

# Full Proposals for International Polar Year 2007-2008 Activities

## Proposed IPY Activity Details

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### 1.0 PROPOSER INFORMATION

(Activity ID No: 167)

#### 1.1 Title of Activity

Arctic Human Health Initiative

#### 1.2 Short Form Title of Proposed Activity

AHHI

#### 1.3 Activity Leader Details

Alan Parkinson

Arctic Investigations Program, Centers for Disease Control and Prevention,  
USA

#### 1.4 Lead International Organisation(s) (if applicable)

Arctic Council

International Union for Circumpolar Health

Arctic Investigations Program, Centers for Disease Control and Prevention

Fogarty International Center, National Institutes for Health

#### 1.5 Other Countries involved in the activity

Canada

Greenland

Denmark

Iceland

Norway

Finland

Sweden

Russian Federation

#### 1.6 Expression of Intent ID #'s brought together in this proposed activity

914, 516, 760, 496, 922 503, 1045, 1046, 1052, 1107, 1109, 1119, 1121, 1122, 1139, 1150,  
1184, 1185, 1202, FP# 356

#### 1.7 Location of Field Activities

Arctic

#### 1.8 Which IPY themes are addressed

2. Change in the polar regions
3. Polar-global linkages/tele-connections
6. The human dimension in polar regions

### **1.9 What is the main IPY target addressed by this activity**

1. Natural or social science
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## **2.0 SUMMARY OF THE ACTIVITY**

The Arctic Human Health Initiative (AHHI) is an IPY (2007-2008) Arctic Council project that aims to increase the visibility and awareness of health concerns of Arctic peoples, to foster human health research, and promote health protection strategies that will improve the health and well-being of all Arctic Residents. The AHHI core project will seek to advance the joint circumpolar human health research agendas of the Arctic Council (AC; [www.arcticcouncil.org](http://www.arcticcouncil.org)), an eight nation intergovernmental forum for sustainable development and environmental protection, and the working groups of the International Union for Circumpolar Health (IUCH). Current AC human health activities include monitoring the human health impact of anthropogenic pollutants, climate variability, infectious diseases, and the expansion and assessment of tele-health innovations in Arctic regions. The IUCH ([www.iuch.org](http://www.iuch.org)) promotes international cooperation, research, scientific information exchange and education in the areas of Arctic Health Policy, Birth Defects & Genetics, Cancer, Diet & Heart, Environmental Health & Subsistence Food Security, Family Health, Fetal Alcohol Syndrome, Health Surveys, HIV/AIDS, STDs, Indigenous Peoples Health, Infectious Diseases, Injury Prevention, Occupational Safety & Health, Population-Based Planning, Tobacco & Health, and Women's Health. An anticipated outcome of the AHHI will be the development of an organizational infrastructure for the coordination of human health research activities in Arctic regions.

A key element of the AHHI will be the development of new, and expansion of existing human health surveillance, monitoring and research networks. These circumpolar networks will allow the monitoring of diseases of concern in Arctic communities through the development of standardized study protocols, data collection, laboratory methods, and data analysis. Once established these networks will allow the monitoring of disease prevalence over time, the determination of risk factors for disease and evaluation and implementation of disease prevention and control strategies. Networks also provide opportunities for the development of sustainable partnerships between communities and researcher through the establishment of community-based monitoring activities.

A focus of the AHHI is the establishment of research activities focusing on human health issues of concern to Arctic residents. Priority areas include the human health impact of:

- Regional and inter-continentally transported anthropogenic pollution in Arctic regions.
- Oil, gas and other sustainable development activities.
- Contaminants and zoonotic infectious diseases on the traditional food supply.
- Climate variability on human health and traditional food supply.
- Infectious diseases including tuberculosis, HIV/AIDS, hepatitis, vaccine preventable diseases, emerging infectious diseases such as SARS.
- The effects of the changing Arctic environment on the evolution, ecology, and emergence of zoonotic disease, particularly avian influenza.

- Chronic diseases such as cancer, cardiovascular diseases, obesity and diabetes.
- Behavioural health issues, such as suicide, interpersonal violence and substance abuse, and unintentional injuries.

Research activities will include the use of culturally sensitive health interview surveys which are a useful tool for characterizing health and risky behaviours, the health status of populations, and the development of culturally appropriate interventions.

In the area of health communication several symposia and topic specific work shops are planned before during and following IPY which will allow the, development of new collaborations, evaluation of advances made in the health of Arctic peoples, the health disparities that remain, and to examine future risks to the health and well-being of all Arctic residents.

Details regarding AHHI specific projects, plans and progress can be found at:  
[www.arctichealth.org](http://www.arctichealth.org)

### **2.1 What is the evidence of inter-disciplinarity in this activity?**

Project involves traditional disciplines commonly associated with human health research. The AHHI will engage Arctic health researchers from disciplines that include epidemiology, environmental (air, water land, biota) monitoring, bio-monitoring, and human exposure disciplines, behavioural health, physiology, psychology, toxicology, genetics, molecular biology, clinical medicine, and indigenous traditional knowledge, as well as informatics. The AHHI will establish sustained interactions between researchers and educators from academic and medical research institutions, hospitals, public health agencies, and communities at risk.

### **2.2 What will be the significant advances/developments from this activity? What will be the major deliverables? What are the outputs for your peers?**

The AHHI will establish sustainable circumpolar networks that will link researchers throughout the circumpolar region, establish surveillance systems that will allow the monitoring of diseases and conditions of concern to Arctic residents, the sharing of information regarding diseases of concern, and potential interventions, and the monitoring of effective intervention strategies, thus improving the health of Arctic peoples.

The AHHI will establish research programs in areas of human health of greatest concern to Arctic residents. Outcomes from these studies will lead to a greater understanding of: the impact of anthropogenic pollution on human health; the ecology and genetics of infectious diseases; the impact of zoonotic diseases on subsistence species; the impact of climate variability on human health; of behavioural health problems such as suicide, substance abuse and injury; chronic diseases and their interventions; and assessment of risk due to contaminants and its reduction in the traditional food supply. Health surveys to be undertaken during IPY will lay a baseline of health determinants and risk factors for a large cohort of Arctic indigenous peoples. This will allow the monitoring of health status of this population over time, as well as the study of the health impact of dietary, environmental and social changes and the emergence of new diseases.

These activities will result in a significant increase in exchange of research findings within the research community and improve information exchange between the research community and communities at risk. Comprehensive scientific symposia on the health and wellbeing of Arctic residents are planned; each will result in published reports describing knowledge of known and predicted health impacts of the changing Arctic environment. A series of 8-10 special health

supplements of the International Journal of Circumpolar Health are planned, which will target scientists of the circumpolar health community, health care professionals and practitioners, and students of circumpolar studies. These supplements in turn can be used as content material for a textbook on Circumpolar Health targeting universities, and health care professionals. In addition it is anticipated that a comprehensive report be published describing the IPY AHHI experience, activities and results. The creation of an AHHI website in association with the Arctic Health website [www.arctichealth.org](http://www.arctichealth.org) will serve as a central repository of the AHHI studies, summary results and publications.

A key outcome of the AHHI will be the focus on Arctic human health and wellbeing, and the development of an organizational infrastructure for the coordination and prioritization of Arctic Health research within the working groups of the Arctic Council and the International Union for Circumpolar Health and strategic planning for health research activities beyond 2009.

**2.3 Outline the geographical location(s) for the proposed field work (approximate coordinates will be helpful if possible)**

Locations	Coordinates
Circumpolar-Arctic	

**2.4 Define the approximate timeframe(s) for proposed field activities?**

Arctic Fieldwork time frame(s)	Antarctic Fieldwork time frame(s)
	MM/YY - MM/YY
	MM/YY - MM/YY
	MM/YY - MM/YY

**2.5 What major logistic support/facilities will be required for this project?**

**2.6 How will the required logistics be supplied? Have operators been approached?**

Source of logistic support	Likely potential sources	Support agreed
Consortium of national polar operators		
Own national polar operator		
Another national polar operator		
National agency		
Military support		
Commercial operator		
Own support		
Other		

**2.7 If working in the Arctic regions, has there been contact with local indigenous groups or relevant authorities regarding access?**

The AHHI is a project of the Arctic Council, and has been presented in concept and endorsed by the Arctic Council which includes representation by Indigenous Peoples Organizations as Permanent Participants. These currently include: Aleut International Association, Arctic

Athabaskan Council, Gwich'in Council International, Inuit Circumpolar Conference, Saami Council, and the Russian Association of the Indigenous Peoples of the North. The AHHI steering committee includes representation from the Alaska Tribal Health Consortium, Southcentral Foundation, the Saami Center for Health Research, the Saami National Center for Adolescent Health, and the Indigenous Peoples Secretariat of the Arctic Council. The AHHI encourages study investigators to include indigenous community participation in all aspects of project planning, implementation and translation of results into products that will benefit the health of all Arctic residents. All research conducted within indigenous communities should be guided by principles outlined by the Alaska Federation of Natives found at: <http://www.ankn.uaf.edu/afnguide.html>. or the US National Science Foundation <http://nsf.gov/od/opp/arctic/conduct.html> , or similarly recognized published standards.

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### **3.0 STRUCTURE OF THE ACTIVITY**

#### **3.1 Origin of the activity**

This is a pulse of activity during 2007-2009 within an existing programme

**If part of an existing programme please name the programme** – Arctic Council;  
International Union for Circumpolar Health

#### **3.2 How will the activity be organised and managed? Describe the proposed management structure and means for coordinating across the cluster**

Existing circumpolar human health organizations will be used to coordinate across the AHHI cluster. These include the 16 working groups of the International Union for Circumpolar Health (IUCH) ([www.iuch.org](http://www.iuch.org) ) and Sustainable Development Working Group (SDWG) and Arctic Monitoring and Assessment (AMAP) Human Health Working Groups. Meetings organized by these organizations can be used to plan, develop and coordinate individual projects of the AHHI. The IUCH's 13th International Congress on Circumpolar Health (ICCH) planned for Novosibirsk, Russia June 12-16, 2006 will serve as the "Gateway to the IPY" for the AHHI. Symposia and IUCH working groups will focus on planning human health activities for IPY. The 14th ICCH to be held in Yellowknife, Canada, in 2009 will consolidate the "IPY human health legacy" and set the Arctic Human Health research agenda for the future.

An IPY AHHI International Advisory Committee has been formed, with representation from each of the IUCH member organizations (American Society for Circumpolar Health, Canadian Society for Circumpolar Health, Nordic Society for Arctic Medicine, Siberian Branch of the Russian Academy of Medical Sciences, Danish/Greenlandic Society for Circumpolar Health, International Network for Circumpolar Health Research, Icelandic Society for Arctic Medicine, Swedish Society for Arctic Medicine, the WHO), SDWG and AMAP human health working groups, Indigenous Peoples Organizations (Aleut International Association, Arctic Athabaskan Council, Gwich'in Council International, Inuit Circumpolar Conference, Saami Council, and the Russian Association of the Indigenous Peoples of the North) and Indigenous Peoples health organizations (Alaska Native Tribal Health Organization, Southcentral Foundation, the Saami Center for Health Research, the Saami National Center for Adolescent Health), The Advisory Committee is the coordinating body for the AHHI and will be supported by a small secretariat. Sub-committees will be formed as necessary particularly in the areas of data management, and education and out reach activities.

The creation of an AHHI website will allow networking between investigators, consolidation of similar projects and pooling of resources. Individual study project details and progress will be available at the AHHI website at [www.arctichealth.org](http://www.arctichealth.org). Communication between AHHI coordinators and AHHI project partners will also be maintained via email.

### **3.3 Will the activity leave a legacy of infrastructure and if so in what form?**

The AHHI will leave an infrastructure of established circumpolar networks that will link researchers throughout the circumpolar region, surveillance systems that will allow the monitoring of diseases and conditions of concern to Arctic residents, and baseline information established by surveys that will allow monitoring of change in health status of Arctic residents. AHHI will reinforce a legacy of community participation in Arctic human health research involving communities in the prioritization of research activities, planning of research, conduct of research activities, and translation of research results into prevention and control activities that benefit communities.

The AHHI will result in a significant increase in research findings that will result in publication in professional journals, lay press and web-based publication. International symposia and topic-specific workshop will result in published proceedings, monographs and an internet accessible library of health information that will document the state of Arctic human health during IPY, as well as the plans to continue research to improve the health and wellbeing of Arctic residents well beyond IPY.

An anticipated outcome of AHHI will be the development of an infrastructure for the coordination of Arctic Health research both nationally within Arctic countries, and internationally within the working groups of the Arctic Council and the International Union for Circumpolar Health.

### **3.4 Will the activity involve nations other than traditional polar nations? How will this be addressed?**

Participation in the AHHI by nations not traditionally involved in Arctic human health research will be encouraged through the observer countries, and other international organizations associated with the Arctic Council (France, Germany, Poland, the Netherlands, and the United Kingdom). Attendance at the AHHI international symposia and topic-specific workshops by nations not traditionally involved in Arctic human health research will also be encouraged through the IUCH, the International Journal for Circumpolar Health, and the Arctic Health websites.

### **3.5 Will this activity be linked with other IPY core activities? If yes please specify**

The AHHI will be linked to other IPY Core initiatives:

Co-ordination of Observation and Monitoring of the Arctic for Assessment and Research (COMAAR-503)

Arctic Portal “A Gateway to Arctic-related Information as it relates the Arctic Council, working groups, permanent participants and observers” (proposed).

Survey of living conditions in the Arctic (SLiCA-190)

Arctic Community Based Environmental Monitoring, Observation and Information Stations Phase 1: Bering Sea Sub Network (BSSN-EoI 922)

Arctic Monitoring and Assessment Program's Human Health Assessment Group (AMAP HHAG Research Program workshop-145).

Arctic Resiliency and Diversity: Community Response to Change (183)

Taking the Antarctic Arctic Polar Pulse-IPY 2007-8 Human Biology and Medicine Research (TTAAPP- 165)

Full Proposals brought together under this proposed activity:  
145, 209, 253, 356, 433,

### **3.6 How will the activity manage its data? Is there a viable plan and which data management organisations/structures will be involved?**

Human health data collection, storage and analysis will be the responsibility of each individual investigator or project manager, will be detailed in individual research protocols and will conform to the ethical requirements of their respective national or local Institutional Review Boards (IRBs). Individual AHHI projects will be catalogued on a central website ([www.arctichealth.org](http://www.arctichealth.org)) together with resulting publications, and summary data sets approved by respective IRBs for distribution to the other investigators or to general public. Compliance with the IPY Data Policy, and the AHHI data management, will be coordinated by a sub-committee of the AHHI International Advisory Committee.

### **3.7 Data Policy Agreement**

**Will this activity sign up to the IPY draft Data Policy (see website)**

Yes

### **3.8 How will the activity contribute to developing the next generation of polar scientists, logisticians, etc.?**

Involving students at all levels in Arctic Health issues will be a key element of the AHHI. Opportunities will be sought by project investigators to engage students where practical and feasible. Potential opportunities within community-based monitoring programs could include, educational sessions in schools on IPY and human health, data measurement, specimen collection, data entry, analysis, report writing and presentation at IPY Science Fairs. Special youth days at conferences such as the ICCH meetings are planned. Such events will promote interest in Arctic Human Health research, as well as reinforce disease prevention strategies and healthy lifestyles to the next generations of Arctic residents. A number of IPY Fellowships in various aspects of Arctic Human Health Research are planned, as are Research Programs of Circumpolar Health and Wellbeing, a Graduate School of Circumpolar Wellbeing Health and Adaptation, and a Joint International Masters Program of Circumpolar Wellbeing and Health. Graduates will be able to act in multi-professional vocations (administrative, managerial, health care services, education, development, planning international collaborations and research).

### **3.9 How will this activity address education, outreach and communication issues outlined in the Framework document?**

An objective of the AHHI is to focus public and political attention on health issues in Arctic regions and to use the AHHI to strengthen communication and links between Arctic communities and the research community in order to increase exchange of human health research findings. Another objective is to facilitate communicating results and how they will benefit the community. Lastly, the AHHI intends to increase community participation in human health research from planning to implementation and translation of results. Projects under the AHHI require community participation, providing opportunities for community education on project goals, risks, possible outcomes, use of results, and publication. The Arctic Council is a forum by which wider distribution of project information can be achieved through its permanent participants and observer nations and organizations. In addition the Arctic Council as a ministerial forum provides the opportunity to educate politicians and policy makers on priority human health issues facing Arctic residents. It is anticipated that the Arctic Council's

members, permanent participants, observers, and other affiliated organizations will play a role in the distribution of results and products of the AHHI to the wider Arctic community, and to policy makers and politicians.

A variety of outlets will be used to educate the public about human health issues important to Arctic residents. Lay press coverage of conferences symposia and workshops are anticipated. Printed material (newsletter, brochures) will be created and distributed. The Arctic health website will serve as a clearinghouse for information on the AHHI, while the AHHI website will provide individual project detail on the AHHI. Opportunities will be sought to promote the AHHI at IPY or national and international Arctic venues and displays.

### **3.10 What are the proposed sources of funding for this activity?**

Individual project investigators will seek funding from their respective government or national funding agencies.

### **3.11 Additional Comments**

As a core project the AHHI proposal is written as a general document to accommodate the many individual proposals submitted to the Joint Committee as official IPY EoI's , or were presented as potential projects to members the AHHI Advisory Committee. Specific proposal descriptions can be accessed at [www.ipy.org](http://www.ipy.org) by entering the proposal EoI or Full proposal number in to the search field. The creation of an AHHI website will allow the posting of detailed information on all AHHI projects at [www.arctichealth.org](http://www.arctichealth.org) . The AHHI website will be updateable allowing individual investigators to update project progress throughout the duration of the IPY and beyond.

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## **4.0 CONSORTIUM INFORMATION**

### **4.1 Contact Details**

#### **Lead Contact**

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#### **Second Contact**

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#### 4.2 Other significant consortium members and their affiliation

Name	Organisation	Country
Larissa Abryutina	Russian Association Indigenous Peoples of the North	Russian Federation
Sharon Hrynkow	Fogarty International Center, National Institutes of Health, Bethesda, MD	USA
James Berner	Alaska Native Tribal Health Consortium, Anchorage, Alaska	USA
Charles Clements	Southcentral Foundation, Anchorage, Alaska	USA
Patricia Cochran	Alaska Native Science Commission, Anchorage, Alaska	USA
Karen Perdue	University of Alaska, Fairbanks, Alaska	USA
Kathy Murray	University of Alaska Anchorage	USA
Carl Hild	Institute for Circumpolar Health Studies, University of Alaska Anchorage	USA
Kue Young	University of Toronto, Ontario	Canada
Earl Nowgesic	Canadian Institutes for Health Research, Victoria, British Columbia	Canada
Gert Mulvad	Center for Primary Health Care, Nuuk	Greenland
Preben Homse	Danish Greenlandic Society for Circumpolar Health	Denmark
Peter Bjerregaad	Institute for Public Health, Copenhagen	Denmark
Juhani Hassi	Center for Arctic Medicine, Oulu	Finland
Bettina Menne	World Health Organization, Copenhagen	Denmark
John Spika	World Health Organization, Copenhagen	Denmark
Terry Petersen	Gwich'in Council International	Canada
Jon Oyvind Odland	Institute for Community Medicine, University of Tromso, Tromso	Norway
Ingvar Holmer	Lund University, Lund	Sweden
Sergi Krivoschekov	Russian Academy of Medical Sciences, Novosibirsk	Russian Federation
Elisabeth Gerhardsen	Saami National Center for Child and Adolescent Health	Norway
Tove Nystad	Center for Saami Health Research	Norway
Priscilla Wohl	Northern Forum, Office of the Secretariat, Anchorage, Alaska	USA
Douglas Klaucke	Office of Global Health, Centers for Disease Control & Prevention, Atlanta, GA	USA
Anders Koch	Department of Epidemiology Research, Statens Serum Institut	Denmark

Brian McMahon	Liver Disease and Hepatitis Program, Alaska Native Tribal Health Consortium and Arctic Investigations Program Centers for Disease Control and Prevention	USA
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