SUMMARY
AND
RECOMMENDATIONS
1. The experimental fishes of this investigation are *Catla catla*, *Labeo rohita* and *Cirrhinas mrigala* from the freshwater habitat, *Rastrelliger kanagurta* from marine habitat and *Mugil cephalus* from brackish water habitat.

2. The levels of polyunsaturated fatty acids (PUFA) like ‘alphalinolenic acid (ALA), eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA)’ are estimated in the dorsal muscle and liver of fish fauna as mentioned above from different habitats.

3. The individual PUFA content and the total PUFA content is significantly found to be higher in the muscle of marine fish mackerel when compared to freshwater fishes. The brackish water fish namely mullet recorded an intermediary level between marine and freshwater fishes.

4. The same trend as in the case of muscle tissue is also observed in liver of these fishes regarding the PUFA content, but with somewhat lesser levels of PUFA in liver than in the muscle.

5. In both the tissues, muscle and liver, the PUFA ALA is significantly found to be far less when compared to other two PUFAs EPA and DHA.

6. Amongst the freshwater fishes, rohu recorded the highest level of PUFA in both muscle and liver followed by catla and mrigal.

7. The serum cholesterol level is found to be highest in the freshwater fishes when compared to brackish water and marine fishes.

8. The serum cholesterol level is found to be highest in mrigal followed by catla, rohu, mullet and mackerel.
9. There is an inverse relationship between PUFA content and serum cholesterol, *i.e.* in fishes where the PUFA content is more like mackerel and mullet, the serum cholesterol is found to be very less and vice-versa.

10. Hence, it is recommended that consumption of marine fish followed by brackish water fish is preferred over freshwater fishes.

11. However, when marine and brackish water fishes are not available, it is recommended that freshwater fishes may be consumed in the preference of rohu followed by catla and mrigal with reference to the PUFA.

12. Thus consumption of fishes with high PUFA content may definitely contribute in lowering the cholesterol level in the blood thereby controlling coronary heart diseases (CHD).

13. The conservative recommendation especially for normal population is to eat fish at least 1-2 times a week. This will provide several nutritional and health benefits, because of n-3 PUFA, micronutrients and high content of good quality proteins with lower cost.