Starvation-Induced Impairment of Metabolism in a Freshwater Catfish

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Starvation induced changes in citrate synthase (CS), glucose-6-phosphate dehydrogenase (G6-PDH), lactate dehydrogenase (LDH), DNA, RNA, RNA/DNA ratio and protein were studied in the freshwater catfish *Clarias batrachus*. Starvation gradually decreased the activity of CS, G6-PDH and LDH in brain, liver and skeletal muscle of the freshwater catfish. The maximum reduction in these enzyme activities upto 35–45% was observed after 35 days of fasting. This shows substantial decline in aerobic and biosynthetic capacity during starvation period. DNA, RNA, RNA/DNA ratio and protein contents were also reduced from 40–67% which reflects reduction in an overall capacity of the protein synthesis. Starvation – induced macromolecular changes indicate impairment of metabolism in fish.

Key words: Fish Starvation, CS, G6-PDH, LDH