Electromagnetic fields (EMF)

2003 WHO research agenda for radio frequency fields

Introduction

In 1997, the WHO International EMF Project developed a Research Agenda in order to facilitate and coordinate research on the possible adverse health effects of non-ionizing radiation. In subsequent years, this agenda has undergone periodic review and refinement.

A major update to the RF (radiofrequencies) Research Agenda was undertaken with the input of an ad hoc committee of invited scientific experts who met in Geneva in June 2003. Further input to the RF Research Agenda came from a WHO Workshop “Adverse Temperature Levels in the Human Body” held in Geneva in March, 2002, (see Goldstein et al., Int. J. Hyperthermia 19, 373-384, 2003). The committee reviewed research in the following areas: Epidemiology and Human Laboratory Studies, Animal and Cellular Studies, and Dosimetry. Consideration was restricted to RF; possible effects non-ionizing radiation from static fields, wide-band and power frequencies will be considered separately.

The RF Research Agenda defines high priority research whose results would contribute to the WHO health risk assessment for RF exposures. Researchers are encouraged to use the Research Agenda as a guide to studies that have high value for WHO health risk assessments. To maximize the effectiveness of large research programs, government and industry funding agencies are encouraged to address the WHO Research Agenda in a coordinated fashion. Such coordination will minimize unnecessary duplication of effort and will ensure the most timely completion of the studies identified as being of high priority for health risk assessment.

The Research Agenda is ordered in separate sections by the weight each research activity carries in human health risk assessment: epidemiology, laboratory studies in humans; laboratory studies in animals and laboratory studies in tissues, cells and cell-free systems. Dosimetry is considered separately, but relates to all research . It should also be recognised that, whilst epidemiological and human laboratory studies directly address health-related endpoints, cellular and animal studies are of value in assessing causality and biological plausibility.

Preceding each research section is a statement of “Overarching Issues”, which have broad applicability to an area of study. Such issues should be kept in mind when designing and analyzing experimental or epidemiological studies.

In order to meet the needs for the scheduled human health risk assessment as well as the needs for a better scientific understanding of the possible effects of RF radiation, each research activity is considered

in terms of ongoing, short term or urgent needs , and long term or future needs.

- **Ongoing:** studies now in progress that are critical for the WHO RF risk assessment and that can be completed in time for such consideration.
- **Short-term or urgent needs:** studies not yet begun but should be initiated as soon as possible. The results of these studies are a high priority need for the WHO RF risk assessment.
- **Long-term or future needs:** studies where results are not expected in advance of the WHO RF risk assessment. These high priority studies will provide data critical to future reviews of RF exposure.

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