

DFO-ISMER-UQAR-OFI doctoral fellowships

As part of the DFO-ISMER-UQAR-OFI doctoral fellowship program (\$40,000/year for 3 years), the Canada Research Chair in Coastal Hydrogeosystem Geochemistry at the *Institut des Sciences de la Mer* (ISMER/UQAR) and the Ecosystem Stress Laboratory of Fisheries and Oceans Canada (DFO) is recruiting a Ph.D. student for research in marine biogeochemistry as part of a UNESCO Decade of Ocean Science for Sustainable Development.



Context

Over the past century, oxygen concentrations have decreased dramatically in the deep-water of the Estuary and Gulf of St. Lawrence (EGSL) with negative consequences for marine life, the fishing industry, and ecosystem health. Hypoxia and warming also impact microbial metabolism, organic matter mineralization processes, and ecosystem functions. With the recent acceleration of deoxygenation and warming of bottom waters, it is crucial to continue our effort to understand and document the biogeochemical processes occurring in the deep-water mass of EGSL. EGSL is a unique natural laboratory for understanding the establishment of an oxygen minimum zone. The proposed Ph.D. project aims to **1) revise organic nitrogen budgets, 2) experimentally evaluate the effect of warming (>7°C) and oxygen depletion (<10%) on organic matter degradation and 3) on pelagic oxygen consumption and N₂ production.**

Qualifications

The candidate will participate in various oceanographic cruises on the EGSL, and conduct experiments in the state-of-the-art geochemistry laboratory of ISMER/UQAR and in the facilities of the Maurice Lamontagne Institute (DFO). The candidate will join a multidisciplinary team and will benefit from the support of professionals for his or her work, in addition to navigating between academic and governmental environments. The candidate will be based at ISMER/UQAR, under the supervision of Gwénaëlle Chaillou and the co-supervision of David Lévesque (DFO). The candidate will also benefit from the expertise of Michel Gosselin and Jean-Carlos Montero-Serrano, professors at ISMER/UQAR, and Michel Starr, a researcher at DFO. The team will be completed by Jean-Éric Tremblay from U. Laval and Doug Wallace from U. Dalhousie who will act as collaborators in the project.

We are looking for someone who is i) motivated and committed to completing the project and publishing the results, ii) has experience in marine biogeochemistry or environmental chemistry or oceanography, and iii) is eligible for the Oceanography Ph.D. program and for DFO-ISMER-UQAR-OFI doctoral fellowship program. As an inclusive workplace, we strive to attract, retain and develop our staff based on inclusive principles. We celebrate the richness that gender identity, ethnicity, sexual orientation, disability, and age bring. We encourage all applications.

The preferred start date is September 2023 but remains negotiable through January 2024. The eligibility criteria for this scholarship are available on the ISMER/UQAR website. Applications (including a cover letter, CV, and contact information for two referees) should be submitted to Gwénaëlle Chaillou (gwenaelle_chaillou@uqar.ca) and David Lévesque (david.levesque@dfo-mpo.gc.ca).