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SPACE MEDICINE BRANCH REPORT

Report of the International Committee of the SMB

This is a report of the International Committee (IC) of the Space Medicine Branch (SMB) of the Aerospace Medical Association. The goal of the committee is to report on and organize the activities of its members toward a common goal of international cooperation in the field of space medicine. Many international branch members are devoted to expanding their activities within the SMB with important projects and goals in upcoming years. With the help of our international members we are kept updated about many national space medicine activities.

For the last 2 years, the IC has been trying to organize a space medicine seminar outside of the United States mainly to inform those foreign medical doctors who cannot travel to the U.S. about space medicine in the U.S. Also, an international setting for a space medicine meeting should allow more foreign scientists and physicians from other space agencies to become involved in our activities, and contribute in support and funding of our international efforts, such as the International Space Station. The meeting would be funded by the host country, and a different country would be chosen every year. This plan has become a reality. The First Space Medicine Seminar will take place during the 44th International Congress of Aviation and Space Medicine, September 8-13, 1996 in Jerusalem, Israel. Countries already showing interest for upcoming years are Greece, Germany, and Japan.

Currently the IC has been working on a project using radio shows to relay to the public, space and space medicine related activities from other countries. Addressed not only to medical doctors, but also to the general public, many people would have the opportunity to have their questions about space answered. Weekly shows may highlight certain space medicine topics providing up-to-date information to space researchers, improved understanding to the public and perhaps increased technology transfer or "spinoff" utilization for the general medical profession. Thais Russomano, M.D., of the Aerospace Medical Center and Institute of Cardiology, Porto Alegre, Brazil, currently working in England, has sent the proposed content and format as well as some examples of possible programs to radio stations in the United Kingdom. She will have a final proposal ready by June of next year to be presented at the upcoming international space medicine seminar in Israel.

The IC is in the process of organizing the International Women In Space Association. Women members of the Space Medicine Branch interested in joining may write to:
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Claudia Stern, M.D., an investigational ophthalmologist at the University of Hamburg, Germany is in constant contact with the IC and is currently working on the formation of the International Women in Space Association and the radio project regarding space/space medicine topics. She also keeps the IC updated on German Space activities. This year a 37-year-old German, Thomas Reiter, is currently slated to spend nearly 5 months on the Russian space station Mir as part of the Euro-Mir program. He is the first ESA astronaut to be involved in operating and maintenance of the board system of the Russian space station. An accomplished German Air Force pilot (Tornado) and aerospace engineer, Reiter will perform up to 41 international experiments on Mir in the fields of human physiology, Earth observation, radiation biophysics and fluid physics. Two highlights of his trip were a space walk outside the space station (October, 1995; he was the first ESA astronaut to do so) and the visit of NASA's Space Shuttle Atlantis carrying a crew of four Americans and one Canadian (November, 1995). On the 9th of September the German Astronaut Reinhard Furrer, who took part in the German D1 Spacelab Mission in 1985, died in an airplane accident. The 54-year-old Furrer was flying an old Messerschmitt Me 108 Taifun after an air show in Berlin, when the plane, one of the three left in the world, crashed. Reinhard Furrer was a Physicist and the head of the Space Institute in Berlin.

Akira Miyamoto, M.D., of NASDA (the National Space Development Agency of Japan) is collecting a medical database of Japanese astronauts. The primary objective of this database will be to help elucidate the effects of spaceflight on the musculoskeletal system. Hopefully, this knowledge may lead to the development of specific countermeasures to reduce muscle atrophy and bone loss during long-term spaceflights in microgravity. The measurements being analyzed include blood and urine analysis, DEXA (dual energy X-ray absorptiometer), MRI and ultrasound bone densitometry. An important aspect of this project is the cooperation between NASDA and NASA. NASA provides its facilities and helps NASDA in collecting its measurements. The data collected are then shared by the researchers of both agencies. This collaboration has proved to be very cost effective. Two Japanese astronauts were already flown on the Space Shuttle and a third will be in space this January on shuttle mission STS-72. It seems that NASA will be ready for the era of the space station.

Eran Schenker, MD from the Israeli Aerospace Medical Institute (IAMI), is helping to establish the space medicine seminars while also keeping us informed on the activities of the Israeli Space Agency. According to Dr. Schenker a memorandum of understanding governing cooperation in space research has been signed between Israel and Russia. The field of cooperation will include civilian commercial space developments particularly communications satellites. Members of the memorandum Russian delegation toured Israeli industry and research facilities, and received briefings about the Israeli satellites Ofek and Amos as well as the Haifa Technion's satellite Tec-Sat. Also this year, the visiting Chinese minister of science signed an agreement with Israel for \$5 million to establish a joint fund for research with China. The Israeli-Chinese research agreement will involve projects in bio-technology and space technology. IAMI projects for the upcoming 1996-97 year include: artificial gravity and long-duration human space missions; saucer-shaped command modules for biomedical protection during human interplanetary missions; evaluating the biomedical aspects of radiation and magnetic field environments of advanced propulsion systems; embryological development in the space environment; and technology transfers from space medicine research in the 1990's.

The above is just a brief summary of some of the activities of the members of the International Committee of the Space Medicine Branch of the Aerospace Medical Association. Other major upcoming international events in space medicine including LMS-1 (Life and Microgravity Sciences) onboard shuttle mission STS-78, Neurolab, the Shuttle-Mir and Euro-Mir programs, and the ongoing planning and construction involving multiple national space agencies for the International Space Station with its dedicated life sciences research, prove that space medicine will continue to be an international endeavor.

Chrysoula Kourtidou-Papedeli, M.D.
Chair, SMB International Committee

MEMBERS**MEMBERS

Have you recruited a new member this year? If each one of us recruited at least one new member, we could actually double our membership with a mere stroke of the pen. Let's keep the momentum going. Adopt the slogan:

EVERY MEMBER GET A MEMBER.