

Expert Group on Human Biology and Medicine

Report to SSG-LS 2010

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Membership

Following the last meeting in St Petersburg in 2008, new members were proposed to the EGHB&M by Russia, South Korea, and Switzerland. In the last year new associate members have joined from Brazil, Belgium, Italy, and Romania. There is still difficulty in coordinating National SCAR Committee Representation on the EGHB&M, with several nations having no nominees, and several others who never respond to email.

Meetings

The EGHB&M had a brief inter-sessional meeting in Dundee, Scotland in October 2009, in association with a conference on Antarctic Medicine organised by the British Antarctic Survey Medical Unit. 5 Full Members and 5 Associate Members, presented brief reports of activity in the preceding year. We welcomed guests from IASC, the Canadian Institute of Circumpolar Health, and the University of Oulu in Finland.

Wide ranging discussions on cooperative Antarctic and Arctic Research were undertaken though no firm conclusions were reached. The populations and systems at the two poles are very disparate in many respects, making comparisons more difficult. It was agreed that where projects proposed were likely to have meaning for the other community, we would keep each other mutually informed, and that the EGHB&M would act as a conduit for joint research proposals.

The conference was very successful with a range of experts presenting relevant papers on all aspects of Antarctic Medicine. The aim was to foster relationships between non governmental organisations undertaking medicine in the Antarctic and the National Program Medical Organisations, and this was achieved with the group agreeing to meet again in 2011 for further joint discussions on best practise. There was some discussion on future applied medical research projects.

The Executive have continued to conduct business of the Group by teleconference.

Ongoing Projects

IPY project "Taking the Antarctic and Arctic Polar Pulse"

This large and ambitious umbrella project linking a large number of smaller research idea, regrettably has not been as successful as hoped. Funding bids by most researchers were not successful even with the ICSU badge of approval. China, Japan and Romania were at least partially successful in undertaking their projects, and results are due to be reported at the SCAR OSC in Buenos Aires. Some papers were presented in Oslo at the IPY conference in June 2010.

Southern Hemisphere Seabirds as Potential Vectors of Lyme Disease

It is known that Northern Hemisphere seabirds are potent vectors in the spread of Lyme disease through their parasitic Ixodes ticks. There is intermingling of southern and northern hemisphere birds around the equator. Southern albatross are known to carry large numbers of ixodes ticks, which spread to other bird populations including penguins. Lyme disease is only rarely seen in the Southern hemisphere but does seem to be increasing in incidence.

A United Kingdom group has been collecting ticks from seabirds and using PCR methods to search for the causative organism of Lyme disease (*Borrelia burgdorferi*). Several different *Borrelia* have been identified with one weak positive from *B. burgdorferi*.

The findings to date suggest that there is potential for these birds to host the disease carrying arachnids, but in the population studied there is no evidence of sustained carriage. Ticks from other areas are being sourced, in collaboration with the SSG-LS. It is considered that this situation should be monitored long term.

Reporting of cases of Lyme disease in the Antarctic should also be undertaken.

Other Research

Individual nations continue to undertake largely applied medical research, and some psychological and anthropological work. Particular interest has focussed on bone mineral density and vitamin D levels in the Antarctic Population with published papers from Australia and the USA. A major project arising from these pilots is being prepared.

Pathogenic Microbiota in Antarctica

Despite discussions in St Petersburg with Russian colleagues (including the author of the original paper presented at ATCM, which SCAR asked the EGHB&M to comment on in 2006) no further information has been received. Without more data, knowledge of the detailed methodology of the study, and cited references, the EG is unable to comment further at this stage although it is hoped to progress this further in the 2010 meeting.

Collaboration with COMNAP

COMNAP has disbanded their medical network as part of their new way of working. However the EG has maintained contact with colleagues in the former MEDINET, and continues to work on projects, particularly a disease reporting system, which should prove valuable in future epidemiological research.

It has been suggested that the HB&M area is one in which SCAR and COMNAP could foster cooperation and joint working.

Some will remember that the EGHB&M presented a paper on joint working in 2006. This is now informally being investigated further and progress may be forthcoming in BA in 2010.

Collaboration with IASC / IUCh

Giichiro Ohno (Japan) and Daranee Boon (UK) represented the EGHB&M at the IUCh annual scientific conference in Canada in June 2009. This gave the opportunity to forge further connections. As mentioned above further discussions were held in Dundee in October, and continue.

Website Development

The first stage of redevelopment is now complete, although one or two problems have been revealed of late. These are being addressed currently. The executive have decided to delay the next phase, pending the outcome of deliberations with SCAR and COMNAP about future working. It seemed pointless to spend money on developing a website which may require further significant redevelopment in the near future.

Difficulty in confirming some national representation, and keeping contact details up to date is proving to be a significant problem. It is anticipated that updating, with a forum for communication, will be now be completed in some form by 2011.

www.medicalantarctica.org

Next Meeting

The EGHB&M will meet in Buenos Aires in association with SCAR OSC.

Unfortunately most members were unable to commit to this meeting and only a relatively small group will attend. As many of the members also have commitments to COMNAP, the potential duration of the stay in BA was too long to allow us to meet prior to the SCAR business meetings, and thus we cannot report on this meeting to the SSG-LS. A report will be forwarded after our meeting.

The executive wish to take this opportunity to draft an international research strategy for the EGHB&M. Any input from SSG-LS members into areas of potential relevant human biology research or collaborative working would be most welcome.

Iain Grant 12 July 2010