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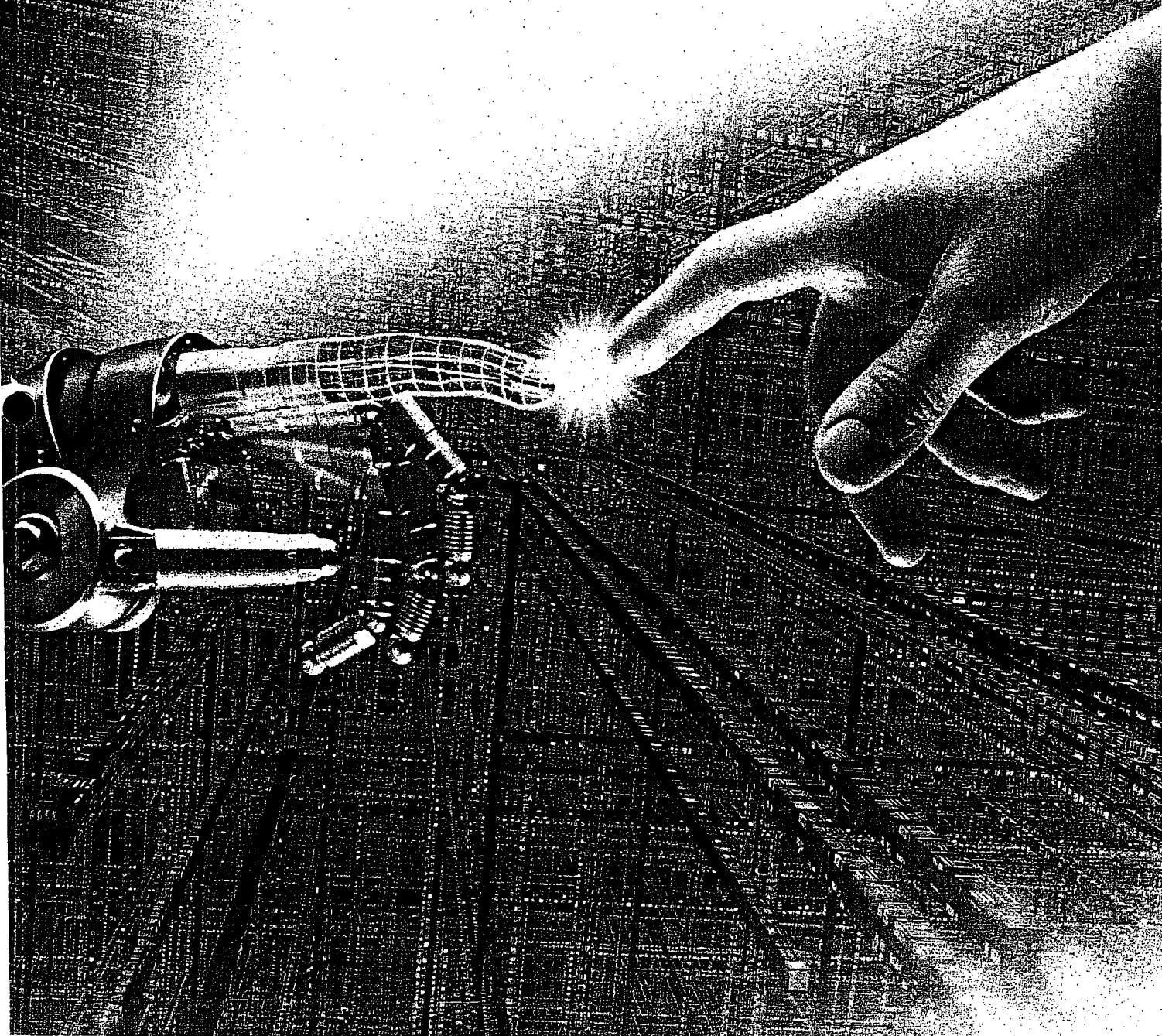
**CEYLON COLLEGE OF PHYSICIANS**



**49<sup>th</sup> ANNUAL ACADEMIC SESSIONS**

**22<sup>nd</sup> - 24<sup>th</sup> SEPTEMBER 2016**

**Cinnamon Grand  
COLOMBO, SRI LANKA**



## PP 25

### Anti-biofilm effect of Ayurvedic preparations: TripalaChurna and aqueous extract of *Mimusopselengibark*

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#### Introduction

Oral biofilms are complex microbial communities, which serve as a protective niche for pathogens. Biofilm organisms are resistant to antimicrobials. Herbal preparations have minimum side effects and are potential antimicrobials.

#### Objectives

We investigated the anti-biofilm effect of bark of *Mimusopselengi* (Munamal) and Tripalachurna consisting of Aralu/*Terminalia chebula*, Bulu/*Terminalia bellirica* and Nelli/*Emblica officinalis* used in ayurvedic medicine.

#### Methodology

Inhibitory effect of bark of *Mimusopselengi* and Tripalachurna were investigated against both planktonic *C. albicans* and *C. tropicalis* by agar well diffusion method. Chlorhexidine gluconate 0.2% was used as the control. Minimum Inhibitory Concentration for planktonic *Candida* was determined by alamar blue assay and Minimum Biofilm Inhibitory Concentration was determined by MTT (3-(4, 5-dimethylthiazol-2-yl)-2, 5-diphenyltetrazolium bromide) assay. Time to kill assay for mature biofilms was performed. Scanning Electron Microscopy (SEM) was done to assess biofilm architecture before and after treatment.

#### Results

Triphala inhibited the growth of both planktonic *Candida* species and biofilms of *C. tropicalis*. Bark of *Mimusopselengi* had no inhibitory effect on planktonic or sessile *Candida* species. Chlorhexidine gluconate (0.2%) effectively reduced metabolic activity of *Candida* biofilms within 30 seconds of exposure. SEM revealed that the cell density of *C. albicans* biofilm had increased while the cell number of *C. tropicalis* biofilm was significantly reduced after 48 hours Triphala treatment compared to negative controls.

#### Conclusion

Triphala had shown an inhibitory effect against biofilms of *C. tropicalis*. But not against *C. albicans*. However Triphala had a lesser inhibitory effect than 0.2% chlorhexidine gluconate.