# Independent Scientific Body
# for the Roberts Bank Terminal 2 Project

BIOS OF MEMBERS
(as of Jan 19, 2024)

**Dr. Kelly Munkittrick**
CAIP Research Chair in Aquatic Ecosystem Health and Professor
Department of Biological Sciences, University of Calgary

Kelly Munkittrick is the CAIP Research Chair in Aquatic Ecosystem Health at the University of Calgary since 2019. Previously he was Executive Director of Cold Regions and Water Initiatives at Wilfrid Laurier University, was Director, Environmental Monitoring and Risk Assessment at Canada's Oil Sands Innovation Alliance (COSIA) and held a Tier 1 Canada Research Chair in Ecosystem Health Assessment at the University of New Brunswick. While working previously as a Federal government scientist, Kelly was one of the developers of the Canadian Environmental Effects Monitoring (EEM) requirements for pulp and paper mills, and metal mines, and was a member of the EEM National Science Team. His research interests are related to improving the sensitivity of environmental monitoring programs, improving their utility in regional management frameworks, and increasing capacity for Indigenous community-based monitoring programs. He is a co-founder of the Canadian Rivers Institute, was Scientific Director of the Canadian Water Network, and has sat on expert panels and review Boards for the United Nations University, the Great Lakes Fisheries Commission Board, and the OECD.

**Dr. Mona Nemer (Chair)**
Chief Science Advisor of Canada

Before becoming the Chief Science Advisor, Dr. Nemer was Professor and Vice-President of Research at the University of Ottawa and Director of the school's Molecular Genetics and Cardiac Regeneration Laboratory. She holds a PhD in Chemistry from McGill University and did post-doctoral training in molecular biology at the Institut de Recherche Clinique de Montréal and Columbia University.

Dr. Nemer is a leader in the area of molecular cardiology; she has discovered several genes essential for normal heart development and function. Her work has contributed to the development of diagnostic tests for heart failure and the genetics of cardiac birth defects. She has published more than 200 highly cited scientific articles and trained over 100 students from around the world.

**Professor David M. Paterson**
Executive Director of MASTS
'The Marine Alliance for Science and Technology for Scotland'
Scottish Oceans Institute, School of Biology, University of St Andrews, Scotland

Prof David M. Paterson is Executive Director of the Marine Alliance for Science and Technology for Scotland (MASTS) and Chairs the Sullom Voe Oil Terminal Environmental Advisory Group (SOTEAG). He has 30 years of research experience on coastal marine systems and held a Royal Society University Research Fellowship at Bristol University before moving to St Andrews. He directs the Sediment Ecology Research Group (SERG) working on the dynamics and ecology and microbiology of coastal systems, especially microphytobenthos and biofilms. He has developed an international reputation scholarship in marine science and led many successful interdisciplinary projects (EU and National) involving biodiversity, ecosystem function, ecosystem services, and global change biology, particularly the effects multiple stressors but more recently also including ecological aspects of oil and gas structure decommissioning. He also advises industry, academic institutions, and Scottish Government. As a Champion of the UKRI "Sustainable Management UK Marine Resources" programme he is promoting inter and trans-disciplinary solutions to the challenges of coastal marine management and policy development.

(Profile: https://www.st-andrews.ac.uk/biology/people/dp1 )

**Professor Margaret Rubega**
CT State Ornithologist
Curator, Ornithology Collections
Dept Ecology and Evolutionary Biology, University of Connecticut

Margaret Rubega is a Professor and the Curator of Ornithology in the Department of Ecology and Evolutionary Biology at the University of Connecticut. As the Connecticut State Ornithologist she provides information and technical advice on avian conservation and biology as it pertains bird-human conflict, such as airplane strikes and bird nests on utility infrastructure, to state (legislature's Environment Committee, Dept. of Energy & Environmental Protection) and federal (USFWS, USGS) agencies, environmental NGOs (e.g., National Audubon, The Nature Conservancy), birding organizations, national and international media organizations (e.g., NPR's Science Friday http://bit.ly/2tDtZC4 and Living on Earth http://bit.ly/2szzoeB and BBC Radio http://bbc.in/2t0mFlN), and the public. A parallel, and growing, component of her work is in science communication, and in the evidence-based training of STEM graduate students to communicate with the press, policy-makers, and the public. Her research addresses questions in avian conservation, ecology and evolution mechanistically, integrating tools from functional morphology, biomechanics, physiology, and animal behavior as necessary to contribute to avian conservation by identifying, explicitly and quantitatively, the mechanical limits to the ability of birds to adjust to environmental change. She is an expert on the mechanics of feeding in birds; work on feeding in shorebirds, including Western Sandpipers, in degrading and salinizing environments has been a major thread in her research; she contributed to the Environmental Impact Assessment that resulted in a historic water rights decision at Mono Lake, California. As a result of her work with captive shorebirds, she is internationally recognized for her expertise in shorebird husbandry and has provided consultation to the Bronx and San Diego Zoos, and to the USFWS for their management of shorebirds during rat control campaigns on remote islands. She is a former Trustee of the Robert and Patricia Switzer Environmental Foundation, and currently the co-lead on a federally-funded conservation planning effort for the largest colony of federally endangered Roseate Terns in the western hemisphere.

**Dr. Hannah Wauchope**
Lecturer in Ecology and Conservation
Global Change Research Institute
School of GeoSciences, University of Edinburgh

Hannah Wauchope is a quantitative ecologist and conservation scientist, specialising in evaluating the impact of changes to environments. Hannah began her career at the University of Queensland, working with a team of experts on shorebird population ecology and biology to model future impacts of climate change on 24 Arctic-breeding species, including the Western Sandpiper. She has since been based in the UK, where she has focussed her research on improving methodologies for understanding population trends given sparse data, and for determining when environmental changes, including stressors, are impacting populations. Hannah now works and teaches at the University of Edinburgh, working broadly on change detection and impacts to Canadian systems. Current projects include: improving methodologies for modelling species responses to change; improving methodologies for how we detect changes in populations; predicting beaver distribution shifts into Nunavik; and climate change impacts to snowshore hare and lynx population dynamics in the Yukon.

**Dr. Jean-Michel Weber**
Emeritus Professor of Biology
University of Ottawa

My research aims to characterize how animals select an adequate mixture of metabolic fuels (lipids, carbohydrates and proteins) to cope with environmental stresses. I am especially interested in the underlying physiological strategies for regulating the storage, mobilization and utilization of accessible energy sources to support exercise, fasting, and cold exposure. How long-distance migrant birds and fish have been able to boost their capacity for lipid metabolism is a central topic of inquiry. We have demonstrated that some migrant sandpipers use dietary long-chain omega-3 fatty acids as performance-enhancing agents to prime their flight muscles and increase aerobic capacity. Experimental evidence clearly shows that successful migration depends greatly on the quality of dietary lipids, not just quantity.

Online: compphys.uottawa.ca/team/jean-michel-weber/