

Cytotoxic Effect of Neem Seed Extract (*Azadirachta indica*) in Comparison with Artificial Insecticide Novastar on Haemocytes (THC and DHC) of *Musca domestica*

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Abstract : Housefly, *Musca domestica* Linnaeus is ubiquitous and hazardous for *Homo sapiens* and livestock in sundry generations. *Musca domestica* carry 100 different pathogens, such as typhoid, salmonella, bacillary dysentery, tuberculosis, anthrax and parasitic worms. The flies in rural areas usually carry more pathogens. Houseflies feed on liquid or semi-liquid substances besides solid materials which are softened by saliva. Neem botanically known as *Azadirachta indica* belongs to the family Meliaceae and is an indigenous tree to Pakistan. The neem tree is also one such tree which has been revered by the Pakistanis and Kashmiris for its medicinal properties. Present study showed neem seed extract has potentially toxic ability that affect Total Haemocyte Count (THC) and Differential Haemocytes Count (DHC) in insect's blood cells, of the housefly. A significant variation in haemolymph density was observed just after application, 30 minutes and 60 minutes post treatment in term of THC and DHC in comparison with novastar. The study strappingly acclaim use of neem seed extract as insecticide as compare to artificial insecticides.

Keywords : neem, *Azadirachta indica*, *Musca domestica*, differential haemocyte count (DHC), total haemocytes count (THC), novastar

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