CONSEILLÈRE SCIENTIFIQUE

CATHERINE MOUNEYRAC

Professeure
Université Catholique de l'Ouest

The general field research of C. Mouneyrac concerns the responses of aquatic organisms to natural and chemical stress (conventionnal and emerging contaminants such as trace elements, persistent organic pollutants, endocrine disruptors, nanomaterials, micro/nanoplastics). The chosen models are annelids, mollusks, crustaceans, sponges. At the interface of fundamental and applied research, she aims to fulfill the gap between ecological (bio indicators) and ecotoxicological (biomarkers) approaches, the final objective being to help environmental diagnosis. More precisely, she studies biomarkers allowing extrapolating from suborganismal responses (biomarkers, energy reserves, reproduction processes) and organismal (biological indices, behaviour biomarkers) to effects occurring at higher levels of biological organization. C. Mouneyrac has participated to the conception and realization of numerous national (ex : ANR) and international (FP7, H2020) scientific projects. She has supervised post-graduate student's works (Post-Doc, PhDs, Masters). She is referee for numerous international journals (Aquatic Toxicology, Ecotoxicology and Environmental Safety, Environmental Sciences and Technology, Nanotoxicology, STOTEN…), and research proposals (ANR, Danish Research Council, Research Grrants Council Hong Kong…). She is part of the Expert committee on the assessment of the risks related to physical agents, new technologies and development areas at the French Agency for Food, Environmental and Occupational Health & Safety (Anses). She has been scientific officer at ANR. She has been selected as a decision-makers a to follow the national study course of the Institut des Hautes Etudes pour la Science et la Technologie (http://www.ihest.fr)

Autres responsabilités exercées

Vice Rector for Research and Valorization (from 2019)
Dean of the Faculty of Sciences (2014-2019)
Director of the Institute of Applied Biology and Ecology (2005-2014)
Scientific Officer Toxicology-Ecotoxicology (ANR)

Principales publications

- **Silva A L,.Prata JC., Mouneyrac C., Barcelò D., DuarteAC., Rocha-Santos T.** (2021). Risks of Covid-19 face masks to wildlife: Present and future research needs. *Science of the Total Environment* **792 (20)**, 148505.
  https://doi.org/10.1016/j.scitotenv.2021.148505
- **Tlili S., Mouneyrac C.** (2021). New challenges of marine ecotoxicology in a global change context. *Marine Pollution Bulletin* **166**, 112242.
  https://doi.org/10.1016/j.marpolbul.2021.112242
- **Lammel T., Thit A., Cui X., Mouneyrac C., Baun A., Valsami-Jones E., Sturve J., Selck H.** (2021). Dietary uptake and effects of copper in Sticklebacks at environmentally relevant exposures utilizing stable isotope-labeled 65CuCl2 and 65CuO NPs. *Science of the Total Environment* **757**, 143779
  https://doi.org/10.1016/j.scitotenv.2020.143779
- **Châtel A., Auffan M., Perrein-Ettajani H., Brousset P., Métais I., Chauran P., Mouloud M., Clavaguera S., Gandolfo Y., Bruneau M., Masion A., Rose J., Mouneyrac C.** (2020). The necessity of investigating a freshwater-marine continuum using a mesocosm approach in nanosafety: The case study of TiO2 MNM-based photocatalytic cement. *NanoImpact* **20,** 100254.
  https://doi.org/10.1016/j.impact.2020.100254

- **Revel M. Yakoenko N., Caley T., Guillet C., Châtel A., Mouneyrc C.** (2020). Accumulation and immunotoxicity of microplastics in the estuarine worm *Hediste diversicolor* in environmentally relevant conditions of exposure. *Environmental Science and Pollution Research*, **27**, 3574 - 35831
  https://doi.org/10.1007/s11356-018-3497-6
- **Revel M., Châtel A., Mouneyrac C.** (2018). Micro(nano)plastics: a threat to human health?. *Current Opinion in Environmental Science & Health*. **1**, 17–23.
  https://doi.org/10.1016/j.coesh.2017.10.003
- **Barrick A., Marion J-M., Perrein-Ettajani H., Châtel A., Mouneyrac C.** (2018). Baseline levels of biochemical biomarkers in the endobenthic ragworm *Hediste diversicolor* as useful tools in biological monitoring of estuaries under anthropogenic pressure. *Marine Pollution Bulletin*. **129**, 81–85.
  https://doi.org/10.1016/j.marpolbul.2018.02.006
- **Devin S., Buffet PE., Châtel A., Perrein-Ettajani H., Valsami-Jones E., Mouneyrac C.** (2017). The Integrated Biomarker Response: a suitable tool to evaluate toxicity of metal-based nanoparticles. *Nanotoxicology* **11**, 1-6.
  http://dx.doi.org/10.1080/17435390.2016.1269374
- **Métais I., Châtel A., Mouloud M., Perrein-Ettajani H., Bruneau M., Gillet P., Jrad N., Mouneyrac C.** (2019). Is there a link between acetylcholinesterase, behaviour and density populations of the ragworm *Hediste diversicolor*? *Marine Pollution Bulletin* **142**, 178–182.
  https://doi.org/10.1016/j.marpolbul.2019.03.026
- **Bertrand L., Monferran M.V., Mouneyrac C., Amé M.V.** (2018). Native crustacean species as a bioindicator of freshwater ecosystem pollution: A multivariate and integrative study of multi-biomarker response in active river monitoring. *Chemosphere* **206**, 265-277.
  https://doi.org/10.1016/j.chemosphere.2018.05.002