

Virtual  
**Seminar**  
**Dr. Doug Muench**

University of Calgary

11 am MT, January 14, 2026

Cellular, molecular and  
metabolic responses of upland  
and wetland plants to  
naphthenic acid fraction  
compounds and oil sands  
process water



## ABSTRACT

Plants are central to reclamation and biological remediation efforts on oil sands mine sites. However, studies that describe the molecular, cellular and metabolic responses of plants to naphthenic acid fraction compounds (NAFCs) and oil sands process water have been underrepresented compared to those of microorganisms. This presentation will outline past and current research from our group that addresses some of these limitations, including the use of model and native plant species, NAFC effects on cellular membranes, and plant uptake and metabolism of NAFCs.



Genomics Research for Optimization of Constructed  
Treatment Wetlands for Water Remediation

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