**Abstract**

Many Indian plants have been increasingly tested for a wide variety of biological activities including antifertility, anticancer, chemotherapeutic and pharmacological activities. Though various plant extracts are used as arrouw poisons and as fish baits, no study to date has evaluated the biopharmacological properties of these plant extracts on freshwater food fishes. In order to identify a substance which can be easily obtained and readily used for fish catching purposes, we have evaluated the pharmacological effects of six commonly available poisonous plants in our area.

*Daturametel, Gloriosasuperba, Vincarosea, Calotropis gigantean, Antiaristoxicaria*and*Partheniumhysterophorus*were the plants screened for pharmacological effects in commonly available and economically important food fish *Channastriata*. The biopharmacological effects were evaluated by obtaining 50% ethanolic extract on neuromuscular transmission. Acetylecholine synthesis and acetylecholine esterase activity inhibition were studied on heart, brain, muscle and liver tissues. The results indicate that all these plants contain potent toxic substances and inhibit neuromuscular transmission. Preliminary studies show that the toxic substances may be easily prepared and readily used for fish baiting purposes.