

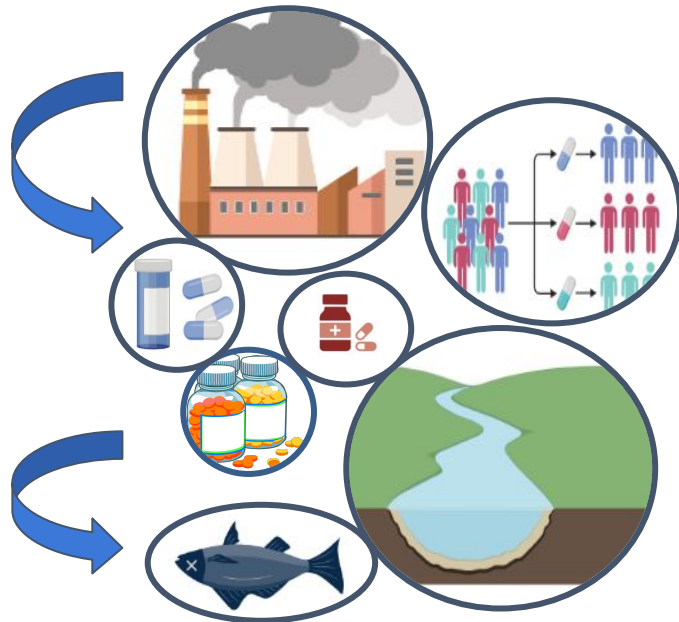
The effects of pharmaceuticals in the neuroendocrinology of aquatic species: a study using *Astyanax lacustris* species exposed to non steroidal anti inflammatories drugs.

Emerging pollutants in aquatic ecosystems

INTRODUCTION

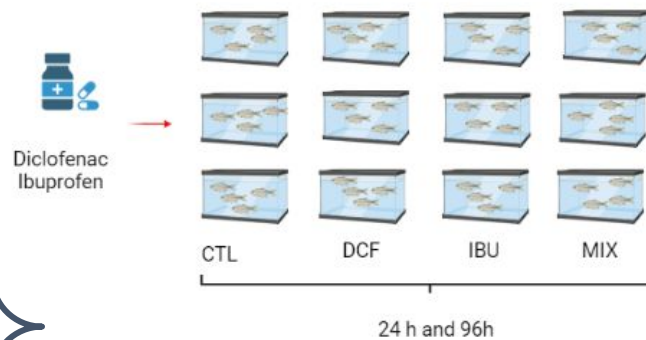
Pharmaceuticals compounds (PCs) are commonly use in healthcare applications. Over the years, an increase in the consumption of PCs and wrong disposal results in negative impacts to aquatic ecosystems. Substances like lipid regulators, antibiotics, anti inflammatories drugs have been detected in those environments and investigations have reported their harmful effects to non-targeted aquatic species.

Environmental contamination

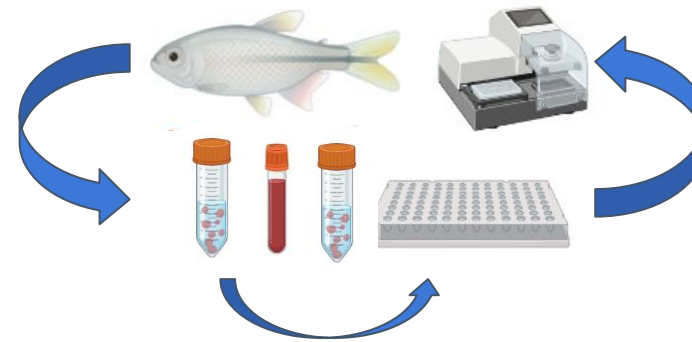


METHODS AND EXPERIMENTS

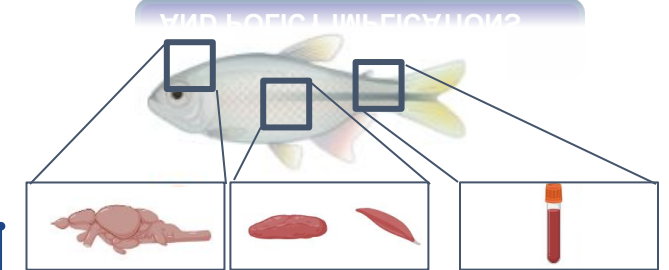
Experimental design



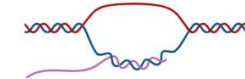
Laboratory procedures



RESULTS, CONCLUSIONS AND POLICY IMPLICATIONS



Gene expression modifications



Reproduction

Biochemical alterations



Reproduction

Metabolism

- Risk Assessment tools for anti inflammatories drugs including biomarkers of reproduction and metabolism biological endpoints;
- Implementation of PCs disposal policies;
- Monitoring programs to detected limits of PCs on natural aquatic environments.