Abstract Acceptance Letter

Thank you for your acceptance to be a speaker at BIT’s 2nd Annual World Congress of Microbes-2012 (WCM-2012), which will be held during July 30-August 1, 2012 in Guangzhou, China. I am sending the abstract acceptance letter to you. You are welcome to join us with the other outstanding scientists.

Hereby, the organizing committee of World Congress of Microbes-2012 is to confirm that Dr. Wan Himratul Aznita Binti Wan Harun “Antifungal Susceptibility and Morphological Changes of Candida glabrata and Candida kruzel under Treatment of Piper belle L. Extract” has been accepted by BIT’s 2nd Annual World Congress of Microbes-2012(WCM-2012).

If you have any other questions about the meeting, please feel free to contact me at Tel: 0086-411-84799609-813, or Email at: dora@bitconferences.com

Sincerely Yours,

[Signature]

Xiaodan Mei
Executive Chair of WCM-2012
The Organizing Committee of WCM-2012

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Antifungal Susceptibility and Morphological Changes of *Candida glabrata* and *Candida krusei* under Treatment of *Piper betle* L. Extract

Wan Himratul Aznita Wan Harun, Fathilah Abdul Razak and Mohd Al-Faisal Nordin

**Abstract**

*Candida* species are normal oral commensals, but may be responsible for a wide range of systemic and superficial opportunistic infections in the oral cavity. *C. glabrata* and *C. krusei* are considerably the most prevalent of invasive infections in diagnosed cases of oral candidiasis. *Piper betle* has long been used as traditional remedies and claimed to possess antibacterial and antifungal activities. The study aims to investigate the antifungal susceptibility of *C. glabrata* and *C. krusei*, and determine the morphology changes following treatment with *P. betle*. *Candida glabrata* ATCC 90030 and *Candida krusei* ATCC 14243 were used in this study. The antifungal effect includes the growth inhibitory responses of the cells based on the doubling time (g) and specific growth rates (μ) of spectrophotometric assay. Scanning electron microscopy (SEM) was used to observe the morphological changes of the candida colonies. The liquid chromatography (LC-MS) was carried out to validate the bioactive components possibly present in the extract. Chlorhexidine (CHX)-containing mouthrinse was used as a positive control throughout the study. In the study, *C. glabrata* and *C. krusei* were shown to be susceptible to *P. betle* extract. The g- and μ-values of the candida cells were significantly deviated relative to the untreated (P < 0.05), indicating the *P. betle* extract exerts fungistatic effect. The cell population appears to be reduced following treatment with the extract and the reduction effect was concentration-dependent. SEM viewing also exhibited the physical damage and considerable morphological alteration in the treated samples. Hydroxybenzoic acid, chavicol and hydroxycavicol were tentatively identified in *P. betle* extract with the latter was a predominant component. As a conclusion, all the properties exhibited by *P. betle* extract towards the candida cells may potentiate its antifungal activities.

**Biography**

Dr Wan Himratul Aznita Wan Harun received her PhD in Oral Molecular Microbiology in 2004 from the University of Malaya, Kuala Lumpur, Malaysia. She is currently a Senior Lecturer in the Faculty of Dentistry, University of Malaya, Kuala Lumpur. Her primary field is microbiology with research emphasis of virulence of oral microorganisms specifically the oral candida. Her research interest also covers the effects of medicinal plant extracts on the biological properties, adherence and molecular analysis of *Candida* species.

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