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CHONTICHA KAEWANUCHIT : IN VITRO SUSCEPTIBILITY OF THAI MEDICINAL PLANTS AGAINST CLINICAL STRAINS OF *CANDIDA ALBICANS*. THESIS ADVISORS : RAJANEE MEKMANEE, M.Sc., MANSUANG WUTHI-UDOMLERT, M.Sc. 54 P. ISBN 974-664-643-5

In Thai medicine, the use of plants in the form of crude extracts, decoction and infusion, was a common practice to treat disease. One of these Thai traditional medicines was anticandida preparation formulated in the past. This preparation was prepared by Lieutenant Colonel Oum Saengsakda in powder mixture form and composed of seven herbs : *Ecdysanthera rosea* Hook.&Arn., *Olax scandens* Roxb., *Barleria strigosa* Willd., *Iresine herbstii* Hook.f., *Panax ginseng* C.Meyer., *Punica granatum* Linn. and *Rhus chinensis* Muell.

Water and 70 % ethanol extracts of powder mixture and seven herbs were subjected for screening of their activity against *C. albicans* isolated from patients attended in Siriraj, Rajvidai and Ramathibodi Hospital. All strains were identified by germ tube test. Anti-candida activity was evaluated by agar disc diffusion and broth dilution methods. Clotrimazole was a reference compound. The result of water and 70 % ethanol extracts of powder mixture, *Punica granatum* L., *Rhus chinensis* Muell. and clotrimazole exhibited their activities with average inhibition zones of 11-15, 11-19, 11-15 and 16.5-23.5 mm respectively, while other herbs were not effective. By using broth dilution test, average MIC value of 70 % ethanol extract of *Rhus chinensis* Muell. was 0.27 g/ml.

Water and 70 % ethanol extracts of *Rhus chinensis* Muell. were scanned to determine appropriate absorption spectra of the extracts by mass spectrophotometer and analysed by HPLC. They showed the same HPLC profile of one peak. Then, hydrolysable tannins in *Rhus chinensis* Muell. were extracted and determined by TLC. The most suitable solvent system was ethyl acetate : chloroform : acetic acid (77 : 15.4 : 7.6). Hydrolysable tannins in *Rhus chinensis* Muell. were isolated and tested for anticandida activity comparable with tannic acid and catechol. No activity was found against *C. albicans*. So it could be concluded that the active components of the extracts from *Rhus chinensis* Muell. were not hydrolysable tannins.