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Dissertation topic:

New organic pollutants in aquatic ecosystems and their behavior in the food chain

Brief description of the dissertation:

The aim of this dissertation is to study the fate of emerging organic pollutants in aquatic ecosystems, with a particular focus on the processes of their bioaccumulation and biomagnification. The research will focus on the collection and processing of both biotic and abiotic samples followed by their preparation and analysis to assess the extent of contamination in freshwater and marine environments. Pollutants will be extracted using ASE (Accelerated Solvent Extraction) and SPE (Solid Phase Extraction) techniques, and subsequently analyzed through liquid and gas chromatography coupled with mass spectrometry. The trophic positions of individual organisms will be determined by stable isotope analysis of carbon (^{13}C) and nitrogen (^{15}N). The resulting data will provide insights into the entry of organic pollutants into different trophic levels of the food web, their distribution across various tissue types, and comparative patterns of bioaccumulation among diverse predator groups, including fish, mammals, and birds.

Date of commencement of studies, year

commencement in 2025