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An in vitro study of extracts of *Pongamia pinnata* (Indian beech "Karanda") and *Azadirachta indica* (Neem "Kohomba") leaves on *chrysomyia Megacephala* larvae

Chrysomyia megacephala larvae are facultative parasites that can cause wound myiasis in man and animals. Myiasis is the invasion of living tissue by larvae of certain species of dipterous flies. In a previous study we found that *Chrysomyia bezziana,* the larvae of which are known to be obligatory parasites, is the commonest species found in maggot infested wounds [1].

A preliminary survey done on treatment practices in the management of wound myiasis in the surgical wards of the National Hospital of Sri Lanka indicated that topical application of mineral turpentine (a commercially available, low aromatic white spirit) is widely used prior to the manual removal of maggots. A literature search done on plant extracts used in the treatment of wound myiasis in Ayurvedic practice indicated that extracts of *Pongamia pinnata* ("Karanda', Indian beech) and *Azadirachta indica* (Neem, " kohomba",) leaves are commonly used. The objective of this *in vitro* study was to investigate the direct effect of these plant extracts on larvae of *C. megacephala*. A colony of *C. megacephala* was maintained in the insectory of this Department and 2nd or 3rd instar larvae produced were used in the study.

Fresh Indian beech and Neem leaves were crushed in tap water at a ratio of 1: 1 (w/v). Pads of cotton wool soaked generously in these extracts were placed in Petri dishes. 10 larvae of *C. megacephala* were dropped onto these Petri dishes, covered with net and observed for 4 hours. "Mukunuvenna" (*Alternanthera sessilis*) extracts were used similarly as the negative control (based on past literature) and turpentine being the most frequently used substance for maggot infested wounds was used as the positive control. After 4 hours the number of immotile larvae in each Petri dish was recorded and the experiment was repeated 3 times. There was no difference in the appearance or the activity of larvae observed after exposure to leaf extracts of Indian beech, Neem or "Mukunuvanna". However, all the larvae exposed to turpentine were found to be dead. This concludes that Indian beech or Neem leaf extracts do not have a direct toxic effect on *C. megacephala* larvae when studied *in vitro*.