

TITLE: A study of antimicrobial activity of *Piper betle* cream and gel against some fungi, yeast and bacteria

ชื่อภาษาไทย: การศึกษาฤทธิ์ต้านจุลชีพของครีมพลูและเจลพลูต่อการเจริญเติบโตของเชื้อรา ยีสต์ และแบคทีเรียบางชนิด

AUTHOR ผศ. ญ. ดร. พิณทิพย์ พงษ์เพชร  
คณะเภสัชศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

#### ABSTRACT

The study on the antimicrobial activity of *Piper betle* gel and cream containing 4% of *Piper betle* oil against 4 dermatophytes: *Trichophyton rubrum*, *Trichophyton mentagrophytes*, *Microsporum gypseum*, *Epidermophyton floccosum*; against *Candida* spp. and against 2 pyogenic bacteria included *Staphylococcus aureus* and group A streptococcus was performed. Ten strains of each microorganism were used in the study except for 5 strains of *Epidermophyton floccosum*.

Satisfactory results were obtained in the study on the antimicrobial activity of *Piper betle* gel which showed very high antifungal effect similar to clotrimazole cream (1%) and significantly higher than tolnaftate cream (1%) ( $p < 0.05$ ). Despite of the antifungal effect, *Piper betle* gel showed low antibacterial effect when compared to gentamicin cream (0.1%) and oxytetracycline + polymyxin B ointment (30 mg:10,000 unit/gram)

There was no antimicrobial effect observed in the study on the activity of *Piper betle* cream.