

## **Role of organic matter composition on mercury methylation in aquatic ecosystems**

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One major challenge in contemporary environmental science is to identify factors controlling the formation of methylmercury (MeHg). The methylation of inorganic mercury (HgII) to MeHg is biotically mediated in aquatic systems. Organic matter (OM) interacts very strongly with HgII, affecting its speciation, solubility, mobility, and toxicity in the aquatic environment. While, it is well known that OM in aquatic systems consists of a mixture of terrestrial compounds drained from the catchment and internally produced OM mainly derived from phytoplankton, the influence of the molecular composition of OM on HgII methylation has been poorly described. This presentation gives an overview on the impact of terrigenous and planktonic derived OM on HgII methylation in aquatic ecosystems. The impact of different global warming scenarios on the fate of this pollutant is also discussed.