

MERFISH

Health-benefit understanding of mercury-selenium interactions from fish to human



H2020-MSCA-RISE

Duration: 2021-2025


<https://cordis.europa.eu/project/id/101007967>



<https://twitter.com/Merfish>

About

MERFISH brings together international experts from a wide array of interdisciplinary research areas (analytical chemistry, fish nutrition, environmental science, communication, toxicology & aquaculture) from industry and academia from EU, Brazil and Mauritius, with a long-term goal of furthering the understanding of the source, transport, fate and effects of mercury from fish to humans and the detoxification role of selenium. MERFISH surges from a global demand, directly related to mercury, one of the top ten chemicals of major public health concern identified by the World Health Organization. However, mercury metabolic pathways in biota still remain poorly understood. Its understanding is crucial to elucidate its (eco)toxic effect and to identify important drivers of the mercury biogeochemical cycle. Fish and seafood consumption is the principal human exposure source to (toxic) methylmercury. EU food safety authorities (such as EFSA), and well-known US and United Nation environmental and food organizations (such as USEPA and FAO) clearly advise about avoiding certain fish species for vulnerable populations (including pregnant women and young children) depending on their methylmercury concentrations. Mercury binding with proteins has been identified as a potential cause for toxicity and the role of selenium as antagonist for mercury toxicity has



been identified but not well understood. MERFISH is based on the development of novel analytical approaches to gather new knowledge about mercury and selenium mechanisms in fish and humans. The project will be a critical contribution to establishing more realistic scenarios to estimate human health risk and benefits, but also to better capture the economic impacts on commercial fisheries. MERSFISH will build a lasting research network to answer emerging challenges in analytical chemistry, food safety, trophic transfer, fish nutrition and environmental and human health related to the global mercury issue.

Participants



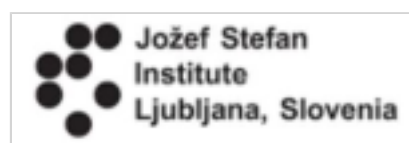
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