



Expert Group on Human Biology and Medicine

Life Sciences Standing Scientific Group

Scientific Committee on Antarctic Research

Chief Officer:	Dr Claude Bachelard
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“Taking the Polar Pulse- IPY 2007-2008”-Human Biology and Medicine Research Proposal

The SCAR Life Sciences Expert Group of Human Biology and Medicine submits to the IPY 2007-2008 scientific planning committee the following preliminary proposal for consideration and inclusion in IPY 2007-2008 planning schema:

Background:

The SCAR Life Sciences: Expert Group on Human Biology and Medicine has three broad goals: 1) to provide and coordinate a forum for medical, physiological, behavioural, clinical and biological scientists to promote high quality research in polar human biology in association with appropriate international scientific organizations, 2) to encourage cooperation in the continued evolution of high quality healthcare and the prevention of injury and disease in the Antarctic, and 3) to promote the full use of the unique environment of the Antarctic to allow understanding of major health problems in polar regions and other analogue or extreme environments in particular, and in mankind in general.

Research Question

What physiological, psychosocial and clinical changes occur in humans interacting with the extreme environment of Antarctica? Are these changes comparable to those experienced in Arctic populations? How can we best prevent and treat any adverse effects of these changes? How can this understanding enable us to improve healthcare, health and wellbeing of humans in Polar regions, at altitude, in space and other extreme environments, and in mankind in general?

Research Proposal

The IPY 2007-2008 provides a unique opportunity to create a human polar observatory and enhance our capacity to develop and coordinate an innovative international Human Biology and Medicine research dataset utilising synergies of existing national polar research programs, activities and data collection.

A multinational, multidisciplinary, collaborative dataset will be collected to:

1. Validate and analyse current physiological, public and occupational health and psychosocial observations.
2. Provide an ongoing standardized dataset that can be referenced against prior and future research endeavour.

This dataset will provide unique opportunities to link with populations in Arctic, extreme environments and space analogues providing a legacy of upgraded healthcare, research programs and databases for future generations.

Activities during this period will include the utilization and enhancement of efficient smart, innovative eHealth and telemedicine technologies in the collection and support of this snapshot of human health during the IPY in polar regions which will continue and be improved upon.

Once the comprehensive IPY science and operational plans are cemented, detailed flexible, modular and opportunistic human biology and medicine research planning will be possible, utilizing the various platforms including isolated polar communities, traverses and polar marine cruises.

Recommendation

The EGHB&M recommends the “Taking the Polar Pulse-IPY2007-8” Human Biology and Medicine preliminary research proposal to the IPY committee for consideration and inclusion in the IPY science plan. Comprehensive plans and proposal development submissions will be forthcoming as per the IPY timeline.

30th July 2004