



The Arctic Institute of North America presents the 2018 – 2019

Arctic Speaker Series

The microbial world in the Arctic:

Environmental baselines and first responders

Speaker:
Rhonda Clark

Date:
Thursday,
September 20, 2018

Time:
6:00 – 7:00 pm

Location:
University of Calgary;
SB 146



GENICE, a Genome Canada funded project, is studying and defining the pristine microbial community in Arctic waters in the Hudson Bay region of Canada and its potential for degradation of hydrocarbons in this cold Arctic environment. Understanding the pristine marine microbial community, prior to any contamination event, provides the baseline against which to assess the effectiveness of any spill responses. And, within this microbial community there will be a percentage of bacteria who can “eat oil” as part of their metabolism. These bacteria would be the “first responders” during a spill event, metabolizing components of the contaminant to begin breaking it down. In this project, genomics and petroleomics techniques are being employed to define the baselines and capacity of the microbial community as first responders. The goals of GENICE are being advanced by a multi-disciplinary team of research scientists

and social scientists from University of Calgary, University of Manitoba and McGill University working together to integrate Arctic communities and response organizations knowledge to inform these scientific efforts and incorporate the project outcomes into practical use within existing spill response approaches.

Biography: Rhonda Clark joined EBG in the fall of 2016 as Research Project Coordinator for the Geomicrobiology group and Project Manager of the Genome Canada GENICE project awarded to Casey Hubert. Prior to joining EBG she worked with Dr. Gerrit Voordouw and the Petroleum Microbiology Research Group here at the University for 8+ years. From 2002-2008 she was a sessional instructor in the department of Biological Sciences teaching microbiology and a Research Associate working on the genetics of nitrogen fixation in *Rhizobium leguminosarum*. Rhonda’s PhD (University of Alberta) work focused on the anaerobic rumen bacterium *Butyvirbio fibrisolvans* and developing novel genetic transfer systems that would allow for the introduction of genes involved in cellulose degradation. This work was done at the Rowett Research Institute in Aberdeen, Scotland, the Agriculture Canada Research Centre in Lethbridge and at the University of Calgary. Upon completing her PhD she was presented with an interesting job opportunity that involved coordinating a 100th Anniversary Commemorative Cattle Drive that took place on CFB Suffield and ended in Medicine Hat, Alberta. The work involved acquiring sponsorships, arranging contracts with service providers (food, video, book, etc), meeting with stakeholders, tracking participant registration and looking after the finances. Rhonda is excited to be supporting EBG in a position that utilizes her experience in research and project coordination.

This event is **free and open to the public**

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