

2016 Compendium of Nunavut Research  
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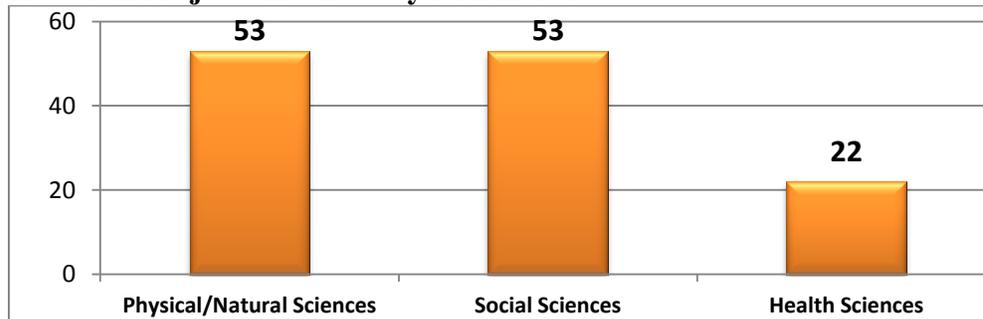




## A Message from Nunavut's Senior Research Officer

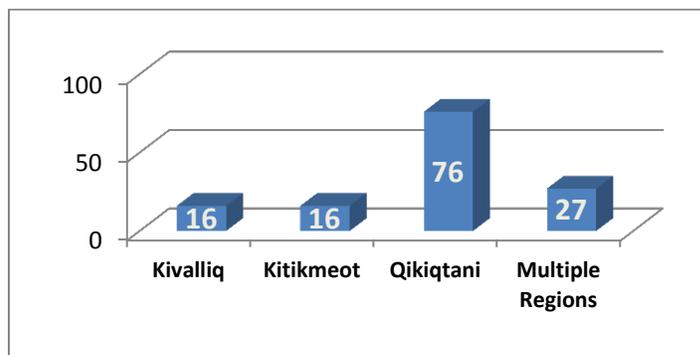
The Nunavut Research Institute (NRI) is responsible for licensing research in Nunavut in accordance with Nunavut's *Scientists Act*. I am pleased to present our 2016 compendium of research which provides information for 128 research projects licensed by NRI in the health, physical/natural and social sciences disciplines across Nunavut in 2016. Our compendium does not include information on wildlife or archeology research which is licensed by other agencies under separate legislation.

### Research Projects Licensed by NRI in 2016



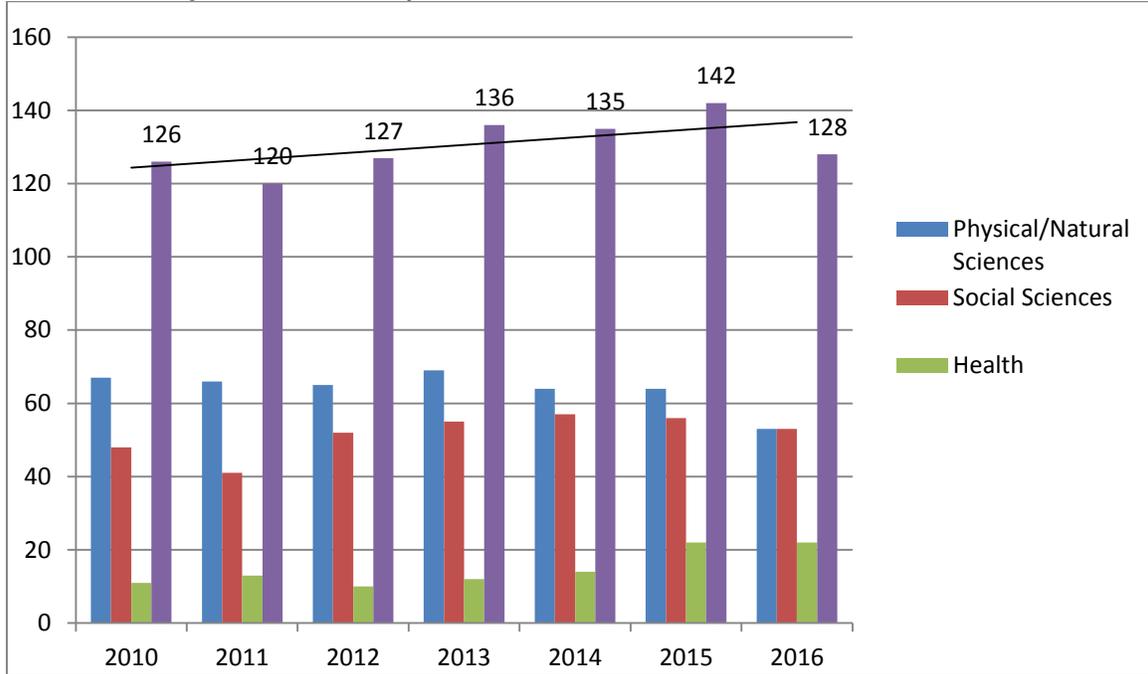
The large majority (60%) of licensed research projects in 2016 were conducted in the Qikiqtani region; and many of these projects utilized logistics support from the Polar Continental Shelf Program in Resolute and from the NRI's Iqaluit research Centre.

### Regional Distribution of Licensed Research in Nunavut, 2016



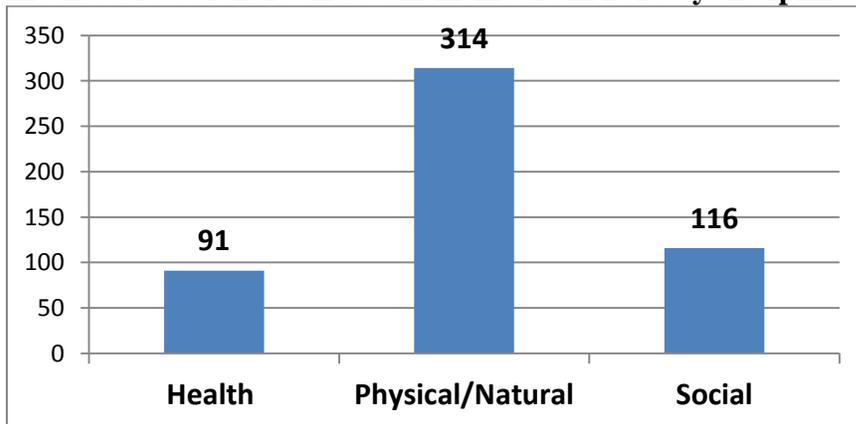
NRI has issued licenses for research in Nunavut since 1993. The total number of licensed projects varies from year to year but has shown a slight increase over time. 2016 marked the first year that an equal number of licenses (53) were issued to projects in both the social and physical/natural sciences in Nunavut.

**Research Projects Licensed by NRI from 2010 to 2016**



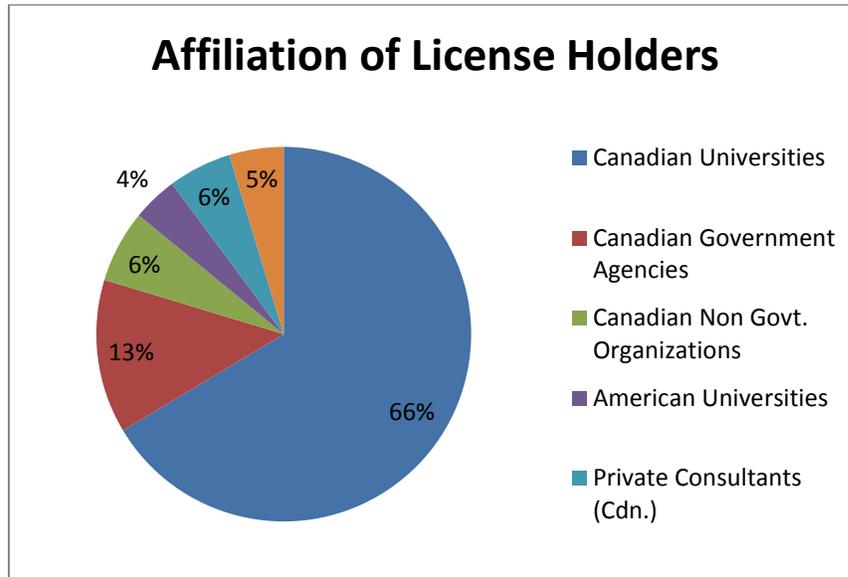
A total of 521 researchers (including principal investigators and team members) participated in NRI licensed research activities in 2016; and the majority of these researchers worked in the physical/natural sciences.

**Licensed researchers and team members in 2016 by discipline**



As in all previous years, the primary recipients of NRI research licenses in 2016 were researchers from Canadian Universities. However, NRI licenses were also issued to researchers from government agencies, the private sector, Canadian non-governmental

organizations, and to investigators from Academic institutions in the United States, Europe, and Asia.



Research in our territory is only successful due to the support, guidance and involvement of Nunavummiut and I would like to thank all those Nunavummiut who shared their valuable knowledge, time, and expertise as part of research in 2016. We believe that research is a powerful tool to address the needs of our communities, by providing useful knowledge, and by building skill and capacity which will help ensure a positive economic and social future in Nunavut. I'm pleased to note that 9 research licenses in 2016 were issued to principal investigators from Nunavut who led a wide range of studies in the health, social, and natural sciences. As the science division of Nunavut Arctic College, NRI is committed to fostering opportunities for all Nunavummiut, and especially Arctic College students and faculty, to participate in scientific research and training.

To view compendiums from previous years, and to learn more about NRI's responsibilities and our various programs and services, please visit our website at [www.nri.nu.ca](http://www.nri.nu.ca).

Mary Ellen Thomas  
Senior Science Officer  
Nunavut Research Institute

## **An East Hudson Bay Network Research Initiative**

<b>License Number:</b>	01 021 15N-M
<b>Principal Investigator:</b>	Heath, Joel
<b>Affiliation:</b>	Arctic Eider Society Vancouver, BC, Canada heath.joel@gmail.com
<b>Number in Party:</b>	4
<b>Research Area:</b>	South Baffin
<b>Fieldwork Locations:</b>	Belcher Islands

### **SUMMARY**

Communities in East Hudson Bay are concerned about ecosystem changes observed in recent decades, particularly related to sea ice conditions, and also about potential impacts of contaminants from long range atmospheric transport and regional human activities. A community-driven research network – The East Hudson Bay Network (EHBN) – has been established to measure and better understand large scale cumulative environmental impacts in East Hudson Bay. Community-driven execution of biological collections as well as parallel ecosystems measurements on sea ice and water will allow for more integrated research in the context of environmental change.

## Overby-Duggan, NU Aeromagnetic Survey

<b>License Number:</b>	04 008 16R-M
<b>Principal Investigator:</b>	Coyle, Maurice
<b>Affiliation:</b>	Geological Survey of Canada Natural Resources Canada Ottawa, Ontario, Canada wmiles@nrca.gc.ca
<b>Number in Party:</b>	2
<b>Research Area:</b>	Kitikmeot
<b>Fieldwork Locations:</b>	Duggan Lake, Overby Lake

### SUMMARY

The purpose of this survey is to acquire high resolution aeromagnetic survey data to inform land management decisions by land owners, governments, and industry. Aeromagnetic surveys measure magnetic properties of bedrock and are an important tool in geological mapping. The bedrock may contain mineral deposits such as carving stone, gold, copper, lead, zinc and diamonds. Understanding the geology will help geologists map the area, assist mineral exploration activities, and provide useful information necessary for communities, Inuit associations, and government to make land use decisions.

## Green Edge

<b>License Number:</b>	01 001 16R-M
<b>Principal Investigator:</b>	Babin, Marcel
<b>Affiliation:</b>	Takuvik Joint International Laboratory Laval University Quebec, Q.C., Canada marcel.babin@takuvik.ulaval.ca
<b>Number in Party:</b>	3
<b>Research Area:</b>	Qikiqtani
<b>Fieldwork Locations:</b>	Qikiqtarjuaq

### SUMMARY

The warming climate has induced substantial changes to the sea ice cover in recent decades, including decreases in ice extent and thickness, and an earlier melt. Through control on the under ice light environment, these changes will likely increase phytoplankton production under the ice cover, extending the period and thus, magnitude of production. This project aims to improve our understanding of the processes that control the Arctic Phytoplankton Spring bloom as it expands northward and to determine its fate in the food web by investigating its related carbon fluxes.

## Glacier Mass Balance and Pollution Studies in the Canadian high Arctic

<b>License Number:</b>	02 002 16R-M
<b>Principal Investigator:</b>	Burgess, David
<b>Affiliation:</b>	Geological Survey of Canada Ottawa, Ontario, CA David.burgess@nrcan.gc.ca
<b>Number in Party:</b>	2
<b>Research Area:</b>	North Baffin
<b>Fieldwork Locations:</b>	Queen Elizabeth Islands

### SUMMARY

This is an ongoing study aimed at monitoring the mass balance and pollution levels of the Melville, Meighen, Agassiz, Devon ice caps, and the Grise Fiord Glacier. An additional component to this work will be to measure variations in flow rates of 3 glaciers on the Devon ice cap in order to understand how these glaciers will respond to future climate warming. Transportation at each site will be by snowmobile or helicopter where requested.

#### I. Glacier mass balance

Meteorological data will also be collected from the 11 automatic weather stations deployed as part of this network. Mass balance measurements provide an indication as to whether the ice caps under investigation are shrinking or growing in any particular year. This work will be performed out of permanent huts that exist on the Meighen and Melville ice caps, and tents on the Agassiz and Devon ice caps.

#### II. Snow sampling for monitoring pollution levels

Snow samples collected from each mass balance monitoring site will be returned to the GSC glaciology laboratory in Ottawa for analysis of the major pollutant ions (eg. Sulphates – acid snow) and pollen. Knowledge of the annual variability of pollen and pollutant concentrations at the monitoring locations provide important information towards quantifying current trends in levels of atmospheric pollution, understanding atmospheric circulation patterns, and interpreting long-term pollution trends from ice cores.

## **NEIGE (Northern Ellesmere Island in the Global Environment)**

<b>License Number:</b>	02 003 16R-M
<b>Principal Investigator:</b>	Vincent, Warwick
<b>Affiliation:</b>	Department of Biology Laval University Quebec City, Quebec, Canada warwick.vincent@bio.ulaval.ca
<b>Number in Party:</b>	10
<b>Research Area:</b>	North Baffin
<b>Fieldwork Locations:</b>	Quttinirpaaq National Park, Resolute Bay Lakes, Markham Ice Shelf

### **SUMMARY**

This is a follow-up of our work in the program NEIGE, to continue monitoring and environmental measurements in Quttinirpaaq National Park's lakes, fiords and vicinity. We will determine the diversity of microbial life in shallow water communities using state of the art molecular techniques, characterize the physical characteristics and processes within northern Ellesmere Island's meromictic lakes, and define the structure and function of microbial food webs within Lake A, C1, Ward Hunt, Disraeli Fjord and Milne Fjord using HPLC and flow cytometry analyses at Laval University. Our climate stations will continue to provide long-term air and soil monitoring data for this globally important site.

## **Assessing the impact of small, Canadian Arctic river flows to the freshwater budget of the Canadian Archipelago**

**License Number:** 02 005 16R-M

**Principal Investigator:** Alkire, Matthew

**Affiliation:** Applied Physics Laboratory  
University of Washington  
Seattle, Washington, USA  
malkire@apl.washington.edu

**Number in Party:** 7

**Research Area:** Kitikmeot, North Baffin

**Fieldwork Locations:** Clyde River, Coppermine River, Ellice River, Back River, Cunningham River

### **SUMMARY**

There are two primary goals of this project, to determine whether relatively small Canadian Arctic rivers significantly contribute to the total volume of freshwater that drains through Davis Strait, and if they are chemically distinct from larger North American rivers such as the Mackenzie and Yukon rivers. To achieve these goals we propose to collect water samples from seven different rivers and their estuaries spanning over Nunavut and the Northwest Territories over a three year study period.

## **Natural Attenuation as an Oil Spill Response Strategy in the Arctic**

**License Number:** 02 007 16R-M

**Principal Investigator:** Greer, Charles

**Affiliation:** National Research Council Canada  
Montreal, Quebec, Canada  
charles.greer@cnrc-nrc.gc.ca

**Number in Party:** 5

**Research Area:** North Baffin

**Fieldwork Locations:** Resolute Bay

### **SUMMARY**

The primary objective of this project is to identify and assess the natural attenuation capacity of the microbial community present in seawater in the Arctic to biodegrade oil, should a spill event occur under Arctic conditions. Surface seawater will be collected from Allen Bay, Nunavut, to assess the microbial and genetic capacity of the natural microbial community to degrade oil under controlled conditions at the Polar Continental Shelf Project facilities in Resolute Bay.

## Air Quality Monitoring at Cape Dorset

<b>License Number:</b>	01 005 16R-M
<b>Principal Investigator:</b>	Cober, Stewart
<b>Affiliation:</b>	Air Quality Processes Research Section Environment Canada Toronto, Ontario, Canada stewart.cober@ec.gc.ca
<b>Number in Party:</b>	4
<b>Research Area:</b>	South Baffin
<b>Fieldwork Locations:</b>	Cape Dorset

### SUMMARY

Shipping and mining activities are expected to increase significantly in Nunavut over the coming decades. These activities bring with them an increase in air pollution. On one hand, we know that Nunavut is a very large place and that, because of dilution, air pollution will never reach the levels it does in southern Canada. On the other hand, the environmental conditions are very different: it is much colder, there is less precipitation, and an increase in air pollution may have a larger effect than it would in the south. To keep track, Environment Canada is developing air quality control programs, similar to those producing weather forecasts, which will forecast air pollution levels for the future.

## Improved Retrievals of Snow Depth on Sea Ice for Numerical Sea Ice Prediction Applications

**License Number:** 02 025 16R-M

**Principal Investigator:** Howell, Stephen

**Affiliation:** Climate Research Division  
Environment Canada  
Toronto, Ontario, Canada  
stephen.howell@ec.gc.ca

**Number in Party:** 6

**Research Area:** North Baffin

**Fieldwork Locations:** Eureka

### SUMMARY

Snow depth over sea ice is a crucial variable that has to be properly initialized in numerical weather prediction (NWP) systems. However, snow depth on sea ice is poorly observed conventionally and has proven very challenging to address with satellite imagery. Recently available measurements from the NASA's Operational IceBridge (OIB) can directly estimate snow depth on sea ice at sufficiently high resolution to allow meaningful validation with ground reference measurements. The overarching objective of this proposal is to utilize state of the art remotely sensed measurements to improve Environment Canada's capability to provide information on snow depth over sea ice for applications related to numerical model based prediction systems such as the Canadian Seasonal to Interannual Prediction System (CanSIPS) and the Regional Ice Prediction System (RIPS). In order to meet these objectives, a new suite of snow on sea ice thickness ground measurements needs to be acquired coincident with OIB flight lines.

## 2016 Back River Project Baseline Program

<b>License Number:</b>	04 004 16R-M
<b>Principal Investigator:</b>	Muggli, Deborah
<b>Affiliation:</b>	Rescan-ERM Vancouver, British Columbia, Canada deborah.muggli@erm.com
<b>Number in Party:</b>	13
<b>Research Area:</b>	Kitikmeot
<b>Fieldwork Locations:</b>	George Camp, Goose Camp

### SUMMARY

Sabina Gold and Silver Corp. (Sabina) is in the process of permitting the proposed Back River Project (the Project), located in the West Kitikmeot region of Nunavut. Rescan has been conducting baseline studies to support this project on behalf of Sabina for the past several years. A draft Environmental Impact Statement was submitted to the NIRB in early 2014. It is anticipated that all required baseline information has been collected for the proposed project, but information gaps could be identified during the regulatory process. Additional field studies may also be required to support potential changes and refinements to engineering studies.

## 2016 Hope Bay Belt Environmental Baseline Program

<b>License Number:</b>	04 005 16R-M
<b>Principal Investigator:</b>	Wen, Marc
<b>Affiliation:</b>	Rescan Environmental Services Vancouver, B.C., Canada marc.wen@erm.com
<b>Number in Party:</b>	16
<b>Research Area:</b>	Kitikmeot
<b>Fieldwork Locations:</b>	Hope Bay Belt

### SUMMARY

TMAC Resources Inc. is exploring significant metal deposits near Hope Bay, Melville Sound, Nunavut. TMAC Resources Inc. is committed to support ongoing exploration activities in the Hope Bay Belt, and would like to continue baseline studies in the area for potential future development. A map of the Hope Bay Belt area is included with this proposal. The majority of the sampling would be restricted to potential deposit areas, access corridors and from reference areas. Sampling could also be conducted in the marine environment for potential future marine access.

## **CANDAC – Canadian Network for the Detection of Atmospheric Change**

<b>License Number:</b>	02 009 16R-M
<b>Principal Investigator:</b>	Drummond, James
<b>Affiliation:</b>	Department of Physics University of Toronto Toronto, Ontario, Canada james.drummond@utoronto.ca
<b>Number in Party:</b>	6
<b>Research Area:</b>	North Baffin
<b>Fieldwork Locations:</b>	Eureka

### **SUMMARY**

Canadians have a special responsibility for their sovereign Arctic territory. The unique environmental conditions – extreme cold, low humidity and seasonal daylight variations – give rise to unusual climate and chemistry processes, many of which are poorly understood. Gaps in our scientific knowledge of the Arctic impair our ability to effectively steward Canada's North. This lack of knowledge has serious social, environmental and biodiversity implications.

In 2002 a group of researchers joined together to form the Canadian Network for the Detection of Atmospheric Change (CANDAC) with the objective of improving the state of observational atmosphere research in Canada.

## Northern Ellesmere Ice Shelves, Epishelf Lakes and Climate Impacts

<b>License Number:</b>	02 010 16R-Mamended
<b>Principal Investigator:</b>	Copland, Luke
<b>Affiliation:</b>	Department of Geography University of Ottawa Ottawa, Ontario, Canada luke.copland@uottawa.ca
<b>Number in Party:</b>	4
<b>Research Area:</b>	North Baffin
<b>Fieldwork Locations:</b>	Glaciers and ice caps of the Queen Elizabeth Islands

### SUMMARY

This research program will continue work on the current characteristics and stability of the northern Ellesmere Island ice shelves and adjacent multiyear landfast sea ice. Fieldwork started at this location in 2008, and will continue for the foreseeable future. Almost all of the ice shelves in this region have experienced dramatic break-ups over the last eight years, so this project aims to improve understanding of the causes of these events and the fate of the remaining ice shelves and related ice features.

## Ice Islands of the Eastern Canadian Arctic

<b>License Number:</b>	02 011 16R-M
<b>Principal Investigator:</b>	Mueller, Derek
<b>Affiliation:</b>	Department of Geography Carleton University Ottawa, Ontario, Canada derek_mueller@carleton.ca
<b>Number in Party:</b>	8
<b>Research Area:</b>	North & South Baffin
<b>Fieldwork Locations:</b>	Canadian Arctic Archipelago, Arctic Ocean, Baffin Bay

### SUMMARY

This research program brings together an international team of researchers to continue previous study on the drift, deterioration and shape of ice islands (large tabular icebergs of Arctic ice shelf or floating glacial tongue origin) in the Eastern Canadian Arctic. Ice islands have extensive dimensions (1 km<sup>2</sup> to 250 km<sup>2</sup>) and are considered ice hazards for shipping and natural resource exploration and development in the Canadian Arctic and Sub-Arctic. The objective of this work is to better understand the drift and deterioration of these ice islands. This will allow for accurate size and location prediction and proper risk assessment and management by stakeholders.

## Upper Air Building Laboratory, Resolute Bay

<b>License Number:</b>	02 015 16R-M
<b>Principal Investigator:</b>	Shepherd, Marjorie
<b>Affiliation:</b>	Climate Research Division Environment Canada Toronto, Ontario, Canada marjorie.shepherd@ec.gc.ca
<b>Number in Party:</b>	4
<b>Research Area:</b>	North Baffin
<b>Fieldwork Locations:</b>	Resolute Bay

### SUMMARY

The Canadian Aerosol Baseline Measurement (CABM) program under the Climate Chemistry Research Measurement and Air Quality Research sections are proposing to measure changes in the levels of absorbing (black carbon) and scattering aerosols and gases that may accompany increased ship traffic and increasing mining activities in the Canadian Arctic as well as from an increase in forest fires at more southern latitudes. In particular, black carbon, which is a strong light absorber that is released into the atmosphere from the incomplete combustion of fuels, is recognized as one of the “Short Lived Climate Forcers” that may contribute to more rapid melting of Arctic ice.

## Postglacial Climates of the Canadian Arctic

**License Number:** 02 018 16R-M

**Principal Investigator:** Gajewski, Konrad

**Affiliation:** Department of Geography  
University of Ottawa  
Ottawa, Ontario, Canada  
gajewski@uottawa.ca

**Number in Party:** 2

**Research Area:** Kitikmeot, Qikiqtaaluk

**Fieldwork Locations:** Prince of Wales & Bathurst Islands

### SUMMARY

The purpose of this study is to understand how the climate has changed over the past 10,000 years in the central Canadian Arctic. The goal of this year's study is to collect lake sediment cores from the central region of the Canadian Arctic Archipelago, specifically Prince of Wales and Bathurst Islands. We wish to determine how warm the region was during the Medieval Warm Period (1200-600 years ago), and how warm periods in the past affected the regional vegetation and lakes.

## **Tehery-Wager Geoscience Project**

<b>License Number:</b>	03 005 16R-M
<b>Principal Investigator:</b>	Wodicka, Natasha
<b>Affiliation:</b>	Natural Resources Canada Geological Survey of Canada Ottawa, Ontario, Canada natasha.wodicka@nrcan-rncan.gc.ca
<b>Number in Party:</b>	14
<b>Research Area:</b>	Kivalliq
<b>Fieldwork Locations:</b>	Tehery-Wager Area

### **SUMMARY**

The Tehery-Wager Geoscience Project, part of the Federal Government's Geo-Mapping for Energy and Minerals Program, is a collaborative effort between the Geological Survey of Canada, the Canada-Nunavut Geoscience Office, and universities. The primary objective is to increase the geological knowledge of the area and identify locations with elevated economic potential. The project will provide modern geologic interpretations required to reduce exploration risk and make appropriate land use decisions. Support from local communities will be required for fuel caching, expediting, wildlife monitors and groceries.

## **Deployment of environmental instrumentation in Grenier Lake watershed, Cambridge Bay, Victoria Island**

**License Number:** 04 010 16R-M

**Principal Investigator:** McLennan, Donald

**Affiliation:** C.H.A.R.S  
Aboriginal Affairs & Northern Development Canada  
Gatineau, Quebec, Canada  
donald.mclennan@polar.gc.ca

**Number in Party:** 5

**Research Area:** Kitikmeot

**Fieldwork Locations:** Grenier Lake Watershed

### **SUMMARY**

Climate change is expected to be more severe in the Arctic compared to other regions, where changes in both temperature and precipitation are predicted in the near future. These changes will have a significant impact on the ecosystems of this region. Of special concern is the disruption of the carbon cycle in the arctic, where positive feedbacks may further accelerate changes in the global climate. Additionally, plans for 2016 consist also of the deployment of two river gauging stations, of a third meteorological station on the shore of the Fourth lake in the Greniers Lakes, as well as implementation of the ADAPT permafrost monitoring protocol on the Northern Shore.

## Cambridge Bay Undersea Observatory

<b>License Number:</b>	04 011 16R-M
<b>Principal Investigator:</b>	Moran, Kate
<b>Affiliation:</b>	NEPTUNE Canada University of British Columbia Victoria, British Columbia, Canada kmoran@uvic.ca
<b>Number in Party:</b>	3
<b>Research Area:</b>	Kitikmeot
<b>Fieldwork Locations:</b>	Cambridge Bay

### SUMMARY

Underwater sensors and a camera provide continuous information on seawater properties, ice thickness and marine organism activity. Data from the underwater instruments and the weather station are transmitted by a WiFi link to a server in a local office, where data are transmitted via satellite to our ONC data centre at the University of Victoria and made available to all. We also plan to collect seawater and mud samples in the vicinity of the platform, to calibrate our instruments. We would also need to collect specimens of seafloor life (invertebrates) around the platform, so that our experts can identify the species we are observing.

## Dynamics and Change of the Devon Ice Cap

<b>License Number:</b>	02 022 16R-M
<b>Principal Investigator:</b>	Sharp, Martin
<b>Affiliation:</b>	Department of Earth & Atmospheric Sciences University of Alberta Edmonton, Alberta, Canada martin.sharp@ualberta.ca
<b>Number in Party:</b>	2
<b>Research Area:</b>	North Baffin
<b>Fieldwork Locations:</b>	Devon Island

### SUMMARY

The goal of this project is to describe and explain ongoing changes in the area, mass, and flow of the Devon Island ice cap so that we can estimate its recent current and future contribution to changes in global sea level. We are interested in how climate warming may cause faster flow of glaciers that end in the ocean, and how faster flow may lead to more mass loss by iceberg calving. Our work combines field studies with satellite and airborne remote sensing, and with modeling of ice cap flow and interactions with the atmosphere. Our fieldwork involves calibrating and validating measurements made by remote sensing, and measuring changes in ice thickness, snow properties, glacier flow, meltwater production and runoff, and rates of iceberg calving. It provides us with data that we can use in our models. We access the ice cap from Resolute Bay by PCSP Twin Otter or helicopter, and travel on the ice by snowmobile or helicopter. Each year we establish a base camp on the ice cap summit where we store food, equipment and fuel. Most work is carried out from mobile 2-person camps. We install some instruments on or adjacent to the ice, but all will be removed at the end of the project so that the ice cap is left as we found it.

## **An investigation of the sensitivity of high Arctic permafrost to climate change**

**License Number:** 02 023 16R-M-amended

**Principal Investigator:** Pollard, Wayne

**Affiliation:** Department of Geography  
McGill University  
Montreal, Quebec, CA  
wayne.pollard@mcgill.ca

**Number in Party:** 7

**Research Area:** North Baffin

**Fieldwork Locations:** Ellesmere Island, Axel Heiberg Island

### **SUMMARY**

This project looks at the impact of climate change on high arctic permafrost conditions and high arctic landscapes. The aims of this project are: (1) to monitor climate conditions for different types of landscape (eg. tundra, mountains, coasts, wetlands, etc.) and assess how much the climate is changing, (2) to determine the amount and rate of landscape change caused by warming and melting permafrost, and (3) to map these changes for the period 2007-2011. The information collected in this study will improve our general understanding about climate and permafrost as well as help to predict how the land will respond as climates warm. This study also contributes new information about high Arctic permafrost and ground ice conditions, the sensitivity of high arctic permafrost to climate change and background data upon which landscape changes can be documented. Another component of this project looks at long-term changes in high Arctic landscapes by looking at how rock surfaces are being weathered and eroded. This research will help understand how northern landscapes are changing and will change in the future.

## **Permafrost Hydrology and Environmental Significance of Perennial Springs in the Expedition Fiord Area, Axel Heiberg Island**

**License Number:** 02 024 16R-M-amended

**Principal Investigator:** Pollard, Wayne

**Affiliation:** Department of Geography  
McGill University  
Montreal, Quebec, Canada  
wayne.pollard@mcgill.ca

**Number in Party:** 4

**Research Area:** North Baffin

**Fieldwork Locations:** Axel Heiberg Island

### **SUMMARY**

My research on the cold perennial springs on Axel Heiberg Island in the Canadian high Arctic has led to a better understanding about the unique nature of saline groundwater in permafrost. This is an ongoing study concerned with the technical analysis of several aspects of spring hydrology and geomorphology. The aims of this research are (1) to determine the origin of perennial spring flow, (2) to understand and explain processes related to the interaction between groundwater and permafrost, and (3) to describe the microbial communities associated with springs, lakes and permafrost. These efforts have contributed to a better understanding about the limits of life in cold climates and about unique physical processes that are occurring in the Arctic. This is the only research on cold perennial springs being conducted in the high Arctic. These springs have no commercial value and our research is driven entirely by scientific questions.

## **Unravelling the Record of Proterozoic Eukaryotic Evolution in the Canadian Arctic (Somerset Island)**

**License Number:** 02 026 16R-M

**Principal Investigator:** Turner, Elizabeth

**Affiliation:** Department of Earth Sciences  
Laurentian University  
Sudbury, Ontario, Canada  
eturner@laurentian.ca

**Number in Party:** 1

**Research Area:** North Baffin

**Fieldwork Locations:** Somerset Island

### **SUMMARY**

This project focuses on the time in history of biological evolution when the earliest organisms more complex than bacteria are thought to have emerged and diversified. These events (somewhere between 1.1 and 0.8 billion years ago), and the nature of the biological events surrounding the appearance of the first complex life ("eukaryotes"), are not well constrained because rocks that old are difficult to work with, and the type of evidence required is exceptionally rare, microscopic, and generally poorly preserved. This project, together with a sister project in northern Baffin Island, is aimed at finding such evidence, so together we can understand how and when this critical stage in biological evolution developed.

## Hydrological processes and change, Apex River, Iqaluit area

**License Number:** 01 013 16R-M

**Principal Investigator:** Lamoureux, Scott

**Affiliation:** Department of Geography  
Queen's University  
Kingston, Ontario, Canada  
scott.lamoureux@queensu.ca

**Number in Party:** 9

**Research Area:** South Baffin

**Fieldwork Locations:** Iqaluit/Apex

### SUMMARY

We plan to develop a long term watershed monitoring program in a river that has important uses for community members and the City of Iqaluit. This information will help manage the river and inform users of changes that are occurring.

## **Land and water research at the Cape Bounty Arctic Watershed Observatory (CBAWO), Melville Island**

**License Number:** 02 028 16R-M

**Principal Investigator:** Lamoureux, Scott

**Affiliation:** Department of Geology  
Queens University  
Kingston, Ontario, Canada  
scott.lamoureux@queensu.ca

**Number in Party:** 14

**Research Area:** North Baffin

**Fieldwork Locations:** Cape Bounty

### **SUMMARY**

Our work is intended to determine how climate change affects the land and water quality. Our work involves taking sediment and water samples from the lakes and streams at Cape Bounty. We have chosen these lakes and rivers because the rivers appear to supply an abundant sediment and deep lakes are needed to preserve the sediments for our research. We have been doing this work since 2003 and hope to continue for several more years.

## **The Record of Eukaryotic Diversification in the Late Mesoproterozoic (ca. 1000 billion years ago) Bylot Supergroup, Baffin Island**

**License Number:** 02 029 16R-M Amended

**Principal Investigator:** Halverson, Galen

**Affiliation:** Department of Earth & Planetary Sciences  
McGill University  
Montreal, Quebec, Canada  
galen.halverson@mcgill.ca

**Number in Party:** 5

**Research Area:** North Baffin

**Fieldwork Locations:** Borden Basin

### **SUMMARY**

Approximately one billion years ago, Earth's surface began a slow but inexorable transition from one with a low biological diversity, low oxygen environment to one with a thriving and diverse biosphere. Baffin Island is one of the few places in the world where ca. 1 billion year-old sedimentary rocks are well preserved and accessible. The purpose of this project is to interrogate and calibrate this sedimentary record to better understand the nature of this critical stage in Earth's history that ushered in the age of eukaryotes and to document the geochemical footprint of these early eukaryotes.

## Mary River Project

<b>License Number:</b>	02 031 16R-M
<b>Principal Investigator:</b>	McPhee, Wayne
<b>Affiliation:</b>	Sustainable Development Baffinland Iron Mines Corporation Oakville, Ontario, Canada wayne.mcphee@baffinland.com
<b>Number in Party:</b>	9
<b>Research Area:</b>	North Baffin
<b>Fieldwork Locations:</b>	Steensby Port, Mary River, Milne Port/Road

### SUMMARY

The goals of this project are data collection and analysis for environmental monitoring and management of the Mary River project to assess Project impacts in relation to the approved environmental impact assessment, compliance to NIRB Certificate No. 005, Amended Type "A" Water License 2AM-MRY1325, and further baseline and operating conditions analysis for future permitting.

## **Microbial investigations of perennial springs, permafrost and ground ice in the high Arctic**

**License Number:** 02 032 16R-M

**Principal Investigator:** Whyte, Lyle

**Affiliation:** Department of Natural Resource Sciences  
McGill University  
St. Anne de Bellevue, Quebec, Canada  
whyte@nrs.mcgill.ca

**Number in Party:** 2

**Research Area:** North Baffin

**Fieldwork Locations:** Axel Heiberg

### **SUMMARY**

The microbial biodiversity in unique habitats including cold perennial salt springs and permafrost environments have not been fully explored, and molecular traits that enable microorganisms to survive and thrive in the Canadian High Arctic are unknown. My research program examines microbial biodiversity and ecology in unique polar habitats and aims to expand our knowledge of polar microbial communities.

## Lake Ice in the Canadian High Arctic

**License Number:** 02 033 16N-M

**Principal Investigator:** Brown, Laura

**Affiliation:** Department of Geography  
University of Toronto Mississauga  
Mississauga, Ontario, Canada  
lc.brown@utoronto.ca

**Number in Party:** 2

**Research Area:** North Baffin

**Fieldwork Locations:** Resolute, Polar Bear Pass

### SUMMARY

The purpose of this project is to monitor lake ice in Canada, as it is an important part of the cryosphere and recent projections suggest thinner and shorter duration of ice cover in the future. The objective of this research is to better understand the links between lake ice and climate, particularly in response to a changing cryosphere.

## **Metal Loading and Retention in Arctic Tundra Lakes during Spring Runoff**

**License Number:** 01 017 16R-M

**Principal Investigator:** Richardson, Murray

**Affiliation:** Department of Geography  
Carleton University  
Ottawa, Ontario, Canada  
murray.richardson@carleton.ca

**Number in Party:** 5

**Research Area:** South Baffin

**Fieldwork Locations:** Iqaluit

### **SUMMARY**

Spring snow melt is the most important hydrologic event of the year in Arctic landscapes. During this relatively short period in spring, inputs of water and waterborne contaminants such as mercury (Hg) and other trace metals to surface waters can exceed those occurring during the remainder of the year. Nevertheless, there is little research on the transport of metal to lakes during snow melt periods in Arctic Canada. The main objective of this project will be to quantify, using hydrological and water chemistry measurements, the relative contributions of mercury and other trace metals in snowmelt runoff, to the water column and sediment of lakes in the vicinity of Iqaluit, Nunavut.

## **Acoustic study of marine mammals and ambient noise in Barrow Strait**

**License Number:** 02 035 16R-M

**Principal Investigator:** Hildebrand, John

**Affiliation:** Scripps Institute of Oceanography  
La Jolla, CA, USA  
jhildebrand@ucsd.edu

**Number in Party:** 5

**Research Area:** North Baffin

**Fieldwork Locations:** Barrow Strait

### **SUMMARY**

The purpose of this project is to investigate marine mammal acoustic behaviour, seasonal presence and relationships with sea ice in Barrow Strait south of Resolute Bay, Nunavut. This study will also measure underwater noise from vessels transiting the region.

## Ancient DNA in Lake Sediment

**License Number:** 01 019 16N-A

**Principal Investigator:** Miller, Gifford

**Affiliation:** INSTAAR & Geological Sciences  
University of Colorado Boulder  
Boulder, Colorado, USA  
gmiller@colorado.edu

**Number in Party:** 1

**Research Area:** South Baffin

**Fieldwork Locations:** Tarr Inlet

### SUMMARY

Based at NRI in Iqaluit, we will use snowmobiles to reach lakes utilizing lake ice as a platform. We will push 6 cm diameter polycarbonate tubes into the mud at the center of the lakes, capturing a small sample of the sediment that fills the lake floor. We then extract the tubes, cap them and return to Iqaluit. The advantage of using ancient DNA to reconstruct past ecosystems is that it records more types of life than pollen or animal remains do. Thus, it will give us a better understanding of how life on Baffin Island has changed over 7000 years, and in earlier warm times, which can provide important constraints on how we might anticipate life in the arctic will change as the world continues to warm.

## Investigation of Surface Minerals at an Old Exploration Site

<b>License Number:</b>	02 036 16N-A
<b>Principal Investigator:</b>	Peterson, Ron
<b>Affiliation:</b>	Department of Geological Sciences & Geological Engineering Queen's University Kingston, Ontario, Canada peterson@queensu.ca
<b>Number in Party:</b>	1
<b>Research Area:</b>	North Baffin
<b>Fieldwork Locations:</b>	Cornwallis Island

### SUMMARY

The goal of this fieldwork is to collect mineral samples in areas near identified potential sulfide ore bodies. These minerals, on the surface, have formed through alteration of the underlying ore deposit. The underlying ore deposit contains copper, lead and zinc as well as other metals. When massive sulfide ore reacts with oxygen and is broken down by water, a metal-containing acidic solution is formed that may pollute adjacent areas. This process is called Acid mine drainage when it is caused by mining activity. In the case of this field area, no mining has taken place. This study will allow us to look at how these breakdown processes work on such a time scale.

## **Origin of Coloured Spinel Occurrences in Southern Baffin Island, Nunavut: implications for local gemstone potential**

<b>License Number:</b>	0102216N-A
<b>Principal Investigator:</b>	Belley, Philippe
<b>Affiliation:</b>	Department of Earth, Ocean and Atmospheric science University of British Columbia Vancouver, British Columbia, Canada pbelley@eos.ubc.ca
<b>Number in Party:</b>	4
<b>Research Area:</b>	South Baffin
<b>Fieldwork Locations:</b>	One location approximately 90 kilometres (km) southeast from Iqaluit and seven (7) locations within a radius of 160 km from the community of Kimmirut.

### **SUMMARY**

Our goal is to understand the geological conditions that led to the formation of the mineral spinel, a semi-precious gemstone, at eight localities on Baffin Island. These localities contain large blue and bluish-purple spinels, some of which can produce small gems. Our findings will be fundamental to exploration for gem deposits in Southern Baffin Island.

The localities near Kimmirut will be reached by foot or boat from the town of Kimmirut. Waddell Bay, Glencoe Island, and MacDonald Island will be reached by boat or helicopter. We will camp in tents at the research sites. Nothing will be left on site after our work.

## **The beginning of an Era: characterizing the depositional environment of Earth's earliest eukaryotic life**

**License Number:** 0102116N-A

**Principal Investigator:** Hodgskiss, Malcolm

**Affiliation:** Department of Earth and Planetary Science  
McGill University  
Montreal, Quebec, Canada  
Malcolm.hodgskiss@mail.mcgill.ca

**Number in Party:** 2

**Research Area:** South Baffin

**Fieldwork Locations:** Sanikiluaq

### **SUMMARY**

We are proposing to do geological fieldwork for scientific purposes between July 18 - August 12, 2016 on the Belcher Islands. The specific project aims are to characterize ocean and atmospheric chemistry across an approximately 400 million-year interval. This will be achieved through geological mapping, which will be carried out on satellite imagery, and surface sampling (no digging) for subsequent geochemical analyses, that will be conducted at McGill University.

## **Arctic carbonates, sandstones and volcanic rocks, NW Ellesmere Island**

**License Number:** 02-042-16R-M

**Principal Investigator:** Beauchamp, Benoit

**Affiliation:** Department of Geoscience  
University of Calgary  
Calgary, Alberta, Canada  
bbeaucha@ucalgary.ca

**Number in Party:** 9

**Research Area:** North Baffin

**Fieldwork Locations:** Axel Heiberg Island

### **SUMMARY**

We will investigate different rock units of carbonate, sandstone and volcanic rocks that have recorded important interplay between large forces some 280 million years ago in the area now occupied by the Canadian Arctic. We will focus on an area of the Sverdrup Basin centered on NW Ellesmere Island, where this phenomenon is well displayed in outcrops.

## **The Houghton impact structure, Devon Island, Nunavut: Geological, biological, and environmental effects**

**License Number:** 02-044-16R-M-Amended

**Principal Investigator:** Osinski, Gordon

**Affiliation:** Department of Earth Sciences  
University of Western Ontario  
London, Ontario, Canada  
gosinski@uwo.ca

**Number in Party:** 10

**Research Area:** North Baffin

**Fieldwork Locations:** Devon Island

### **SUMMARY**

The Houghton impact structure is one of the best preserved and best exposed meteorite craters on Earth. Geological investigations at this crater over the past several years have revolutionized our understanding of various aspects of the impact cratering process. The research of this project focuses on understanding the geological, biological, and environmental effects of the impact event. The objectives of this year's fieldwork are to (1) investigate magnetic/gravity anomaly in the centre of the crater, (2) map and investigate hydrothermal alteration, (3) examine endolithic habitats within shocked rocks, (4) conduct detailed study of the intra-crater sedimentary deposits, and (5) continue long-term environmental monitoring via several weather stations installed around the crater.

## **Seabed Mapping of Frobisher Bay to Support Infrastructure Development & Natural Hazard Assessment**

<b>License Number:</b>	01 029 16R-M
<b>Principal Investigator:</b>	Mate, David
<b>Affiliation:</b>	Canada Nunavut Geoscience Office Natural Resources Canada Iqaluit, Nunavut, Canada dmate@nrcan.gc.ca
<b>Number in Party:</b>	8
<b>Research Area:</b>	South Baffin
<b>Fieldwork Locations:</b>	Frobisher Bay

### **SUMMARY**

Frobisher Bay is becoming a focal point for a range of new infrastructure development options that supports Nunavut Capital City and a natural resource development in the region. This includes a possible deep water port, fishing industry, mine at Chidliak diamond property, fibre optic cable connecting through the Northwest Passage, and Hydro Electric dam site in the area. In order to support the evolution of this region and its safe use by residents, an innovative partnership between the Canada-Nunavut Geoscience Office, Government of Nunavut's Nuliajuk research vessel and Natural Resources Canada will produce, the first ever, detailed maps of the seabed of Frobisher Bay.

## Cambridge Bay Nearshore Ecological Surveys

**License Number:** 0401916N-M

**Principal Investigator:** Kent, Danny

**Affiliation:**

Vancouver Aquarium Marine Science Centre  
Vancouver, British Columbia, Canada  
eric.solomon@vanaqua.org

**Number in Party:** 9

**Research Area:** Kitikmeot

**Fieldwork Locations:** Cambridge Bay and areas surrounding Cambridge Bay, including the Outer Bay and Finlayson Island.

Marine diving sites are all located within a 40 km radius of Cambridge Bay.

### SUMMARY

In collaboration with the Canadian High Arctic Research Station, Vancouver Aquarium Marine Science Centre divers will record (video and stills) nearshore marine life in several locations around Cambridge Bay in August of 2016. Some marine nearshore animals (anemones, sea stars, urchins, fish, etc.) will be collected for use by the Vancouver Aquarium to display at public events in the community of Cambridge Bay, in displays and exhibits at the Aquarium, and for photographing. No birds or mammals will be collected. The purpose is to document areas representative of different nearshore ecosystems, habitats and marine life.

## Surface Water Quality in Iqaluit, Nunavut

<b>License Number:</b>	0103016N-M
<b>Principal Investigator:</b>	Harper, Sherilee
<b>Affiliation:</b>	Department of Population Medicine University of Guelph (Ontario Veterinary College) Guelph, Ontario, Canada harpers@uoguelph.ca
<b>Number in Party:</b>	4
<b>Research Area:</b>	South Baffin
<b>Fieldwork Locations:</b>	Iqaluit

### SUMMARY

The objectives of this study are to:

- 1) Estimate the prevalence of Giardia and Cryptosporidium parasites in surface water;
- 2) Identify the association between parasite and bacteria prevalence in water;
- 3) Identify environmental and meteorological conditions that increase the risk for Giardia and Cryptosporidium in surface water;
- 4) Examine molecular source attribution of Giardia and Cryptosporidium parasites in water to explore the origin of the pathogens

Raw water samples will be collected from the Apex River, Sylvia Grinnell River and Airport (Carnery) Creek for parasites testing. The program is proposed to take place from June 2016 to October 2016.

## Zoonotic Disease Prevention in Dog Populations in Iqaluit, Nunavut

**License Number:** 0103116N-A

**Principal Investigator:** Sargeant, Jan

**Affiliation:** Department of Population Medicine  
Guelph University  
Guelph, Ontario, Canada  
sargeanj@uoguelph.ca

**Number in Party:** 2

**Research Area:** South Baffin

**Fieldwork Locations:** Iqaluit

### SUMMARY

The objectives of our proposed project include estimating how commonly *Giardia* and *Cryptosporidium* are found in dog feces and examining the source of these protozoa using molecular laboratory methods. To address these objectives, the feces of four types of dogs (sled, outdoor, domestic and stray dogs) will be collected, within Iqaluit city boundaries including Apex. We will not be in direct contact with dogs; only the feces they pass naturally in their environments will be collected.

## ArcticNet marine-based research program: Integrate

**License Number:** 0601016R-M

**Principal Investigator:** Merzouk, Anissa

**Affiliation:**

University of Laval  
Quebec City, Quebec, Canada  
anissa.merzouk@arcticnet.ulaval.ca

**Number in Party:** 41

**Research Area:** North & South Baffin, Kitikmeot

**Fieldwork Locations:** All Communities within North & South Baffin, and Kitikmeot

### SUMMARY

The main objective of the proposed research program is to assess the changes occurring in the Canadian Arctic coastal marine ecosystem in response to climate warming. Using the Canadian research icebreaker CCGS Amundsen to access the vast expanses of the coastal Canadian Arctic, sampling operations in Nunavut waters in 2013 took place between 01 August and 13 October. The ArcticNet marine-based research program is however a long-term program scheduled to run every year until 2018. Shipboard sampling will be carried out along the ship track and at designated sampling stations in Hudson Strait, Baffin Bay, Lancaster Sound and the Northwest Passage. Shipboard operations will include mapping the ocean floor with sounding technologies, using a fish-finding sonar to assess the distribution of important fish species, measuring meteorological parameters and sampling seawater, sediment, sea ice, plankton and juvenile fish.

## Northern Boothia Peninsula Aeromagnetic Survey

<b>License Number:</b>	04 006 16R-M-Amended2
<b>Principal Investigator:</b>	Miles, Warner
<b>Affiliation:</b>	Geological Survey of Canada Natural Resources Canada Ottawa, Ontario, Canada wmiles@nrca.gc.ca
<b>Number in Party:</b>	2
<b>Research Area:</b>	Kitikmeot
<b>Fieldwork Locations:</b>	Boothia Peninsula

### SUMMARY

The purpose of this airborne survey is to acquire high-resolution aeromagnetic data to provide publically available geoscience information to inform land-use decisions by landowners, governments, and industry. Aeromagnetic surveys measure magnetic properties of bedrock and are one of the tools used in geological mapping. The bedrock may contain mineral deposits, such as gold, copper, lead, zinc, and diamonds. Understanding the geology will help geologists map the area, assist mineral exploration activities, and provide useful information necessary for communities, aboriginal associations, and government to make land-use decisions. This survey will be flown to improve our knowledge of the area. It will support potential future ground-based geological mapping and provide basic information to support mineral exploration.

## Permafrost Atmospheric Science in Cambridge Bay, Canada

**License Number:** 04 020 16R-M

**Principal Investigator:** Jung, Ji Young

**Affiliation:** Arctic Research Center  
Korea Polar Research Institute  
Incheon, Yeongsu-gu, Republic of Korea  
jjjung@kopri.re.kr

**Number in Party:** 7

**Research Area:** Kitikmeot

**Fieldwork Locations:** Cambridge Bay

### SUMMARY

This research will focus on interactions that drive critical climate feedbacks within these environments through greenhouse gas fluxes and changes in surface energy balance associated with permafrost degradation. Subsurface microbial, geochemical, and hydrologic processes that determine the fate of organic carbon will need to be characterized to better predict CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O fluxes from Arctic landscapes. An improved understanding of organic matter vulnerability in thawing permafrost with the nitrogen cycle will greatly improve modeling of greenhouse gas flux from subsurface environments and the atmosphere.

## **Geotechnical and Environmental Baseline Studies – Iqaluit Port Development**

**License Number:** 01 034 16N-M

**Principal Investigator:** Cardona, Marie

**Affiliation:**

Advisian  
Burnaby, BC, Canada  
marie.cardona@advisian.com

**Number in Party:** 1

**Research Area:** South Baffin

**Fieldwork Locations:** Iqaluit

### **SUMMARY**

This study will be performed for the Government of Nunavut in two locations. One is near the municipal wharf, and the other is in the proposed deep water port area and quarry. Geotechnical and environmental baseline studies are required to support the design of upgrades proposed for the municipal wharf, and a new deep water port.

## **Lithologic and Tectonic Controls on Paleoproterozoic banded iron formation-hosted/associated gold – A study of the Amaruq Gold Zones**

**License Number:** 03 009 16N-M

**Principal Investigator:** Mercier-Langevin, Patrick

**Affiliation:**  
Natural Resources Canada  
Quebec City, Quebec, Canada  
patrick.mercier-langevin@canada.ca

**Number in Party:** 1

**Research Area:** Kivalliq

**Fieldwork Locations:** Amaruq Property

### **SUMMARY**

This study examines gold mineralization associated with faults and iron formation-bearing volcano-sedimentary rock successions to advance the understanding of the controlling factors on gold deposit formation and develop improved exploration models.

## **Geotechnical and Environmental Baseline Studies – Pond Inlet Small Craft Harbour Development**

**License Number:** 02 047 16N-M

**Principal Investigator:** Cardona, Marie

**Affiliation:**

Advisian  
Burnaby, BC, Canada  
marie.cardona@advisian.com

**Number in Party:** 1

**Research Area:** North Baffin

**Fieldwork Locations:** Pond Inlet

### **SUMMARY**

These studies will be used to gather data to support the design of the proposed small craft harbour, quarry, and breakwater, preparation of an Environmental Assessment (EA) as per the Nunavut Land Claims Agreement, and post-EA permitting.

## Impacts of Air Pollution on Terrestrial and Aquatic Ecosystems on Southern Baffin Island

**License Number:** 01 036 16N-A

**Principal Investigator:** Aherne, Julian

**Affiliation:**  
Trent University  
Peterborough, Ontario, Canada  
jaherne@trentu.ca

**Number in Party:** 3

**Research Area:** South Baffin

**Fieldwork Locations:** Meta Incognita Peninsula

### SUMMARY

In each study area (Kimmirut and Iqaluit), approximately 50 lakes will be randomly selected for sampling. All study sites will be located outside of Inuit Owed Land and Territorial Parks (in NTS grids: 025N15, 025N16, 025M06, and 025M08). All samples will be shipped back to Trent University, Ontario (17/09/2016) for chemical analyses for major cations and anions, nutrients, trace metals, and mercury.

This project will have no permanent or temporary structures erected.

## Past Climate Reconstruction using Annually-Layered Carbonate Buildups on the Nunavut shallow seafloor

<b>License Number:</b>	02 048 16N-M
<b>Principal Investigator:</b>	Halfar, Jochen
<b>Affiliation:</b>	Department of Chemical & Physical Sciences University of Toronto at Mississauga Mississauga, Ontario, Canada jochen.halfar@utoronto.ca
<b>Number in Party:</b>	4
<b>Research Area:</b>	North Baffin
<b>Fieldwork Locations:</b>	Jones Sound, Lancaster Sound, Wellington Channel, Penny Strait, Prince Regent Inlet

### SUMMARY

Climate data in the Canadian Arctic prior to the beginning of instrumental observations in the 20<sup>th</sup> century is sparse. Hence, at present we do not have a good understanding of ocean temperature and sea ice evolution during the past centuries. During our cruise we will collect small carbonate (limestone) mounds on the shallow seafloor of Nunavut. These mounds contain annual bands and can form on the seafloor for hundreds of years, thus allowing a reconstruction of Arctic climate several centuries back. Using the small vessel Vagabond, we will traverse Jones Sound, Lancaster Sound, Wellington Channel, Perry Strait, and Prince Regent Inlet and collect mounds using SCUBA at water depths of 15-20m at various locations.

## Western Hudson Bay Geoscience for Infrastructure

**License Number:** 03 010 16N-A

**Principal Investigator:** Oldenborger, Greg

**Affiliation:**  
Natural Resources Canada  
Ottawa, Ontario, Canada  
greg.oldenborger@canada.ca

**Number in Party:** 4

**Research Area:** Kivalliq

**Fieldwork Locations:** Rankin Inlet

### SUMMARY

The western coast of Hudson Bay in the Kivalliq region of Nunavut is undergoing significant infrastructure development associated with natural resources, shipping, and community sustainability. Permafrost and ground ice are important features of this landscape that can significantly affect land-based infrastructure through influence on ground stability and drainage patterns. Knowledge of permafrost conditions is required to characterize climate change impacts. However, there are only limited studies of permafrost and ground temperature data in the Kivalliq region. This proposed study will provide valuable permafrost information along the western Hudson coast of Nunavut.

## Arctic sea ice and climate histories from a shallow ice core, Agassiz Ice Cap, Ellesmere Island

**License Number:** 02 050 16N-M

**Principal Investigator:** Criscitiello, Alison

**Affiliation:**

University of Calgary  
Canmore, Alberta, Canada  
glacierz@gmail.com

**Number in Party:** 2

**Research Area:** North Baffin

**Fieldwork Locations:** Northern Ellesmere

### SUMMARY

The purpose of this 4-day excursion to the Agassiz Ice Cap is to obtain two to three shallow (~ 20 m) ice cores. These shallow ice cores will be brought back to the University of Calgary, where they will be analyzed for their chemistry. The main research objective is to compare the chemistry of these ice cores with satellite-derived reconstructions of sea ice concentration to determine if ice cores from this region can be used to reconstruct Baffin Bay sea ice concentration prior to the satellite era. Due to the proximity of this site to the North Open Water polynya, a biologically productive area of open water between Ellesmere Island and Greenland, we will also attempt to use these ice core records to reconstruct a history of polynya variability.

## **Baseline Monitoring Of Marine Productivity and Oceanography Spanning The Northwest Passage Using Ships Of Opportunity**

<b>License Number:</b>	05 015 16N-M
<b>Principal Investigator:</b>	Fisher, Jonathan
<b>Affiliation:</b>	Memorial University of Newfoundland St. John's, NFLD, Canada jonathan.fisher@mi.mun.ca
<b>Number in Party:</b>	2
<b>Research Area:</b>	Nunavut Wide
<b>Fieldwork Locations:</b>	Northwest Passage, Baffin Bay

### **SUMMARY**

This project's goals are to collect, analyze, and report the findings from station-based and continuous sampling of phytoplankton, zooplankton (not fishes) and oceanographic conditions throughout Canada's Northwest Passage aboard a ship of opportunity during August-September 2016. These objectives can be achieved aboard the RRS Ernest Shackleton as it transits the Northwest Passage escorting a cruise ship (see Project Map). It will provide the first continuous collection and analyses of plankton data spanning ~5000 nm of northern waters. It is also expected to provide an example of how new scientific 'baseline' information can be collected at relatively low cost aboard ships of opportunity within changing northern waters and how that information can be shared with northern communities interested in the drivers of local fisheries productivity and distributions as they respond to climate change. Research will take place offshore, no structures/developments will be undertaken.

## Ice Dynamics and Cryospheric Changes in Northern Canada

<b>License Number:</b>	02 002 17R-M
<b>Principal Investigator:</b>	Copland, Luke
<b>Affiliation:</b>	Department of Geography University of Ottawa Ottawa, Ontario, Canada luke.copland@uottawa.ca
<b>Number in Party:</b>	5
<b>Research Area:</b>	North Baffin
<b>Fieldwork Locations:</b>	Glaciers and ice caps of the Queen Elizabeth Islands

### SUMMARY

This research program will continue work on the current characteristics and stability of the northern Ellesmere Island ice shelves and adjacent multiyear landfast sea ice. Fieldwork started at this location in 2008, and will continue for the foreseeable future. Almost all of the ice shelves in this region have experienced dramatic break-ups over the last eight years, so this project aims to improve understanding of the causes of these events and the fate of the remaining ice shelves and related ice features.

## Winter to Summer Transitions in the Arctic-Ice Covered Ecosystem (Arctic-ICE) – Multiyear Project

<b>License Number:</b>	04 018 16R-M-Amended
<b>Principal Investigator:</b>	Mundy, CJ
<b>Affiliation:</b>	Centre for Earth Observation Science University of Manitoba Winnipeg, Manitoba, Canada cj.mundy@ad.umanitoba.ca
<b>Number in Party:</b>	9
<b>Research Area:</b>	Kitikmeot
<b>Fieldwork Locations:</b>	Dease Strait, Wellington Bay, Queen Maud Gulf, Finlayson Islands

### SUMMARY

Climate warming has induced rapid change in the ice-covered marine ecosystem of the high Arctic. In this project we will investigate: (1) physical and biological processes controlling the timing of marine primary production, which has been hypothesized as an indicator of potential change in the ecosystem, (2) the influence of rivers and sea ice melt on the freshwater budget and organic carbon cycle in coastal bays near Cambridge Bay, and (3) microbial diversity in sea ice, seawater and marine sediments as it relates to in situ biogeochemical cycling and the potential microbial response to increased industrial activity, e.g., oil spills.

## **Arctic BioMap: Co-designing a Community based Monitoring Program for Species Biodiversity, Wildlife Health and Environmental Change**

**License Number:** 05 014 16N-M

**Principal Investigator:** Panikkar, Bindu

**Affiliation:** Arctic Institute of North America  
University of Calgary  
Calgary, Alta, Canada  
panikkar.bindu@gmail.com

**Number in Party:** 2

**Research Area:** North Baffin, Kitikmeot, Kivalliq

**Fieldwork Locations:** Cambridge Bay, Kugluktuk, Pond Inlet, Baker Lake

### **SUMMARY**

The objective of this project is to understand the local wildlife and environmental change issues of concern and to develop indices and metrics on wildlife diversity, health and environmental change of local importance to build a mobile and web based application called Arctic BioMap. Arctic BioMap will be a real-time community based monitoring application via mobile phonesm web platform, and cloud computing facilities to enhance the reporting to the existing wildlife monitoring efforts. The project will be designed, developed, implemented and evaluated in cooperation with community members and the community will own the data archiving, sharing and access agreements.

## **Introducing the Emotional and Effective Geographies of Law: Strengthening Community through the practise and Feeling(s) of Inuit Law**

**License Number:** 04 001 16R-M

**Principal Investigator:** Robertson, Sean

**Affiliation:** Faculty of Native Studies  
University of Alberta  
Edmonton, Alberta, Canada  
sean2@ualberta.ca

**Number in Party:** 2

**Research Area:** Kitikmeot

**Fieldwork Locations:** Kugaaruk

### **SUMMARY**

The purpose of this study is to better understand Inuit and legal social norms related to subsistence activities and other areas of hamlet life. The Advisory Committee chose sealing and fishing. In resonance of Inuit way of knowing that go beyond rational thinking, the project also seeks to learn more about the role of the body, emotions and "the feeling" in certain areas related to the enactment of norms. The topic includes norms pertaining to the management of resources, the settling of disputes, interactions with non Inuit normative orders (e.g. Canadian Law), etc.

## **The Ethnoarchaeology of Inuit Sea-Mammal Hunting, NW Foxe Basin, NU**

**License Number:** 02 001 16R-M

**Principal Investigator:** Desjardins, Sean

**Affiliation:** Department of Anthropology  
McGill University  
Montreal, QC, Canada  
sean.desjardins@mail.mcgill.ca

**Number in Party:** 2

**Research Area:** North Baffin

**Fieldwork Locations:** Igloolik

### **SUMMARY**

The economic and ideological importance of sea mammal hunting by Inuit has been largely neglected by both archaeologists and anthropologists. My research seeks to address how dramatically the sea mammal hunting economy has changed in the arctic since AD 1200. Recent archaeological surveys of ancestral Inuit sites around Igloolik and Hall Beach, Nunavut, have proven the existence of a widespread and long-lasting walrus hunting tradition. In mid July, I hope to travel to Igloolik, where I will use archaeological data collected in the region and oral histories of Igloolik elders, to build a dialogue with local elders and hunters on the regional change over time of seal and walrus hunting practices and beliefs.

## **‘Safe and sound:’ Exploring Inuit mothers’ experiences of child welfare in relation to Inuit Qaujimagatugangit (IQ) in Arviat, Nunavut**

**License Number:** 03 002 16R-M

**Principal Investigator:** Johnston, Patricia

**Affiliation:** School of Social Work  
University of British Columbia  
Pitt Meadows, BC, Canada  
patriciajohnston@ubc.ca

**Number in Party:** 2

**Research Area:** Kivalliq

**Fieldwork Locations:** Arviat

### **SUMMARY**

This research project responds to concerns expressed by Inuit about the child welfare system (social services). Inuit have stated that Qallunaat (non-Inuit) ways of doing things do not work in their communities – child welfare is no exception. Mining is seen as the economic future of Nunavut, yet it can also hold implications for child wellbeing. An increasing number of families are finding employment in the mining industry. Research concerning the social impact of mining has noted some of the problems that can result from this form of employment on families.

## Ukkusiksalik National Park Marine Baseline Data Collection

<b>License Number:</b>	03 003 16N-M
<b>Principal Investigator:</b>	Mahy, Maryse
<b>Affiliation:</b>	Parks Canada Iqaluit, Nunavut, Canada maryse.mahy@pc.gc.ca
<b>Number in Party:</b>	1
<b>Research Area:</b>	Kivalliq
<b>Fieldwork Locations:</b>	Naujaat, Chesterfield Inlet, Rankin Inlet, Coral Harbour, Baker Lake, Arviat, Igloolik

### SUMMARY

The primary goal of this project is to reflect Inuit knowledge in 3 sub-projects. The results of the pilot project will contribute to best practices for the Nunavut Field Unit of Parks Canada to be able to best engage Inuit Knowledge in its monitoring program for Ukkusiksalik National Park in the future. It will also assist in continuing to protect and present the park to the public.

## **Pilot Project to Monitor the Ecological Integrity and assess Climate Change Vulnerability of Auyuituq National Park through Inuit Qaujimajatuqangit**

**License Number:** 01 006 16R-M

**Principal Investigator:** Mahy, Maryse

**Affiliation:** Parks Canada  
Iqaluit, Nunavut, Canada  
maryse.mahy@pc.gc.ca

**Number in Party:** 5

**Research Area:** Qikiqtani

**Fieldwork Locations:** Pangnritung, Qikiqtarjuaq

### **SUMMARY**

The overall goal of this project is to include Inuit knowledge in Park's Canada's assessment of the health of Auyuituq National Park's ecosystems. The immediate objectives of the project are as follows: to collect Inuit knowledge for a climate change vulnerability assessment project for the park, and to test a method for monitoring/studying the health of the park's ecosystems/environment through Inuit knowledge in the long term.

## **Monitoring the Health of Simirlik National Park through Inuit Knowledge: Pilot Project**

**License Number:** 02 016 16N-M

**Principal Investigator:** Mahy, Maryse

**Affiliation:** Parks Canada  
Iqaluit, Nunavut, Canada  
maryse.mahy@pc.gc.ca

**Number in Party:** 1

**Research Area:** North Baffin

**Fieldwork Locations:** Pond Inlet, Arctic Bay

### **SUMMARY**

The overall goal of the project is to include Inuit Knowledge in Parks Canada's assessment of the health of Simirlik National Park's ecosystems. The immediate objective of the project is to test a method for monitoring/studying the health of the Park's ecosystems/environment through Inuit Knowledge in the long term.

## Towards a Sustainable Fishery for Nunavummiut

**License Number:** 04 009 16N-M

**Principal Investigator:** Schott, Stephan

**Affiliation:** School of Public Policy & Administration  
Carleton University  
Ottawa, Ontario, Canada  
stephan.schott@carleton.ca

**Number in Party:** 1

**Research Area:** Kitikmeot

**Fieldwork Locations:** Cambridge Bay, Gjoa Haven, Taloyoak

### SUMMARY

The Traditional Ecological Knowledge (TEK) Sharing and Mapping Workshop is a component of the larger four year research project, "Towards a Sustainable Fishery for Nunavummiut", led by a diverse research team of government, university, non-profit, and local collaborators. The larger project will deliver essential genomics and microbiome data, stock management tools, population genomics maps for Arctic char, cod and shrimp, and guidelines for a community based fisheries plan, which will serve as a model for other regions. The purpose of the project is to improve the understanding of the use and status of arctic char, cod, and shrimp in the Lower Northwest Passage in order to strengthen food security, create a baseline of the status and value of fish stocks and to evaluate economic development opportunities.

## Use of Digital Technologies by Inuit for Environmental Activism

**License Number:** 02 017 16N-M

**Principal Investigator:** Young, Jason

**Affiliation:** Department of Geography  
University of Washington  
Seattle, Washington, USA  
youngjc2@uw.edu

**Number in Party:** 1

**Research Area:** North Baffin

**Fieldwork Locations:** Igloolik

### SUMMARY

This project will ask whether and how websites and social media applications (like Facebook) incorporate Inuit principles, language, and values into their design and discussions. It will also ask whether the Internet negatively transmits qallunaat (non-Inuit) values and ideas to Inuit. Ultimately, this project seeks to understand whether the Internet can be used to encourage productive conversations between Inuit and qallunaat, while preserving and emphasizing the important role of Inuit traditional knowledge.

## **Review & Impact Analysis: Health Canada Climate Change Health Adaptation Program**

<b>License Number:</b>	06 008 16N-M
<b>Principal Investigator:</b>	Abele, Frances
<b>Affiliation:</b>	Frances Abele Consulting Inc. Cantly, QC, Canada francesabele@gmail.com
<b>Number in Party:</b>	6
<b>Research Area:</b>	Nunavut Wide
<b>Fieldwork Locations:</b>	Igloolik, Clyde River, Pangnirtung, Iqaluit, Arviat, Pond Inlet, Cambridge Bay, Kugluktuk

### **SUMMARY**

The purpose of this study is to document and evaluate the development and execution of the Climate Change and Health Adaptation Program (CCHAP) during its entire duration (2008-2016) and to review and analyze the reported climate change and health results of all projects funded in this period. Furthermore, this study will assess the impact of the projects in select communities and to compare the Program with other initiatives with similar goals in Canada and in other circumpolar countries.

## Oral Histories of Auyuittuq National Park

**License Number:** 02 013 16R-M

**Principal Investigator:** Routledge, Karen

**Affiliation:** Parks Canada  
Calgary, Alberta, Canada  
karen.routledge@pc.gc.ca

**Number in Party:** 4

**Research Area:** Qikiqtani

**Fieldwork Locations:** Pangnritung, Qikiqtarjuaq

### SUMMARY

Parks Canada is collecting oral histories about the area that is now Auyuittuq National Park. These stories will mainly be used to help Parks Canada staff, residents of Pangnirtung and Qikiqtarjuaq, and visitors understand the history of Auyuittuq National Park.

## Auyuittuq National Park Place Names Project

<b>License Number:</b>	02 014 16R-M
<b>Principal Investigator:</b>	Routledge, Karen
<b>Affiliation:</b>	Parks Canada Calgary, AB, Canada karen.routledge@pc.gc.ca
<b>Number in Party:</b>	3
<b>Research Area:</b>	Qikiqtani
<b>Fieldwork Locations:</b>	Qikiqtarjuaq, Pagnirtung

### SUMMARY

The primary goal of this project is to create a map of Inuktitut place names within Auyuittuq National Park. The main participants in this project are the Parks Canada Inuit Knowledge Working Groups (IKWGs) in Pagnirtung and Qikiqtarjuaq. Since 2005, the IKWGs have worked with Parks Canada staff on projects pertaining to traditional knowledge. In March 2015, Parks Canada staff met with the IKWGs in Qikiqtarjuaq to discuss methodology for this project and to assess existing maps (including data provided by Inuit Heritage Trust and Parks Canada).

## **Traditional Knowledge Studies Regarding Agnico Eagle Mines' Amaruq Project and Proposed Access Road**

**License Number:** 03 004 16R-M

**Principal Investigator:** Burt, Page

**Affiliation:** Outcrop Ltd.  
Outcrop Ltd.  
Rankin Inlet, Nunavut, Canada  
page@outcrop.com

**Number in Party:** 5

**Research Area:** Kivalliq

**Fieldwork Locations:** Baker Lake, Chesterfield Inlet

### **SUMMARY**

The purpose of this study is to document traditional knowledge in the area of the Amaruq advanced exploration site, 50 km northwest of the Meadowbank Mine, and a proposed all-weather access road connecting this site with the Meadowbank Mine. The information will be used in the environmental permitting for this project.

## **The Potential Impact of High Speed Internet on Inuit Culture, Education and Well Being**

<b>License Number:</b>	01 008 16R-M
<b>Principal Investigator:</b>	Yunes, Erin
<b>Affiliation:</b>	York University Toronto, Ontario, Canada eyunes@yorku.ca
<b>Number in Party:</b>	2
<b>Research Area:</b>	North & South Baffin, Kivalliq
<b>Fieldwork Locations:</b>	Arviat, Baker Lake, Cape Dorset, Pangnirtung, Pond Inlet

### **SUMMARY**

Internet capability was introduced to Nunavut Territory as early as 1995. Since then, a series of initiatives to establish high speed connectivity in the arctic has been undertaken by government agencies, grass roots organizations, and private corporations. This project will first focus on a historical analysis of communication technology in Nunavut with an emphasis on traditional use of information and communication technology (ICT). Moving forward from this analysis, it will be investigated how modern ICT is currently being utilized in communities, especially by younger people.

## **Transforming Teaching Practices in Two Nunavut (Kitikmeot Region) Community Schools**

**License Number:** 04 014 16N-M

**Principal Investigator:** McMillan, Barbara Alexander

**Affiliation:** Department of Curriculum, Teaching & Learning  
Faculty of Education, University of Manitoba  
Winnipeg, Manitoba, Canada  
barbara.mcmillan@umanitoba.ca

**Number in Party:** 1

**Research Area:** Kitikmeot

**Fieldwork Locations:** Kugluktuk, Taloyoak

### **SUMMARY**

Consistent with the mandate to work toward culture-based education, this research project will be based in two Nunavut community schools in the Kitikmeot Region of Nunavut and involve Middle Years (Grades 5-7) students and their teachers. The project will (1) identify culturally located priorities for education, (2) implement classroom pedagogies that aim to achieve these priorities and evaluate the success of these pedagogical approaches on student learning including competency, and (3) identify processes that contribute to changes toward a culturally responsive approach to teaching.

## **On the syntactic status of person and number markers in Inuktitut**

**License Number:** 01 015 16N-M

**Principal Investigator:** Compton, Richard

**Affiliation:** Department of Linguistics  
University of Quebec at Montreal  
Montréal, QC, Canada  
compton.richard@uqam.ca

**Number in Party:** 2

**Research Area:** Qikiqtaaluk

**Fieldwork Locations:** Iqaluit

### **SUMMARY**

The goal of this research is to better understand the structure of Inuktitut; how words and sentences are formed, which properties differentiate Inuktitut from other languages, and which properties it shares with other languages. The larger goal of linguistic research is to expand our knowledge of human language.

## Leverage Points for Climate Change Action

<b>License Number:</b>	02 030 16N-A
<b>Principal Investigator:</b>	Yona, Leehi
<b>Affiliation:</b>	Dartmouth College Hanover, New Hampshire, USA leehi@dartmouth.edu
<b>Number in Party:</b>	1
<b>Research Area:</b>	Qikiqtaaluk
<b>Fieldwork Locations:</b>	Clyde River, Iqaluit

### SUMMARY

The goal of this social science research is to create resources for youth activists interested in climate change action, based on interviews with communities, organizations and policy makers.

## **Piusituqavut: How Inuit Traditions are Experienced in a Modern, Artistic Space**

**License Number:** 02 020 16R-M

**Principal Investigator:** Lemaire, Andreanne

**Affiliation:** Department of Psychology  
Universite du Quebec a Montreal  
Montreal, Quebec, Canada  
andreanne.lemaire@gmail.com

**Number in Party:** 3

**Research Area:** North Baffin

**Fieldwork Locations:** Igloolik

### **SUMMARY**

The objective of this research is to explore the role of artistic programs for Inuit youth in their experience of well-being and traditions. This research project stems from a broad interest for the Inuit Qaujimajatuqangit in Nunavut and the importance of keeping Inuit traditions alive for healing. This project aims to understand how, within the context of the social and cultural changes that Inuit society is undergoing, Inuit knowledge and traditions are expressed and used in a modern artistic setting. It thus appears essential to explore what Inuit traditions mean to people participating in such activities.

## **Evaluating the Effectiveness of Wildlife Research Communication in Nunavut Communities**

**License Number:** 01 016 16N-M

**Principal Investigator:** Henri, Dominique

**Affiliation:** Environment & Climate Change Canada  
Montreal, QC, Canada  
dominique.henri@canada.ca

**Number in Party:** 2

**Research Area:** Qikiqtaaluk, Kivalliq

**Fieldwork Locations:** Kimmirut, Cape Dorset, Coral Harbour

### **SUMMARY**

Good communication between researchers and community members is essential for the success of wildlife research projects in Nunavut. Effective communication is important to ensure that local needs are met by wildlife research, as well as for the incorporation of relevant research findings in decision-making processes. The primary goal of this study is to evaluate scientific communication practices conducted by wildlife researchers in Nunavut communities.

## **Musk Ox Health & Resilience: Musk Ox Surveillance on Victoria Island to Support Food Security, Food Safety, Public Health & Musk Ox Health**

**License Number:** 04 012 16R-M

**Principal Investigator:** Tomaselli, Matilde

**Affiliation:** Department of Ecosystem & Public Health  
University of Calgary  
Calgary, Alberta, Canada  
matilde.tomaselli@ucalgary.ca

**Number in Party:** 4

**Research Area:** Kitikmeot

**Fieldwork Locations:** Cambridge Bay

### **SUMMARY**

The proposed study aims to develop a community-based musk ox health surveillance system in the community of Cambridge Bay in order to monitor musk ox health over time and be able to detect disease emergence. This surveillance system will be built through community involvement and will incorporate traditional and local knowledge about musk ox health and diseases.

## **Rights in a Changing Climate: Understanding the Role of Human Rights Norms in Transnational Climate Advocacy**

**License Number:** 01 018 16N-M

**Principal Investigator:** Jodoin-Pilon, Sebastien

**Affiliation:** Faculty of Law  
McGill University  
Montreal, QC, Canada  
sebastien.jodin-pilon@mcgill.ca

**Number in Party:** 1

**Research Area:** South Baffin

**Fieldwork Locations:** Iqaluit, Pangnirtung

### **SUMMARY**

In 2005, there was an Inuit Petition before the inter-American Commission on Human Rights to Oppose Climate Change caused by the United States of America. This petition marked the start of a movement in which environmental lawyers and activists have framed climate change as a human rights problem. The purpose of this study is to examine the long-term impacts of this petition and the lessons that it offers for understanding the role and effectiveness of human rights in climate advocacy efforts.

## **Waste Management Solutions for Canadian Arctic Communities**

<b>License Number:</b>	04 013 16N-A
<b>Principal Investigator:</b>	Curry, Nathan
<b>Affiliation:</b>	Concordia Institute for Water, Energy & Sustainable Systems Concordia University Montreal, Quebec, Canada nathancurry@gmail.com
<b>Number in Party:</b>	2
<b>Research Area:</b>	Kitikmeot
<b>Fieldwork Locations:</b>	Cambridge Bay

### **SUMMARY**

Over the last two decades, increased urbanization have significantly changed the composition of Arctic waste streams. Traditionally comprised of organic waste, animal carcasses and other biodegradable waste, these streams now include plastics, hazardous material, and electronic waste, causing the common waste management practices of open dump pits, shallow tundra trenches, permafrost dumping, and burn barrels to release harmful leachate into water tables, and toxins into the air. Known waste management issues are being further complicated by climate change. There is a clear need to investigate and employ new waste management practices that include waste to energy technologies in order to bolster sustainable community and industrial development through a decrease in fossil fuels used for energy production, reduce pollution and environmental contaminants, and secure access to clean water supplies.

## **Study of the Profile of Francophone Migrants and Immigrants in Canada's Northern Territories (Yukon, Northwest Territories and Nunavut)**

**License Number:** 01 012 16N-A

**Principal Investigator:** Traisnel, Christophe

**Affiliation:** Graduate School of Public Studies  
University of Moncton  
Moncton, NB, Canada  
christophe.traisnel@umoncton.ca

**Number in Party:** 1

**Research Area:** Qikiqtani

**Fieldwork Locations:** Iqaluit

### **SUMMARY**

The proposed study will seek to better understand the factors contributing to the weakness of the retention of francophone migrants and immigrants, and to clear a number of avenues for improving this retention.

## **In Our Own Words: The Voice of Inuit RCMP Special Constables from Nunavut**

**License Number:** 05 014 16N-M

**Principal Investigator:** Webster, Deborah

**Affiliation:** 87 Aylen Avenue  
Ottawa, Ontario, Canada  
websterdeborah@hotmail.com

**Number in Party:** 1

**Research Area:** Nunavut Wide

**Fieldwork Locations:** Arviat, Iqaluit, Pond Inlet, Coral Harbour, Pangnirtung, Kimmirut, Grise Fiord, Cape Dorset, Clyde River, Hall Beach, Cambridge Bay, Chesterfield Inlet, Rankin Inlet, Coral Harbour

### **SUMMARY**

This project will create a record of Nunavut RCMP special constables' roles and contributions in their own words. Information gathered from interviews will be used to write biographies about each special constable to include in a book about Our Inuit Specials.

## **Identity, Livelihood, and the Politics of Oil in the Arctic: A case study of Clyde River Inuit and Greenpeace Alliances**

**License Number:** 0203716N-M

**Principal Investigator:** Bickford, Annette Louise

**Affiliation:** Department of Social Science  
York University  
Toronto, Ontario, Canada  
bickford@yorku.ca

**Number in Party:** 1

**Research Area:** North Baffin

**Fieldwork Locations:** Clyde River

### **SUMMARY**

The purpose of this study is to understand how Clyde River residents are negotiating food security in light of scheduled seismic surveys in nearby Baffin Bay and Davis Strait. As the first Supreme Court case from Nunavut, the case against seismic testing had food security implications of national importance.

## **Mobilizing Inuit Cultural Heritage: Women's Skin Sewing as Creative Arts Project**

**License Number:** 02 034 16R-M

**Principal Investigator:** Wachowich, Nancy

**Affiliation:** School of Social Sciences  
University of Aberdeen  
Aberdeen, Scotland, U.K.  
n.wachowich@abdn.ac.uk

**Number in Party:** 4

**Research Area:** North Baffin

**Fieldwork Locations:** Pond Inlet

### **SUMMARY**

We are working with an international research team on a project designed to promote access to advanced information and communication technologies, and to connect Inuit voice to objects of cultural heritage. This project is taking place in several communities in the Canadian Arctic and involves documenting and promoting creative practise and different forms of artistic tradition.

## The Inuit and their Dogs: Human-Animal Relations in Nunavik and Nunavut Today

<b>License Number:</b>	01 020 16N-A
<b>Principal Investigator:</b>	Levesque, Francis
<b>Affiliation:</b>	Universite du Quebec en Abitibi-Temiscamingue Val-d'Or, Quebec, Canada francis.levesque2@uqat.ca
<b>Number in Party:</b>	1
<b>Research Area:</b>	South Baffin
<b>Fieldwork Locations:</b>	Iqaluit

### SUMMARY

In the past 60 years, public authorities in Nunavut have tried to put in place measures to control what they perceived as the risks associated with dog populations, mainly the transmissions of zoonosis to human population (i.e. rabies, parasites) and attacks on people. The measures adopted to control these perceived risks have included the vaccination of dogs, the slaughter of others (officially, only roaming and sick ones), and the obligation of tying them up. The main objective of this project is to bridge the gap between public health and Inuit over the issues of dogs in Iqaluit. Specifically, this project will: 1) Make a description of dogs (loose, pets, sled dogs, etc.), the risks that are associated with them (accidents, transmission of zoonosis and diseases, etc.), dog sicknesses, local regulations, and resources (dog pound, vet services, etc.), and 2) Describe local perceptions of dogs among various actors.

## **In Pursuit of Environmental Sustainability in the Arctic: The role of Arctic Council governance norms in shaping the region's environmental governance systems**

**License Number:** 0102316N-M

**Principal Investigator:** Spence, Jennifer

**Affiliation:** Faculty of Public Affairs  
Carleton University  
Ottawa, Ontario, Canada  
Jennifer.spence@carleton.ca

**Number in Party:** 1

**Research Area:** South Baffin

**Fieldwork Locations:** Iqaluit

### **SUMMARY**

The objective of this project is to explore to what extent the governance features of the Arctic Council (AC) has influenced the way its participants work together and make decisions (governance norms) and, by extension, to what extent these governance features may have spread to the broader network of existing institutions that support environmental governance in Nunavut.

In particular, a component of this research will explore how the AC integrates the local knowledge and experience of the region's peoples into its analysis and decision-making. This research will further examine how well the objectives of the AC are aligned with the needs and expectations of the region's peoples.

## Pronouns and reflexives in Inuktitut

<b>License Number:</b>	01 024 16N-A
<b>Principal Investigator:</b>	Yuan, Michelle
<b>Affiliation:</b>	Department of Linguistics Massachusetts Institute of Technology Cambridge, Massachusetts, USA YUANM@MIT.EDU
<b>Number in Party:</b>	1
<b>Research Area:</b>	South Baffin
<b>Fieldwork Locations:</b>	Iqaluit

### SUMMARY

This project researches the sentence-level structure of Inuktitut, with special focus on pronouns and reflexives. The linguistic distributions of these elements will be carefully and thoroughly documented, while looking for patterns and generalizations in the data. The results will primarily be used to inform general linguistic research on pronouns and reflexives, but will also be potentially useful for language pedagogy and language maintenance.

## **Climate Communication and Adaptation: Engaging Maritime Publics in Resource Management**

**License Number:** 04 015 16N-M

**Principal Investigator:** Tam, Chui-Ling

**Affiliation:** Department of Geography  
University of Calgary  
Calgary, Alberta, Canada  
cltam@ucalgary.ca

**Number in Party:** 1

**Research Area:** Kitikmeot

**Fieldwork Locations:** Cambridge Bay

### **SUMMARY**

The purpose of this research is to study climate change communication and compare maritime communities in diverse climate zones to identify differences and similarities in local perceptions of climate change and global climate action, and associated effects on local participation in resource management.

The research question is: Does climate change communication mobilize or constrain local public engagement, and do those effects vary depending on the particular spatial and socio-ecological attributes of places experiencing environmental change? The objectives are to understand how local resource environments and challenges are perceived and communicated in the context of climate change, how climate change is perceived as a societal and ecological phenomenon, and how different actors participate in climate change communication and resource management.

## Community-Based Research for Water Security in Iqaluit, Nunavut

<b>License Number:</b>	01 026 16N-A
<b>Principal Investigator:</b>	Watson, Victoria
<b>Affiliation:</b>	Department of Geography York University Toronto, Ontario, Canada vwatson@yorku.ca
<b>Number in Party:</b>	1
<b>Research Area:</b>	South Baffin
<b>Fieldwork Locations:</b>	Iqaluit

### SUMMARY

This research project works with local community members to study water security in Iqaluit. The purpose will be to collect information about access to fresh water, and to understand current issues for the community. Data will be collected through interviews and participant observation, and will address water usage from the municipal water system as well as direct collection from natural sources. Iqaluit was chosen because of the current issues with water access. Data gathered will be used for the completion of a Master's thesis, given to the Nunavut Research Institute, and to the government for policy development. The researcher will return to Iqaluit in 2017 to discuss the research with community members. The research may result in a publication.

## Representation of Northern Women in the Media

<b>License Number:</b>	03 006 16N-M
<b>Principal Investigator:</b>	Glennie, Cassidy
<b>Affiliation:</b>	Department of Sociology Mount Allison University Sackville, New Brunswick, Canada cmglennie@mta.ca
<b>Number in Party:</b>	1
<b>Research Area:</b>	Kivalliq
<b>Fieldwork Locations:</b>	Rankin Inlet

### SUMMARY

The purpose of this study will be to examine how Inuit women feel about the representation of their ethnicity in the media. Two focus groups will be held for young women in the community. Participation will be voluntary. The two focus groups will involve approximately 10 young Inuit women between the ages of 16 and 25. The focus group will only include young Inuit women. All other demographics will be excluded. This research project is based around the impact of the representation and exclusion of Inuit women in music videos.

## Public Housing Accountability in Nunavut

<b>License Number:</b>	01-026-16R-M
<b>Principal Investigator:</b>	Baker, Ron
<b>Affiliation:</b>	Department of Management University of Guelph Guelph, Ontario, Canada ron@uguelph.ca
<b>Number in Party:</b>	1
<b>Research Area:</b>	Qikiqtani
<b>Fieldwork Locations:</b>	Iqaluit, Qikiqtarjuak

### SUMMARY

The purpose of this study is to examine the role of accountability in the delivery of public housing in Nunavut communities. Of particular interest are the reporting requirements, both financial and non-financial, and the roles of the local Board of Directors, local housing organization, Nunavut Housing Corporation, and the Nunavut Government. An examination of the funding agreements and arrangements will also be undertaken.

**Assessing the Costs of Climate Change on Harvesting in Pond Inlet, Nunavut**

**License Number:** 02-043-16N-M

**Principal Investigator:** Acker, Sarah

**Affiliation:** Geography Department  
University of McGill  
Montreal, Quebec, Canada  
sarah.acker2@mail.mcgill.ca

**Number in Party:** 1

**Research Area:** North Baffin

**Fieldwork Locations:** Pond Inlet

**SUMMARY**

Hunters in Arctic Canada that already handle many stresses, like the increase in harvesting regulations or contaminants in hunted animals, must also take on issues of climate change and how environmental changes are altering the ability to hunt now and in the future. This research seeks to understand the role of climate change in the rising costs of harvesting, and what economic impacts Inuit harvesters and communities may face in the future because of the associated environmental changes.

## OceanCanada: Climate Change and Oceans in Canada

**License Number:** 05-011-16N-M

**Principal Investigator:** Mauro, Ian

**Affiliation:** Geography Department  
University of Winnipeg  
Winnipeg, Manitoba, Canada  
i.mauro@uwinnipeg.ca

**Number in Party:** 1

**Research Area:** Qikiqtaaluk

**Fieldwork Locations:** Pangnirtung

### SUMMARY

Researchers seek to work collaboratively with the communities of Pangnirtung, Arviat and Igloolik to collect, conserve, and communicate Inuit Qujimajatuqangit regarding oceans, climate change, and industrial development impacts. This research will use video-based methodologies to collect qualitative social science data.

## **Contending with Risk and Uncertainty: Social Experiences of Uranium Mining in Qamani'tuaq, Nunavut**

**License Number:** 03-008-16N-A

**Principal Investigator:** Metuzal, Jessica

**Affiliation:** Environmental Studies  
Queen's University & Concordia University  
Ottawa, Ontario, Canada  
jmetuzals@gmail.com

**Number in Party:** 1

**Research Area:** Kivalliq

**Fieldwork Locations:** Baker Lake

### **SUMMARY**

This projects aims to understand how risk and uncertainty inform the acceptability of uranium mining in Qamani'tuaq. The proposed research will adopt an adaptive and flexible approach comprised of multiple research methods including archival research, semi-structured interviews, and participant observation.

## **Structuring a Preparedness and Emergency Response Regime? The Environmental Protection of Lancaster Sound, Nunavut, Canada**

**License Number:** 02 046 16N-M

**Principal Investigator:** Rattue, Kevin

**Affiliation:** Geography and the Environment  
Oxford University  
Oxford, England  
krattue@gmail.com

**Number in Party:** 1

**Research Area:** North Baffin

**Fieldwork Locations:** Pond Inlet, Resolute, Arctic Bay, Iqaluit

### **SUMMARY**

As Arctic sea ice cover decreases, shipping lanes through the Northwest Passage (NWP) may become increasingly accessible to commercial traffic. The possibility of an oil or fuel spill exists and the location of Lancaster Sound would make emergency response difficult. The physical environment could be disastrously impaired and the lifestyles of coastal communities adversely impacted. Within this context, this research will examine the adequacy of existing contingency planning and emergency measures available to respond to an accident in Lancaster Sound, Nunavut.

## **Paarii and Uinigumasuittuq: Re-examining Arctic Exploration Through Inuit Oral Histories**

**License Number:** 02 039 16N-A

**Principal Investigator:** Gennari, Carolyn

**Affiliation:** School of Art & Design  
University of Michigan  
Central Falls, RI, USA  
Gennari@umich.edu

**Number in Party:** 2

**Research Area:** North Baffin

**Fieldwork Locations:** Igloolik

### **SUMMARY**

The objective of this research is to explore the continuing importance of Inuit oral history in relation to arctic exploration and Nunavut culture and tradition. I am particularly interested in how traditional knowledge is preserved through storytelling and used in circus arts, dance, music, and performance. This project stems from previous research centered on the voyages of Captain William Parry to discover a northwest passage, anchoring in Igloolik in 1822. My methodology is two fold: I will be researching Inuit oral histories which are archived and transcribed at the Inullariit Elder's Society at the Igloolik Research Institute. John MacDonald has given me research advice for how to search for content related to William Parry contained in these transcripts. I will also be meeting with participants of Artcirq and other community members. In these cases, I will conduct informal interviews related to the project.

## **Sustainable Cruise Tourism Development in Nunavut: Community Perspectives on the Visit of the Crystal Serenity 2016**

**License Number:** 04 021 16N-M

**Principal Investigator:** Orawiec, Andrew

**Affiliation:** University of Toronto  
Toronto, Ontario, Canada  
andrew.orawiec@mail.utoronto.ca

**Number in Party:** 1

**Research Area:** Kitikmeot, North Baffin

**Fieldwork Locations:** Pond Inlet, Cambridge Bay

### **SUMMARY**

This study will determine whether luxury cruise tourism is aligned with the vision of sustainability as presented in Tunngasaiji: A Tourism Strategy for Nunavummiut – including both the positive and negative effects on the economy, environment, and society of Nunavut.

## **Qikitani Inuit Association Inuit Qaujimajatuqangit Database**

<b>License Number:</b>	01 025 16R-M
<b>Principal Investigator:</b>	D'Orazio, Rosanne
<b>Affiliation:</b>	Department of Lands & Resources Qikiqtani Inuit Association Iqaluit, Nunavut, Canada rdorazio@qia.ca
<b>Number in Party:</b>	1
<b>Research Area:</b>	North Baffin & South Baffin
<b>Fieldwork Locations:</b>	Arctic Bay, Cape Dorset, Clyde River, Grise Fiord, Hall Beach, Igloolik, Iqaluit, Kimmirut, Pangnirtung, Pond Inlet, Qikiqtarjuaq, Resolute Bay, Sanikiluaq

### **SUMMARY**

The Qikiqtani Inuit Association (QIA) is creating an Inuit Qaujimajatuqangit (IQ) database. QIA has collected & digitized the Inuit Land Use and Occupancy (ILUO) Data created in the 1970's that was created to aid in the negotiations of the Nunavut Land Claim Agreement. QIA is involved in IQ collection through development (Baffinland) and through protected areas creation (Lancaster Sound National Marine Conservation Area). QIA is currently incorporating new IQ data into the database. This includes all IQ data that Baffinland has collected during the Environmental Assessment process. QIA is currently involved in the creation of the Lancaster Sound National Marine Conservation Area (NMCA). As part of the process, QIA will be conducting the Inuit Qaujimajatuqangit/Traditional Knowledge Study component to help aid the creation of the NMCA.

## **Inuk Ihunma Inukmarik (Thinking like a Genuine Inuk)**

**License Number:** 00300716N-M

**Principal Investigator:** Ford, Jessica

**Affiliation:** First Nations Studies  
University of Western Ontario  
London, Ontario, Canada  
jsford@uwo.ca

**Number in Party:** 1

**Research Area:** Kivalliq

**Fieldwork Locations:** Baker Lake

### **SUMMARY**

Inuit Elders living in Qammanituaq, Nunavut who received a customary education will be asked to share their learning experiences and stories, and reflect on the ways in which they acquired Inuit knowledge. The Elders will also be asked for their thoughts about how customary learning approaches might be used in formal school settings today to re-work curriculum in ways that would support the preservation of culture and encourage students to complete their educational journeys.

## Sustainable Development in Nunavut

**License Number:** 01 035 16N-M

**Principal Investigator:** Lopez, Fabiola

**Affiliation:** Department of Resource Economics and Environmental  
Sociology  
University of Alberta  
Edmonton, Alberta, Canada  
Brenda.paarlee@ualberta.ca

**Number in Party:** 1

**Research Area:** South Baffin

**Fieldwork Locations:** Iqaluit

### SUMMARY

The goal of this project is to assess the current institutional arrangements in place for managing the socio-economic opportunities and environmental impacts of tourism (cruise ship tourism) on Auyuittuq National Park and Bylot Island Migratory Bird Sanctuary.

## **The Inuit Circumpolar Council (ICC): vehicle for Inuit decolonization and a model for Inuit peacemaking?**

**License Number:** 0103216N-A

**Principal Investigator:** Shoepner, Lydia

**Affiliation:** Arthur V. Mauro Centre for Peace and Justice  
University of Manitoba  
Winnipeg, Manitoba, Canada  
lydia.schoepner@outlook.com

**Number in Party:** 1

**Research Area:** South Baffin

**Fieldwork Locations:** Pangnirtung

### **SUMMARY**

This research project analyzes the Inuit Circumpolar Council's (ICC's) work to promote decolonization for Inuit in Nunavut and Greenland and to make their lives more peaceful. I will be focusing on two current conflicts: the effects of climate change and Inuit demands for sovereignty. Through conversations with Inuit from two communities (Pangnirtung, Nunavut and Maniitsoq, Greenland), and with Inuit who are currently or who have previously been affiliated with the ICC, I will analyze how climate change and Inuit sovereignty are understood and dealt with in the community and within the ICC. This project seeks to identify existing and potential interconnections between local Inuit and the ICC in Canada and Greenland to address issues of climate change and Inuit sovereignty.

## **Quantity and Quality Research Project: Social Change and Education of Inuit in Nunavut, Canada – A Case Study at Iqaluit**

<b>License Number:</b>	02 049 16N-M
<b>Principal Investigator:</b>	Hasegawa, Mizuho
<b>Affiliation:</b>	Tokyo University of Foreign Studies Yokohama, Aobaku, Canada makiramiho@poppy.ocn.jp
<b>Number in Party:</b>	2
<b>Research Area:</b>	South Baffin
<b>Fieldwork Locations:</b>	Iqaluit

### **SUMMARY**

Nunavut history has been marked by rapid and huge changes in society and education. Inuit have endured the changes and are now taking significant steps. The incorporation of Inuktitut and Inuit Qaujimajutuqangit into school programs is vital to preserving Inuit culture and identity. In this project I wish to make it clear how Inuit society in Nunavut has improved and how Nunavut educational programs are impacting Nunavut students' ability to strive for academic success.

## Rankin Inlet: The Economy of a Community

<b>License Number:</b>	03 011 16R-M
<b>Principal Investigator:</b>	Muir, Andrew
<b>Affiliation:</b>	Carleton University Ottawa, Ontario, Canada book_shelves@hotmail.com
<b>Number in Party:</b>	2
<b>Research Area:</b>	Kivalliq
<b>Fieldwork Locations:</b>	Rankin Inlet

### SUMMARY

The overall objective of this project is to develop a better understanding of the local economy of Rankin Inlet, with a focus on how it has changed since the 1950s and on how residents presently secure a living. As well, the dissertation combines historical research of the Government of Canada's and commercial interests' intervention in the Arctic with a discussion of how Inuit society in the Kivalliq Region has changed since the 1700s.

## **Inuit Qaujimagatunqangit in Elementary Life Science Education**

<b>License Number:</b>	03 012 16N-A
<b>Principal Investigator:</b>	Kaluraq, Marjorie Kaviq
<b>Affiliation:</b>	School of Education Trent University Iqaluit, Nunavut, Canada marjoriekaluraq@trentu.ca
<b>Number in Party:</b>	3
<b>Research Area:</b>	Kivalliq
<b>Fieldwork Locations:</b>	Arviat, Baker Lake, Chesterfield Inlet, Coral Harbour, Naujaat, Rankin Inlet, Whale Cove

### **SUMMARY**

The purpose of this study is to learn from the experience of teachers and elders about elementary life science education. Elementary education is a foundational stage where students learn primary skills that contribute to their interest and success in secondary school science. Engaging elementary students with science that is relevant and interesting is key to promoting their enthusiasm for the subject into further science education and ultimately to science-based careers.

## **Engagement in the Canadian Red Cross: Supporting Nunavut Youth to Create Change in their Community**

**License Number:** 05 017 16N-M

**Principal Investigator:** Ulrich, Rebecca

**Affiliation:** Royal Roads University  
Winnipeg, MB, Canada  
rebecca.ulrich@redcross.ca

**Number in Party:** 2

**Research Area:** Kivalliq, Qikiqtani

**Fieldwork Locations:** Rankin Inlet, Pond Inlet, Iqaluit, Hall Beach

### **SUMMARY**

The objective of this research is to find ways of engaging Nunavut youth in the development of Respect Education programs with the Canadian Red Cross, and to ensure the program meets their needs. The Respect Education program is currently delivered in schools across Nunavut as part of the Suicide Prevention Action Plan.

## **Representations of and reactions to Indigenous perspectives: Investigating Indigenous-related content in K-12 official science curriculum documents and education stakeholders' views of this content**

**License Number:** 01 037 16N-A

**Principal Investigator:** Kim, Eun-Ji Amy

**Affiliation:** McGill University  
Montreal, Quebec, Canada  
ekim039@gmail.com

**Number in Party:** 3

**Research Area:** Qikiqtani

**Fieldwork Locations:** Iqaluit

### **SUMMARY**

The purpose of this project is to examine the ways in which Inuit Qaujimagatuqangit (IQ) has been incorporated into K-12 science curriculum documents in Nunavut and to outline the views of stakeholders (i.e., academics, curriculum consultants and developers, directors of education and curriculum services) on the integration of IQ within science education.

## **A Collaborative Research Project with Inuit Youth, Families and their Communities about Informal Education Practices, Community Driven Science Research and Life Long Learning with Important Implications for Inuit Education and Perverserance**

<b>License Number:</b>	05 016 16N-M
<b>Principal Investigator:</b>	Rahm, Jrene
<b>Affiliation:</b>	Faculty of Education University of Montreal Mont-Royal, Quebec, Canada jrene.rahm@umontreal.ca
<b>Number in Party:</b>	5
<b>Research Area:</b>	Kivalliq & Qikiqtani
<b>Fieldwork Locations:</b>	Arviat, Sanikiluaq, Pond Inlet

### **SUMMARY**

The purpose of this collaborative community project is the description and documentation of Inuit ways of learning with Inuit youth, families and their communities. The three-year collaborative community project is also closely aligned with the research priorities of the National Strategy of Inuit Education. We initiated collaborations with four programs in three communities in Nunavut to pursue our goal of describing life-long learning and a holistic model of Inuit education.

## **Integrating Local Knowledge of Ecologically Sensitive and Culturally Important Marine Areas in Arctic Canada**

**License Number:** 02 027 16N-M-Amended3

**Principal Investigator:** Carter, Natalie Ann

**Affiliation:** Department of Geography  
University of Ottawa  
Ottawa, Ontario, Canada  
ncarte3@uottawa.ca

**Number in Party:** 3

**Research Area:** Qikiqtaaluk, Kitikmeot

**Fieldwork Locations:** Pond Inlet, Cambridge Bay, Gjoa Haven, Arviat

### **SUMMARY**

The intent of the Northern Marine Transportation Corridors (NMTC) initiative, co-led by the Canadian Coast Guard, is to reduce the likelihood of marine incidents by providing predictable levels of service to mariners transiting the corridors. However, the corridors do not adequately consider marine areas used by northern communities for traditional or cultural activities, nor do they consider non-commercial use of the marine environment including tourism vessels that are likely to travel off the corridors into uncharted waters and under serviced regions. The proposed research is in direct reaction to this challenge.

## **The Sustainability and Education Policy Network (SEPN): Leading Through Multi-Sector Learning**

**License Number:** 01 014 16N-M-Amended

**Principal Investigator:** McKenzie, Marcia

**Affiliation:** College of Education  
University of Saskatchewan  
Saskatoon, SK, Canada  
marcia.mckenzie@usask.ca

**Number in Party:** 8

**Research Area:** South Baffin

**Fieldwork Locations:** Iqaluit

### **SUMMARY**

The Sustainability and Educating Policy Network (SEPN) is a network of researchers and organizations advancing sustainability in education policy and practise across Canada. Based at the University of Saskatchewan, SEPN is the first large-scale, national level research collaboration to collect and analyze comparable data at all levels of education. This study asks about the degree to which a sustainability focus is included in practises and policies in your work or study setting and about the drivers and barriers to sustainability uptake.

## **Supporting Inuuqatigiitsiarniq for Inuit families: A Community-Based Study of Healthy and Respectful Family Environments in Arviat, Nunavut**

<b>License Number:</b>	03 001 17N-M
<b>Principal Investigator:</b>	Tagalik, Shirley
<b>Affiliation:</b>	Arviat Wellness Centre/Aqqiumavvik Arviat, Nunavut, Canada inukpaujaq@gmail.com
<b>Number in Party:</b>	11
<b>Research Area:</b>	Kivalliq
<b>Fieldwork Locations:</b>	Arviat

### **SUMMARY**

The goals of this study are:

1. To initiate community discussions about healing needs;
2. To explore, and build upon, current family and community resources for well-being including inuugatigiitsiarniq/illagiitsiarniq;
3. To provide the opportunity for intergenerational connections, counseling and healing to take place;
4. To build relationship, anger management and inuugatigiitsiarniq/illagiitsiarniq skills for strong families, strong parents, and strong children;
5. To reinstate the role and responsibility of family membership and explore its implications for well-being of children, parents, extended families and the community.

## **Drawing from the Past: Picturing Modernity in the North Baffin Region, 1964**

<b>License Number:</b>	02 038 17N-M
<b>Principal Investigator:</b>	Vorano, Norman
<b>Affiliation:</b>	Department of Art History Queen's University Kingston, Ontario, Canada norman.vorano@queensu.ca
<b>Number in Party:</b>	1
<b>Research Area:</b>	Qikiqtani
<b>Fieldwork Locations:</b>	Clyde River, Pond Inlet

### **SUMMARY**

This research creates new understandings and interpretations of drawings made by Inuit men and women from the North Baffin Region in 1964. The interviews provide information about Inuit culture and history during the 20th century, and help enlarge our knowledge and appreciation of the events, times and thoughts that are depicted on the drawings. The primary objective of this research is to gather video interviews that will be used as interpretative material in a traveling exhibition of these drawings that will be co-produced in 2017 by Queen's University and the Canadian Museum of History, with the assistance of our institutional partners in Nunavut: Piqusilirivvik and the Pond Inlet Archives. The exhibition will travel to other venues in Canada and the U.S. as well as in Nunavut. Edited sections of the video interviews may be made available online in conjunction with this exhibition.

## **Oncogenic drivers of lung cancer among Canadian Inuit: a retrospective histological and molecular analysis**

<b>License Number:</b>	05 005 16R-M
<b>Principal Investigator:</b>	Goss, Glenwood
<b>Affiliation:</b>	Ottawa Hospital Cancer Centre Ottawa Hospital Research Institute Ottawa, Ontario, Canada ggoss@ottawahospital.on.ca
<b>Number in Party:</b>	7
<b>Research Area:</b>	Nunavut
<b>Fieldwork Locations:</b>	All Nunavut Communities

### **SUMMARY**

Cancer is quickly becoming a major health concern among Canadian Inuit in Nunavut, with lung cancer representing more than one third of all cancer diagnoses. Inuit experience a number of barriers in accessing cancer treatment services, given their remote location. With the recent development of oral targeted therapies, some lung cancer patients may be eligible for treatment in the community based on the molecular characteristics of their tumour or "biomarkers". Determining the molecular characteristics of lung cancer among Canadian Inuit would inform policy and identify opportunities for personalized therapy in the community.

## **Identifying Cultural and Geographic Barriers and Improving Palliative Care Services in the Qikiqtaaluk Region of Nunavut: The Perspectives of Health Care Providers**

<b>License Number:</b>	01 004 16N-M
<b>Principal Investigator:</b>	Vincent, Daniel
<b>Affiliation:</b>	Bruyere Research Institute Ottawa, Ontario, Canada dvincent@bruyere.org
<b>Number in Party:</b>	2
<b>Research Area:</b>	Qikiqtaaluk
<b>Fieldwork Locations:</b>	Iqaluit

### **SUMMARY**

The objective of the proposed study is to improve end-of-life care services to Nunavummiut patients and their families by considering the implications of study findings to help guide palliative care initiatives and programs within Nunavut. Several previous studies have explored health care service providers' experiences providing palliative care to Aboriginal patients and their families. No studies have previously explored the provision of culturally sensitive end-of-life care to Nunavummiut in Iqaluit and remote Baffin Island communities.

## **What are the Components necessary and Resources available for Developing and Implementing an Effective Youth Driven Tobacco Cessation Program for Inuit Youth in Grades 10 through 12 at Maani Illiniarvik in Rankin Inlet, NU?**

**License Number:** 03 001 16N-A

**Principal Investigator:** O'Connell, Katharine

**Affiliation:**  
University of Alberta  
Rankin Inlet, Nunavut, Canada  
keoconne@ualberta.ca

**Number in Party:** 2

**Research Area:** Kivalliq

**Fieldwork Locations:** Rankin Inlet

### **SUMMARY**

This project aims to identify the components needed and the resources available to develop an effective youth driven tobacco cessation program in Rankin Inlet. Two focus groups (8-10 students per group) will be conducted with students in grades 10 through 12 at Maani Ululyuk Illiniarvik. Students will be selected based on interest in the project and submission of a signed consent form. In addition, two stakeholder interviews will be completed to gather information. Interviews will be conducted with a local public health nurse as well as a member of the school team at Maani Ululyuk Illiniarvik. Each focus group and interview will be transcribed and analyzed line by line in microsoft Excel where codes, themes and categories will be created. Finally, recommendations for the development and implementation of a youth driven tobacco cessation program will be generated.

## Survey of Primary Care Providers in NU

<b>License Number:</b>	05 006 16N-M
<b>Principal Investigator:</b>	Young, Kue
<b>Affiliation:</b>	School of Public Health University of Alberta Edmonton, Alberta, Canada kue.young@ualberta.ca
<b>Number in Party:</b>	2
<b>Research Area:</b>	Nunavut Wide
<b>Fieldwork Locations:</b>	All Communities

### SUMMARY

As part of a 5 year research partnership focused on strengthening and improving the health care system in the North funded by the Canadian Institutes for Health Research, we are looking to gather primary care provider perspectives in Nunavut on primary health care in general, and issues related to medical travel in particular.

## **Access to Primary Healthcare in Iqaluit: Component of the Evaluation of the Project for Enhanced Rural and Remote Training**

<b>License Number:</b>	01 002 16R-M
<b>Principal Investigator:</b>	Godwin, Marshall
<b>Affiliation:</b>	Faculty of Medicine Memorial University St. John's, NL, Canada godwinm@mun.ca
<b>Number in Party:</b>	2
<b>Research Area:</b>	Qikiqtani
<b>Fieldwork Locations:</b>	Iqaluit

### **SUMMARY**

The primary purpose of this study is to examine access to primary healthcare services for individuals living in Iqaluit, NU. This is a component of an evaluation of the Project for Enhanced Rural and Remote Training, an initiative of Memorial University of Newfoundland and the Government of Nunavut. This initiative provides funding for current family medicine residents to complete a portion of their residency training in Iqaluit, NU

## **Housing in the Canadian Arctic: Assessing the Impacts of Rehousing for Inuit Health**

**License Number:** 02 006 16R-M

**Principal Investigator:** Riva, Mylene

**Affiliation:**

Laval University  
Quebec City, Quebec, Canada  
mylene.riva@crchudequebec.ulaval.ca

**Number in Party:**

**Research Area:** Baffin, Kivalliq

**Fieldwork Locations:** Arviat, Clyde River, Iqaluit, Repulse Bay, Kugluktuk, Baker Lake

### **SUMMARY**

In the Canadian Arctic, 60% of the population in Nunavut live in social housing. In 2006, 39% of the population reported living in overcrowded houses, vs. 3% of non indigenous Canadians. These poor housing conditions are compromising population health and communities' capacity for social and economic development. Studies have shown that "rehousing", that is moving to a new house, may improve health directly or indirectly through psychosocial pathways. This project aims to examine whether moving to a new house by reducing exposure to overcrowding and improving housing quality, is associated with better health directly, and indirectly through psychosocial pathways.

## Gathering Community Perspectives on Infant Sleeping Practices in Nunavut

<b>License Number:</b>	05 002 16R-M
<b>Principal Investigator:</b>	Arbour, Laura
<b>Affiliation:</b>	UBC Dept. of Medical Genetics University of Victoria Victoria, BC, Canada larbour@uvic.ca
<b>Number in Party:</b>	5
<b>Research Area:</b>	South Baffin, Kivalliq, Kitikmeot
<b>Fieldwork Locations:</b>	Arviat, Cambridge Bay, Iqaluit

### SUMMARY

Nunavut has the highest rate of infant deaths (deaths until 1 year of age) in Canada. One important cause of infant death in Nunavut is sudden infant death syndrome (SIDS), where an infant dies during sleep without an obvious cause. When this occurs, it is devastating for families. Safe sleeping practices with a newborn infant are very important and may reduce the chance of SIDS. Sleeping practices that can make a difference include the position the baby is put to sleep in and other aspects such as sleep surfaces, other people in the same bed as the baby, etc. In partnership with Nunavut Tunngavik Inc. (NTI) and the Arctic Health Research Network (AHRN), this project will hold multigenerational focus groups to explore traditional and current sleep practices (positioning, co-sleeping etc). Information from the focus groups and knowledge of Inuit cultural practices will help in development of a health promotion strategy encouraging safe sleep practices and culturally relevant Maternal Child Health practices

## Should Newborn Screening Be Initiated in Nunavut for Mild CPT1 (Carnitine Palmitoyl Transferase -1) Deficiency?

**License Number:** 05 003 16R-M

**Principal Investigator:** Arbour, Laura

**Affiliation:** Department of Medical Genetics  
Victoria General Hospital  
Victoria, BC, CA  
laura.arbour@viha.ca

**Number in Party:** 4

**Research Area:** Nunavut Wide

**Fieldwork Locations:** ????

### SUMMARY

CPT1 deficiency is caused by a genetic change (mutation) in the Carnitine Palmitoyl Transferase-1 gene. This gene normally produces a protein that is involved in producing energy from the fats we eat. We all have two copies of this gene (all of our genes come in pairs) as we inherited one copy from our mother and one copy from our father. People who have a mutation in both copies of their CPT1 gene produce a protein that does not work properly. These individuals have trouble producing energy from fats. The mutations do not usually affect people in daily life, because we get most of the energy we need by breaking down sugars from our food rather than fats. However, when we get sick or are not eating enough food for other reasons, our bodies start to break down our fat stores for energy. Thus, individuals (particularly infants) who have CPT1 mutations in both copies of the gene can run into health problems during periods of illness or fasting because they cannot produce enough energy from fats. The result may be low blood sugar (hypoglycemia) and seizures or, in the worst-case scenario, unexpected sudden infant death.

## Understanding the Role of the CPTA1A P479L variant in infant and child health outcomes in Nunavut

**License Number:** 05 004 16R-M

**Principal Investigator:** Arbour, Laura

**Affiliation:** UBC Department of Medical Genetics  
University of Victoria  
Victoria, BC, Canada  
larbour@uvic.ca

**Number in Party:** 6

**Research Area:** Nunavut Wide

**Fieldwork Locations:**

### SUMMARY

CPT1A (carnitine palmitoyltransferase 1A) is a liver protein that uses fat for energy when sugar is not available (during fasting or prolonged exercise). Classical CPT1A deficiency is caused by a genetic change (mutation) in the CPT1A gene causing the protein to not work properly. Although this usually does not cause problems since most energy comes from sugars, people with these mutations (especially infants) can have problems during illness or fasting, resulting in low blood sugar, seizures and even unexpected sudden infant death. Treatment involves frequent feeding in the first years of life and medical aid if the child becomes ill. Early diagnosis and education saves lives

## **Navigational Strategies in Young and Older Adult Inuit Trackers and Hunters**

<b>License Number:</b>	02 008 16R-M
<b>Principal Investigator:</b>	Bohbot, Veronique
<b>Affiliation:</b>	Faculty of Medicine/Douglas Institute University of McGill LaSalle, Verdun, Quebec, Canada veronique.bohbot@mcgill.ca
<b>Number in Party:</b>	2
<b>Research Area:</b>	North Baffin
<b>Fieldwork Locations:</b>	Igloolik

### **SUMMARY**

This study will shed light on what navigation strategies Inuit trackers and hunters – experts in navigation – use to orient. As such, the results of this study will contribute to our understanding of the strategies that contribute to good orientation skills in Inuit trackers and hunters. In addition, this study will inform us as to whether using a GPS has an impact on the navigation strategies used by Inuit trackers and hunters, and if so, this research has the potential to help us understand what happens when Inuit rely too much on the GPS. This study could bring awareness of the shortcomings of GPS use and the importance of traditional navigation in the Inuit culture.

## **Walking the Prevention Circle: Researching Community Capacity Building for Violence Prevention**

<b>License Number:</b>	01 007 16R-M
<b>Principal Investigator:</b>	Cardinal, Shelley
<b>Affiliation:</b>	Red Cross Canada Victoria, BC, Canada shelley.cardinal@redcross.ca
<b>Number in Party:</b>	3
<b>Research Area:</b>	Baffin, Kivalliq
<b>Fieldwork Locations:</b>	Arviat, Cape Dorset

### **SUMMARY**

Our research purpose is to conduct community based research on the Canadian and Australian Red Cross Societies' Walking the Prevention Circle (WTPC) – a program for building community capacity for promoting healing and preventing violence in Aboriginal Communities. This research will help us understand how communities implement WTPC and will also help us learn about ways in which WTPC is effective in enabling communities to build capacity and bring about positive changes

## **Adapting the Community Readiness Model (CRM) for HIV/AIDS Prevention, Education and Screening with Inuit Communities Developing Strategies for HIV Prevention with Community Input & Collaboration**

<b>License Number:</b>	02 012 16R-M
<b>Principal Investigator:</b>	Steenbeek, Audrey
<b>Affiliation:</b>	Department of Community Health & Epidemiology Dalhousie University Halifax, NS, Canada a.steenbeek@dal.ca
<b>Number in Party:</b>	9
<b>Research Area:</b>	Qikiqtani, Kivalliq, Kitikmeot
<b>Fieldwork Locations:</b>	Arviat, Kugluktuk, Clyde River

### **SUMMARY**

HIV infections are a real threat for Inuit communities, and since every community is different, we are not sure how ready communities are in dealing with HIV. The main purpose of this research is to help Inuit communities identify how ready they are to deal with HIV infections with the community readiness model. The community readiness model is a tool that can help communities determine how ready they are to deal with a specific issue. For this project, we are looking at initiatives that focus on HIV prevention, education and screening. Our research project aims to adapt, pre-test and use the CRM to identify how ready 3 communities in Nunavut are to deal with HIV

## Social Network Influences on Fertility

<b>License Number:</b>	0300616N-M
<b>Principal Investigator:</b>	Parker, Jessica Leanne
<b>Affiliation:</b>	Department of Psychology University of Lethbridge Lethbridge, AB, Canada jessica.parker@uleth.ca
<b>Number in Party:</b>	2
<b>Research Area:</b>	Kivalliq
<b>Fieldwork Locations:</b>	Arviat

### SUMMARY

This project aims to investigate a number of factors that may have some bearing on how individuals go about forming, or not forming, intentions concerning fertility, and the likelihood that these *intentions* will be realized in the form of actual births

## Understanding Inuit Relationships with Food, Water and Pets

**License Number:** 01 009 16N-M

**Principal Investigator:** Wilcox, Ashlee Cunsolo

**Affiliation:**  
Cape Breton University  
Sydney, Nova Scotia, Canada  
ashlee\_cunsolowilcox@cbu.ca

**Number in Party:** 2

**Research Area:** Qikiqtani

**Fieldwork Locations:** Iqaluit

### SUMMARY

Recent research uncovered the highest rates of self reported enteric illness reported in the world to be in Iqaluit, Nunavut and Rigolet, Nunatsiavut. These illness can be caused by contaminated drinking water, food, or person-to-person contact. To reduce the high rates of the illness in Northern Canada, we must monitor these pathogens causing illness to understand what pathogens are responsible for illness and how people contract the illness.

## Translating Research in Elder Care (TREC 2.0): Advice Seeking Networks in Residential Long Term Care

<b>License Number:</b>	02 019 16R-M
<b>Principal Investigator:</b>	Estabrooks, Carole
<b>Affiliation:</b>	Faculty of Nursing University of Alberta Edmonton, Alberta, Canada cesabro@ualberta.ca
<b>Number in Party:</b>	4
<b>Research Area:</b>	Qikiqtani, Kitikmeot
<b>Fieldwork Locations:</b>	Igloolik, Gjoa Haven

### SUMMARY

There is very little information available in the literature about the social (advice seeking) structure between senior leaders in nursing homes and nursing homes themselves. Using the latest innovations and research evidence to care for seniors living in Canadian nursing homes is an important goal that is best achieved when successful innovations and practices can spread throughout the nursing home sector efficiently. However, we know little about the informal communication networks between nursing home leaders and nursing homes that are so important to this spread. For example, are nursing home leaders in touch with each other? Do nursing home “centers of influence” exist? An understanding of these networks in nursing homes will make an important contribution to the transfer and exchange of knowledge among nursing home leaders on many topics such as implementing new innovations and quality improvement programs.

## Taima TB: Whole Genome Sequencing Project

<b>License Number:</b>	01 010 16Registry
<b>Principal Investigator:</b>	Alvarez, Gonzalo
<b>Affiliation:</b>	University of Ottawa Ottawa Hospital Research Institute Ottawa, Ontario, Canada galvarez@ohri.ca
<b>Number in Party:</b>	2
<b>Research Area:</b>	Qikiqtaaluk
<b>Fieldwork Locations:</b>	Iqaluit, Cape Dorset

### SUMMARY

Taima TB is a group of research projects aimed at helping Inuit in Canada stop the transmission of tuberculosis (TB) in their communities. It is a research partnership between the researchers (Ottawa Hospital Research Institute), the Nunavut lands claim association (Nunavut Tunngavik Inc.), and the health services provider (Government of Nunavut). Taima TB is built on thorough community engagement, inclusive research governance, and comprehensive knowledge translation.

## Taima TB 3HP Study in Iqaluit, Nunavut

**License Number:** 01 011 16Registry

**Principal Investigator:** Alvarez, Gonzalo

**Affiliation:**

Ottawa Hospital Research Institute  
Ottawa, Ontario, Canada  
galvarez@ohri.ca

**Number in Party:** 3

**Research Area:** Qikiqtaaluk

**Fieldwork Locations:** Iqaluit

### SUMMARY

A key element to control the spread of tuberculosis (TB) is treating latent TB infection before it turns to active TB disease. Those with latent TB infection (LTBI) have TB but it is sleeping. They are not sick and they are not contagious. However, without treatment this TB infection could cause a person to get sick with active TB disease. Usually, people with TB infection take one drug, INH. They have to take it twice a week for 9 months in Nunavut for a total of 78 doses. The main purpose of this study is to find out whether more people will start and finish treatment for latent TB infection if the treatment is shorter.

## **Establishment of a project for Diarrhoeal Illness Surveillance at Sentinel Site in Nunavut**

<b>License Number:</b>	06 009 16R-M
<b>Principal Investigator:</b>	Goldfarb, David
<b>Affiliation:</b>	Department of Pediatrics McMaster University Hamilton, Ontario, Canada goldfarb@mcmaster.ca
<b>Number in Party:</b>	12
<b>Research Area:</b>	Qikiqtani, Kivalliq, Kitikmeot
<b>Fieldwork Locations:</b>	Iqaluit, Kimmirut, Rankin Inlet, Arviat, Cambridge Bay, Gjoa Haven

### **SUMMARY**

The reason for doing this study is to understand the causes of diarrhea in Nunavut and to understand if a rotavirus vaccine or other interventions would lessen the burden of diarrhea in the territory. The study will take 2 years to complete. This study is a partnership between the Government of Nunavut, McMaster University and the Public Health Agency of Canada.

## **Evaluation of Eczema, Asthma and Allergies among the Children of Iqaluit (EAACI Study-Phase 2)**

<b>License Number:</b>	01 033 16N-M
<b>Principal Investigator:</b>	Ahmed, Ahmed
<b>Affiliation:</b>	Imperial College Ottawa, Ontario, Canada drahmed75@hotmail.com
<b>Number in Party:</b>	1
<b>Research Area:</b>	Qikiqtani
<b>Fieldwork Locations:</b>	Iqaluit

### **SUMMARY**

The purpose of this study is to figure out the number of Grade Seven students in Iqaluit that have Eczema, Asthma and Allergies, and to get more information about possible risk/protecting factors. The study will be conducted at the Qikiqtani General Hospital. The parents of grade 7 students will be contacted and advised of the study. They have the right to decline participation in the study, participate only by answering the study questionnaire or agreeing to both the questionnaire and the skin test for food and environmental allergens.

## Temporal Variation of Inuit Gut Microflora in Response to Seasonal Dietary Changes

**License Number:** 02 040 16R-M

**Principal Investigator:** Dubois, Genevieve

**Affiliation:** Biological Sciences Department  
University of Montreal  
Montreal, Quebec, Canada  
genevieve.dubois.1@umontreal.ca

**Number in Party:** 5

**Research Area:** North Baffin

**Fieldwork Locations:** Resolute Bay

### SUMMARY

The gut microflora, the complex community of bacteria that populates the human colon, is an evolving unit that is generally divergent across human individuals, populations and across time. Gut microflora is heavily influenced by many factors such as diet, water source, age, gender and geography. Hence, our lifestyle and our identity are the factors that shape its composition.

## Professional Field Placements in Isolated Regions of Northern Canada

<b>License Number:</b>	01 038 16N-M
<b>Principal Investigator:</b>	Mercure, Dominique
<b>Affiliation:</b>	School of Social Work Laurentian University Sudbury, Ontario, Canada dmercure@laurentian.ca
<b>Number in Party:</b>	2
<b>Research Area:</b>	Qikiqtani
<b>Fieldwork Locations:</b>	Iqaluit

### SUMMARY

This project aims to better understand the access to quality French language health services for individuals living in the smallest francophone community in Canada: Iqaluit, Nunavut.

## Determinants of Dietary Behaviour & Physical Activity among Canadian Inuit

<b>License Number:</b>	050 13 15Amended
<b>Principal Investigator:</b>	Akande, Victor
<b>Affiliation:</b>	School for Nutrition, Toxicology & Metabolism Maastricht University Iqaluit, Nunavut, Canada vakande@gov.nu.ca
<b>Number in Party:</b>	3
<b>Research Area:</b>	Baffin, Kivalliq, Kitikmeot
<b>Fieldwork Locations:</b>	Cambridge Bay, Baker Lake, Resolute Bay, Iqaluit

### SUMMARY

Reports show that a lot of Inuit eat junk food instead of healthy traditional foods. In addition, many Inuit do not exercise enough, unlike in the past when physical exercise was normally done as a part of gathering traditional foods. Eating junk food and low physical activity increase the risk of developing diabetes, heart problems, and cancer. The challenge is that we do not fully understand many of the factors affecting eating habits, and whether or not Inuit participate in adequate physical activity.