

Hepatotoxic effects of municipal sewage effluent on *Mystus tengara*. A biochemical and histopathological analysis

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Nada is an industrial town in the Malawi region of western Madhya Pradesh and is situated in the bank of Chambal River. The study was conducted to investigate the histopathological and biochemical studies of the liver of *Mystus tengara*. The effluents were collected from non point source and the chemical parameters assessed. The COD, BOD, TSS, TS and TDS were much higher than the standard quality. The toxicity of these effluents on *Mystus tengara* and the LC 50 values were determined. The liver showed vacuolar degeneration, focal areas of necrosis and fibrosis, aggregations of inflammatory cells between the hepatocytes. Biochemical studies clearly indicate that total protein, DNA and RNA content were higher in control group than experimental groups. However, both ALP and ACP activity was maximum in treated groups. The decrease in the total protein content in experimental fishes is due to decrease in DNA and RNA contents. However, it is interesting to see that in both experimental groups both ALP and ACP activity was elevated. It may be due to that, as both are phosphatases and known to remove phosphorus (dephosphorylation) at 5' end of DNA and thus preventing DNA from ligating. That is why that DNA content was found to be minimum in both treated groups when both enzymes were elevated. Therefore, low protein and RNA content were observed in experimental groups. It was concluded that the environmental contamination of Chambal river induced several histopathological and biochemical alterations in the liver of *Mystus tengara*.

Biography

P.B.Reddy has completed his Ph.D in 1991 from Vikram University, Ujjain.M.P. In 1992, he won the M.P. Young Scientist Award, by MP Council of Science and Technology (MP.Govt). Presently he is the Prof & Head of the Department of Zoology, Govt.College, Nagda, Ujjain.M.P. He has published more than 20 papers in reputed journals and serving as an editorial/advisory board member of two reputed Journals. He is life/Fellow member of various 6 international societies of environmental and Life Sciences.

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