**Abstract**

Serotonin (5-hydroxytryptamine) is a vasoconstricting hormone produced normally by the argentaffin cells of the gastrointestinal tract. It is implicated in the synaptic transmission in the CNS and is widely distributed in living cells. It is present in the gastrointestinal tract, blood plaltelets and the brain. The hypothalamus, midbrain and caudate nucleus but not the cerebral cortex contain considerable amounts of serotonin.

It is found in the brain by the action of the enzyme 5 hydroxytryptophandecarboxyalted and is destroyed by the action of amino oxidases in a similar manner to the catecholamines. So amino oxidase inhibitions lead to marked increase in the endogenous serotonin levels.

In the case of fishes, no information is available on the inhibition of serotonin by any effluent. Hence the present work was undertaken to assess the effect of steel factory effluent on the brain serotonin content of the air-breathing fish, *Trichogasterpectoralis*.

Prolonged (30 days) raw steel factory effluent exposure (5%) inhibited (-63.13%) markedly the brain serotonin content of the fish. Whether the effluent exerts similar action on other organs is under investigation.