

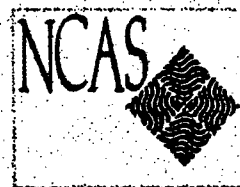
Engineering Social Transformation Through Research & Development

Annual Research Symposium

8-9 June 2015

Sri Lanka Foundation Institute, Colombo

Symposium Proceedings



National Centre for Advanced Studies
in Humanities & Social Sciences
Sri Lanka

Engineering Social Transformation through Research & Development

Annual Research Symposium – 2015

08th – 09th June 2015

**University Grants Commission Auditorium
&
Sri Lanka Foundation Institute
Colombo**

Symposium Proceedings

**National Centre for Advanced Studies in Humanities and Social Sciences
No. 6A
Sukhastan Gardens
Ward place
Colombo 07
Sri Lanka**

Antifungal Activities of Selected Plant Extracts against *Candida Albicans* and *Candida Parapsilosis*

Radhika, N. D. M.¹, Gunathilake, D. P. P.¹,
Gunasekara, T. D. C. P.¹, Weerasekara, M. M.¹, Fernando, S. S. N.¹,
Arawwawala, L. A. D. M.², Hewageegana, H. G. S. P.³

¹Department of Microbiology, University of Sri Jayewardenepura.

²Institute of Industrial Technology,

³Institute of Indigenous Medicine, University of Colombo.

tdcpgunasekara@gmail.com

Aqueous extracts and ethanolic extracts of dried stem bark of *Pongamia pinnata* (Magulkaranda), dried stem of *Rubia cordifolia* Linn (Welmadata), dried leaves of *Jasminum officinale* Linn (Jasmine), dried stem of *Berberis ceylanica* (Daruhandra) and *Garcinia zeylanica* (Goraka) were used in this study. *Berberis ceylanica* (Daruhandra) and *Garcinia zeylanica* (Goraka) are endemic plants of Sri Lanka. Aqueous extracts were prepared as the traditional ayurvedic practice by boiling chopped pieces of herbs in 6 volumes of water down to 1 volume to obtain neat concentration, and Ethanolic extracts were prepared using hot ethanolic extracting method. The neat concentration of stock solution was made by dissolving 250mg of the plant extract (ethanolic) in 1 ml of Dimethyl sulfoxide (DMSO). Five clinical isolates and a standard strain from each *Candida albicans* and *Candida parapsilosis* were tested in triplicates using well diffusion method with Flucanazole and Amphotericin B as positive controls.

Aqueous extract of *Berberis ceylanica* had an average zone of inhibition of 4.6mm against *Candida albicans* and no zone of inhibition against *Candida parapsilosis*. Ethanolic extract of *Berberis ceylanica* had an average zone of inhibition of 15.7mm against *Candida albicans* and 13.6mm against *Candida parapsilosis*. The ethanolic extract of *Rubia cordifolia* had an average zone of inhibition of 2.2mm against *Candida albicans* while none of the aqueous extracts had any effect. Both aqueous and ethanolic extracts of *Jasminum officinale*, *Pongamia pinnata* and *Garcinia zeylanica* did not give any zone of inhibition to both species.

Aqueous and ethanolic extracts of endemic plant *Berberis ceylanica* and ethanolic extract of *Rubia cordifolia* have potential antimicrobial activity against *Candida albicans* and *Candida*

prapsilosis. Further studies should be carried out to determine the cell cytotoxicity and in vivo activity of this extract.

Key words: Antifungal Activity; *Candida*.