

## Antibacterial Activity of *Pungam paal* Oil (P.P-Oil) Against Selected Pathogens

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Siddha Medicine is one of the medical system of Indigenous Medicine. Siddha drugs have been prepared by using herbs, minerals, metals and animal products. *Pongamia pinnata* leaves, seeds, flowers, bark and root bark are used in the treatment in Siddha Medicine and seeds and root bark oils are used in the treatment of skin diseases. In general the organisms *Staphylococcus aureus* and *Pseudomonas aeruginosa* caused wounds and ear infections. Hence the aim of the study was to evaluate the antibacterial activity of oil of *Pongamia pinnata* against *Staphylococcus aureus* (ATCC 25923), *Escherichia coli* (ATCC 25922), *Pseudomonas aeruginosa* (ATCC 27853), *Enterococcus faecalis* (ATCC 29212). Pungam Paal oil was prepared according to the Siddha literature. PungamPaal -oil was prepared by milks of root bark of *Pongamia pinnata*, *Cocos nucifera*, *Helicterus isora*, *Boswellia seratta*, zinc sulphassulphate of zinc and copper sulphate. The antibacterial activity was carried out using the cut well diffusion method with Muller Hinton Agar. The diameter of the zone of inhibition (ZOI) was measured after 24 hours incubation. The P.P-oil showed inhibition activity against all the organisms tested. The diameter of Z-O-I is ranging from  $11 \pm 1.16$  to  $22 \pm 0.29$ mm. Oil showed antibacterial activity against gram negative bacteria ranging from  $11 \pm 1.16$  to  $22 \pm 0.29$ mm. The diameter of Z.O.I of oil is greater than the diameter of Z-O-I of standard streptomycin ( $21 \pm 0.91$ mm). The oil has an antibacterial activity against tested organisms that could be used in treatment of infectious disease caused by *Enterococcus faecalis*, *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Escherichia coli*. Further studies will be needed with wide spectrum of clinical isolates and to identify the active compounds of the oil.

**Key Words** : Antibacterial activity, Pungam paal oil(P.P oil), *Pongamia pinnata*, *Staphylococcus aureus*.