79. The susceptibility of *Candida* spp. to the aqueous extract of *Piper betle*
Mohd-Al-Faisal N., Himratul Azmita W.H. and Fathilah A.R.

*Oral Biology Department, Faculty of Dentistry, University of Malaya, 50603 Kuala Lumpur*

**Abstract**

Species within the genus *Candida* has been implicated in many fungal diseases such as candidiasis or thrush. The increasing clinical and microbiological resistance of *Candida* spp. to several commonly prescribed antifungal agents however, has lead to the search for new active antifungal compound from natural resources. This study was carried out to screen the susceptibility of the aqueous extract of *Piper betle* towards seven species of the *Candida*. The Kirby-Bauer susceptibility test using the principle of the disc diffusion was employed. The growth responses of the species to various concentrations of the extract following a 24 hr incubation period were recorded and analysed using the percentage inhibition of diameter growth (PIDG) against chlorhexidine gluconate (CHX). It was found that the growth of *C. albicans*, *C. tropicalis*, *C. lusitaniae*, *C. dubliensis* and *C. parapsilosis* was considerably inhibited at 25 mg mL⁻¹ of the extract and this effect was observed to increase in a dose dependent manner at higher concentrations. The growth of *C. krusei* and *C. glabrata* was inhibited at higher concentrations of 50 and 100 mg mL⁻¹, respectively. When compared to CHX, the effectiveness of *Piper betle* extract as antifungal agent was better towards all the tested candidal species (PIDG > 50%), although higher concentrations were required for *C. krusei* and *C. glabrata* to show equivalent effect. Results obtained in this study show the potential of *Piper betle* extract as antifungal agent and thus significantly contribute to antifungal development.