
Abstract

Aquatic sediments are the major sink for organic and inorganic anthropogenic contaminants. These contaminants have well documented reproductive, development, physiological and metabolic effects and hence are toxic to aquatic and terrestrial organisms. The elutriation of sediments has been widely used in ecotoxicological studies to evaluate the sediment toxicity. In our study we investigated the pollution level of sediments of River Ravi contaminated with different heavy metals. Our finding indicated that different sites of River Ravi have the presence of different heavy metals such as Copper, Nickel, Cobalt, Lead, Nickel and Cadmium. The study was also carried out to determine the potential of contaminated River-Ravi sediments causing metabolic disruption and obesogenic response on Grass Carp (*Ctenopharyngodon Idella*). The sediments were collected from three different sites of River Ravi i.e., Babu Sabu, Saggian and Shadra and the Grass Carp was exposed to three different concentrations 1:10, 1:50 and 1:100 of elutriate sediments for 7 days to examine the lipid metabolism disruption in Grass Carp liver by biochemical parameters such as Cholesterol level and Triglycerides level. The Cholesterol and Triglyceride level was higher in all the groups that was exposed to concentration of 1:50 elutriate of sediments of River Ravi sites. This shows that the liver under exposure of contaminants increase the uptake to fatty acids from diet and hence from fatty acids, triglycerides and cholesterol will produce in increasing amount and their accumulation in liver will cause excessive lipogenesis that will lead to obesity.