the literature shows.

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