

3rd International EMF Seminar in China
13-17 October 2003
Guilin, China

Meeting Summary

The 3rd International EMF Seminar in China: Electromagnetic Fields and Biological Effects, which was postponed due to the SARS epidemic from 18-22 April to 13-17 October 2003, was held in Guilin, China. The meeting was sponsored by the Chinese Ministry of Health, the World Health Organization, and the International Commission on Non-Ionizing Radiation Protection, and hosted by the Bioelectromagnetic Laboratory, Zhejiang University, and the National Institute for Environmental Health and Related Product Safety, Chinese Center for Disease Control and Prevention.

136 participants came to the seminar from China, Hong Kong China, Taiwan China, Japan, Korea, USA, Australia, Russia, Switzerland, Sweden, Germany, France, UK, Italy, Belgium, Finland, Austria, Bulgaria, Brazil, Malaysia, and Singapore. Among the participants, 79 were domestic and 57 were foreign attendees. The organizing committee was happy to see representatives from the Chinese government departments, e.g. State Council, Ministry of Health, Ministry of Information Industry, State Environmental Protection Administration, State Administration of Radio, Film & TV, and Standardization Administration of China, etc. Meanwhile, three international organizations sent official representatives to the meeting, including Dr. Michael Repacholi, Coordinator of the International EMF Project from WHO, Dr. Shengli Niu from the International Labour Organization, and Dr. Bernard Veyret from the International Commission on Non-Ionizing Radiation Protection. The conference accepted 111 abstracts/papers, and 98 of them were reported in different sessions.

The seminar provided a central forum covering all aspects of electromagnetic fields (EMF), including direct current (DC), extremely low frequency (ELF), and radio frequency (RF) fields. The topics ranged from bioeffects of EMF to international standards harmonization.

The objective of the conference was to exchange new concepts, methods, and recent progress in EMF-related research and application fields. Furthermore, it provided a forum to strengthen the networks and friendship among professionals of the Bioelectromagnetics society and promote the collaboration between China and other countries around the world.

During the opening ceremony, Deputy Director He Qinghua of MOH, Co-chairman Prof. Chiang of Zhejiang University and Dr. Repacholi from WHO, Dr. Veyret from ICNIRP, and Dr. Niu from ILO delivered opening remarks respectively. In the welcome speech, Prof. Chiang clearly pointed out:

“listen to both sides and you will be enlightened; heed only one side and you will be blinded”; “we are facing a big knowledge gap in evaluating EMF health risk at this stage. This is the reason why there is no satisfactory and generally acceptable EMF standard around the world. I think an international EMF exposure standard might only be established on the principle of science and democracy, on the principle of mutual understanding and to reach unanimity through consultation”; “Now China is revising its own EMF exposure standard, and I hope this seminar will help this process in the right direction”.

This seminar was also a WHO workshop for harmonizing international EMF exposure standards. There was a session to present different opinions on standards and worldwide harmonization. Prof. Huai Chiang presented “Discussion on the rationale for China EMF exposure standards”. Then the committee organized a special round-table discussion. Representatives from the Chinese government noted that the prerequisite for adoption of ICNIRP Guideline would be to have international organizations, such as WHO and other UN agencies, endorse that guideline. In addition, Chinese scientists brought up concerns about the ICNIRP guideline, including the scientific basis for setting exposure limit (acute vs chronic; short-time vs long-term exposure), the view on data inconsistency, and the requirement for data replication (no special requirement for negative data). The Chinese Standards committee was asked by Dr Repacholi to provide a scientific rationale for their standard when it was finalized so everyone in the world would know what was the basis for the Chinese standard. He said that this would be very important for the harmonization of standards around the world. We believe that this meeting will promote international EMF exposure standards and facilitate harmonization of different countries’ EMF standards.

During the WHO research co-ordination meeting, Chinese scientists proposed a priority for *in vitro* studies to determine biological endpoints and explore the mechanism of action of EMF using cutting-edge biological techniques, e.g. genomics and proteomics techniques. This could lead to more information on mechanisms and testing endpoints. For EMF health risk assessment, one of the priorities is to detect the biological effects of EMF on physiological index (immune function and behavior, etc) in *in vivo* systems. To fulfil the purpose of EMF health risk assessment more efficiently and avoid disputes over the research data, WHO will attempt to raise funds and then choose several laboratories with a good scientific reputation to carry out EMF bioeffect researches.

The meeting closed with agreement from all participants that the meeting was very successful and well organized by our Chinese colleagues.