



<b>Title</b>	<b>Fungicidal activity of Histain-5 against Candida species</b>
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Fungicidal Activity of Histatin-5 against *Candida* Species.H. NIKAWA\*, C. JIN, H. FUKUSHIMA, S. MAKIHIRA, T. HAMADA, <sup>1</sup>L.P.SAMARANAYAKE. (Hiroshima Univ, Hiroshima, Japan, <sup>1</sup>Hong Kong Univ, China).

Histatin-5 (Hsn-5) is a group of small, cationic antifungal peptides present in human saliva and several recent reports have suggested its therapeutic potential in patients with oral candidosis. However, little information is available on the antifungal activity of the peptide against either *Candida albicans* isolates from HIV-infected patients or against non-*albicans Candida* species. Hence, we analysed the fungicidal potential of Hsn-5 against 32 isolates of *Candida* spp. representing 6 species. Namely 2 isolates of *C. albicans* from HIV-positive patients, 4 from HIV-negative individuals, 4 of *C. guilliermondii*, 8 of *C. glabrata*, 4 of *C. parapsilosis*, 4 of *C. krusei* and 6 of *C. tropicalis*. Antifungal activity of Hsn-5 was examined according to the method of Edgerton et al. (J. Biol. Chem. 273: 20438-20447, 1998). Exposure to 50µM of Hsn-5 for 90 min, at 37 °C, killed 90% (approx.) of *C. albicans* isolates from HIV-negative patients, 95% of *C. tropicalis* and *C. guilliermondii* isolates, and more than 90% of *C. parapsilosis* and *C. krusei* isolates. In contrast, Hsn-5 induced 66 - 75% loss of viability of two *C. albicans* isolates from HIV-positive patients, compared with 90-100% fungicidal effect against 4 isolates from HIV negative patients (ANOVA; p<0.05). In addition, *C. glabrata* were the least sensitive to the peptide (mean 63%; ANOVA; p<0.01). These results in general suggest that i) oral *C. albicans* isolates in HIVinfection are more resistant to Hsn-5 than isolates from healthy individuals and ii) of the examined species *C. graptara* is the most resistant to this peptide.

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