**Abstract**

 A toxic substance can be classified in one of several ways, according to (i) its physiological manifestations, e.g., as nerve and muscle poison, (ii) its chemical constitution e.g. alkaloid, glucoside, or (iii) its botanical origin. It has been estimated that in India there are about 700 poisonous species belonging to over 90 families of flowering plants.

In *Cleistanthuscollinus*, the leaves contain the toxic substance identified as a lignan lactone cleistanthin.

*Clariasgariepinus* of both sexes, gonadally immature, weighing 50 -70g, were exposed to 5% *Clesitanthus* leaf extract for 30 days. At the end of the exposure, the fishes were terminated by cervical transaction The liver was dissected and the microsomes were isolated. EROD activities were measured fluorometrically.

The results indicate that the plant extract significantly accumulated the EROD activity (+ 36.84 %; p< 0.05). Perhaps the toxic substance targets the liver, which is the seat of all biochemical activities in fish.