

Alexandre J. Poulain

Full Professor, Tenured
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DEGREES & TRAINING:

- . NSERC Postdoctoral Fellow, Department of Biology, Geobiology Lab, Massachusetts Institute of Technology (MIT), MA, USA, 2007-2009
- . Ph.D., Sciences Biologiques, Université de Montréal, Canada, 2007
- . M.Sc., Aquatic Sciences, Institut National de la Recherche Scientifique (INRS), Eau, Terre & Environnement, Canada, 2003
- . B.Sc., Biology and Environmental Science, Université d'Angers, France, 2001

EMPLOYMENT HISTORY:

- . 2024 : Vice-Dean, Research & Infrastructure
- . 2021-2024 : Vice-Dean, Innovation & Strategic Partnerships
- . 2020 : Full Professor, Department of Biology, University of Ottawa, ON, Canada.
- . 2014-2020: Associate Professor, Department of Biology, University of Ottawa, ON, Canada.
- . 2019-2022: Adjunct Professor, Department of Civil & Mineral Engineering, University of Toronto, ON, Canada.
- . 2019-2024: Visiting Scientist, Fellow of the Chinese Academy of Science, State Key Laboratory for Environmental Geochemistry, Guiyang, China.
- . 2016-2019: Adjunct Professor Trent University, ON, Canada
- . 2015-2017: Invited Professor at the Université de Toulon, France
- . 2015-2016: Invited Professor at the Université Grenoble Alpes, France (sabbatical leave)
- . 2009-2014: Assistant Professor, Department of Biology, University of Ottawa, ON, Canada

STATEMENT OF CURRENT RESEARCH:

The long-term objective of the lab is to assess and quantify threats to ecosystem health that are associated with toxic metal(oid)s. We determine how microbes interact with contaminants at the cellular level and evaluate the consequences of these interactions at the ecosystem level. We investigate how microbes sense and transform metals, particularly for detoxification, how such processes evolved, and how this information can be applied to the development of novel analytical and bioremediation tools.

ACADEMIC HONOURS:

- . Chinese Academy of Science President's International Fellow 2019-2022
- . Member of the College of New Scholars, Artists and Scientists of the Royal Society of Canada, 2017-2024
- . NSERC Discovery Accelerator, 2014-2017
- . Ontario Early Researcher Award, 2014-2019
- . Lindeman Award from the American Society for Limnology and Oceanography, 2009

SCHOLARLY AND PROFESSIONAL ACADEMIC ACTIVITIES:

Panel Membership & Reviewing Activities

- . Advisory Board Member of GMOS-Train. GMOS-train is an international and highly interdisciplinary research training programme addressing the need to shift towards the best implementation of the Minamata Convention on Mercury.
- . Royal Society of Canada, Incoming College Member Selection Committee (Biological Sciences)
- . Membre du Jury de sélection des lauréats des Prix Acfas (Association francophone pour le savoir)
- . Panel Review Member for the US Department of Energy (USDOE), and the National Aeronautics and Space Administration (NASA)
- . NSERC Research Tool and Instrumentation Review Panel
- . Comité d'évaluation FRQNT projet individuel et équipe, Fonds de Recherche du Québec - Nature et Technologies
- . Selection committee, Research Development Program, University of Ottawa

- . Selection committee, Fonds France Canada pour la Recherche, University of Ottawa/Consulat Général de France.
- . Ad-hoc grant reviewer: NSF (USA), ANR (France), SNF (Switzerland), FQRNT (QC), NSERC (Canada)
- . Ad-hoc journal reviewer: Environmental Science & Technology, Applied & Environmental Microbiology, Science of The Total Environment, Nature, Nature Communications, Nature Geoscience, Science, Science Advances, Environmental Pollution, Environmental Microbiology, Environmental Chemistry, e-life, FEMS Microbiology Ecology, Geochimica Cosmochimica Acta, The ISME Journal, Limnology & Oceanography, Journal of Geophysical Research,

Editorial Activities

- . Associate Editor - Biogeochemistry, *Frontiers in Environmental Sciences* (2018-present)
- . Subject Editor - Life Science and Microbiology, "FACETS" Canada's own multidisciplinary open access science journal created by Canadian Science Publishing. (2016-present)
- . Associate editor "e-lectures series in aquatic sciences", initiative led by ASLO (Association for the Sciences of Limnology and Oceanography). These peer reviewed lectures are intended as a resource for educators and researchers to teach classes outside their direct field of expertise by providing them with teaching material developed by experts in the field. <http://www.aslo.org/lectures/> (2009-2017)

Event Administration and Organization

- . Organizing Committee Member, 2018 Symposium on Phototrophic Prokaryotes, Vancouver, BC, Canada, August 2018
- . Special session co-chair "Why Do Ecosystems Retain Mercury?" The role of redox transformations in controlling mercury mobility in terrestrial and aquatic environments". International Conference on Mercury as a Global Pollutant, Edinburgh, Scotland, July 2013.
- . Special Session co-chair "Mercury Fate and Biogeochemistry" at the international meeting of the Society for Environmental Toxicology and Chemistry, November 2012
- . General session chair "Mercury Bioaccumulation And Trophic Transfer" at the 2011 Conference on Mercury as a Global Pollutant, Halifax, NS, Canada, July 2011.
- . Member of the Scientific Committee and webmaster of "Vulnérabilité et résilience des écosystèmes: l'utopie d'une gestion durable" under the auspices of the 23^{ème} Entretiens Jacques Cartier; Lyon, France. <http://www.resilienceejc2010.uottawa.ca> November 2010.
- . Organizing Committee Member, 30th Congress of the International Association of Theoretical and Applied Limnology, Montréal, August 2007.

Other Activities

- . Co-founder of Microbright (with Dr. Daniel Grégoire). Microbright is a start up company that uses the power of microbes to remove toxic metals from water. We specialize in using microbes naturally found in the environment to provide an environmentally sustainable solution for water treatment.
- . International Affairs Committee Member, Royal Society of Canada (2018-2020)
- . Associate Director, Environmental Science Program (2016 - 2020)
- . Director, Core Molecular Biology and Genomics Laboratory (2017 - 2020)
- . Member of the Departmental Teaching and Promotion Committee (2017 - 2019)
- . Member of the Biology Graduate Affairs Committee (2016 - 2018)
- . Host and Organizer of [@Limnoseminar](#) series, a series of monthly online live broadcasts to share research in the field of Limnology. (2016-2018)
- . Communications Officer, Society of Canadian Limnologists. (2014-2018)
- . Remote field work and Canadian high Arctic field team leader (2003-2006, 2010).

SUPERVISIONS:

Total HQP training (including supervision and co-supervision since 2009): **81**.
Completed: 3 PDFs, 8PhD, 6 MSc, 55 BSc and 2 research staff. Currently: 1 PDF, 3 PhD, 2MSc, 1 research staff

PUBLICATIONS:

Lifetime Summary Count

List accessible on Google Scholar.

- Papers in refereed journal 99
- Patents 2
- Invited seminars 35
- Abstracts and / or papers read >50