International Commission for Protection against Environmental Mutagens and Carcinogens

Paul H. M. Lohman

Medical Biological Laboratory-TNO, P. O. Box 45, 2280 AA Rijswijk, The Netherlands

Abstract

The objectives, organizational structure, and activities of the newly established International Commission for Protection against Environmental Mutagens and Carcinogens (I.C.P.E.M.C.) are presented. The purpose of this commission is to evaluate current knowledge and establish priorities for research and regulatory action concerning substances and situations that may result in significant genotoxic damage to humans.

I.C.P.E.M.C. is an international commission with scientific expertise in the fields of environmental mutagenesis, carcinogenesis, and genetic toxicology. Its principal objectives are to prevent and minimize the deleterious effects resulting from the interaction of chemicals with the genetic material of humans. Its membership is recruited from universities, research institutions, industry, and national health authorities. The Commission seeks to identify and promote scientific principles and to make recommendations to serve as guidelines and regulations in the national or international context. The Commission has 2 main strategies to achieve its objectives, the preparation of critical evaluations of the current body of knowledge to establish priorities for further research or possible regulatory action, and the identification of substances and situations that may entail significant genotoxic damage to humans.

The Commission meets at regular intervals in April and September at "Verte Rive" near Lausanne, Switzerland. The Executive Committee, consisting of the I.C.P.E.M.C. officers, the president of IAEMS, and the Vice-Chairman for liaison with the Institut de la Vie, oversees I.C.P.E.M.C. and its committee activities and acts on behalf of the Commission between meetings.

At the first meetings, considerable attention was given to defining the aims and objectives of the Commission, particularly the way it should work. Agreement was reached that the Commission should primarily function in a scientific manner, as set out above, and refrain from making statements carrying regulatory implications.

The establishment of I.C.P.E.M.C. as a nongovernmental organization will facilitate liaison with organizations that share its interest in resolving problems posed by mutagens and carcinogens in the human environment, such as the United Nations Environmental Programme, the European Economic Community, and the World Health Organization. (In this context, it may be noted that I.C.P.E.M.C. is affiliated with the International Association of Environmental Mutagen Societies and sponsored by the Institut de la Vie.)

Task Groups and Committees have been established by the Commission. The former are composed mainly of Commission members; the latter consist mainly of scientists who are not members of the Commission, thereby achieving some distribution of labor.

Task Group 1 (B. A. Bridges, Chairman, N. P. Bochkov, H. Bohme, J. Clemmesen, D. Jansen, T. Sugimura, and L. Tomatis) sets the priorities for evaluating the genotoxic properties of chemicals. These compounds are selected by Task Group 1 after correspondence and consultation with Commission members; such human exposure constitutes an important criterion for review by I.C.P.E.M.C. The first document resulting from these activities concerns the risks of cigarette smoking (1). Other documents are being prepared on the following compounds: isoniazide, epichlorohydrin, dichlorvos, vinyl chloride, hair dyes, and psoriasics.


Task Group 3 (B. A. Bridges, Chairman, N. P. Bochkov, and J. D. Jansen) prepared a statement on human populations accidentally exposed to a suspected mutagenic chemical (2).

Task Group 4 (A. Hollaender, Chairman, V. Ray, T. Sugimura, and L. Tomatis), is formulating a statement on "Possible Tolerance Limits or Limits of Exposure to Mutagenic Chemicals at Which no Detrimental Effect can be Recognized." This task group met in Washington, D. C. in August, 1979.

Committee 1, chaired by B. J. Kilbey (United Kingdom), is charged with reviewing the development, validation, application, and comparison of short-term screening systems for identifying and characterizing chemical mutagens. A plan was developed to collect information for a number of different test systems that have been used with a great number of different mutagenic chemicals. All compounds tested in the whole mouse test will also be included since these will form a useful starting point for validating the screening tests.

Committee 2, chaired by D. B. Clayson (United States), studies the relationships between chemical carcinogens and chemical mutagens. Working papers prepared by D. B. Clayson, entitled "Differences between in vivo and in vitro systems," and by A. S. Wright, entitled "Metabolic differences in vivo and in vitro," are now being circulated to Commission members.

1 To whom requests for reprints should be addressed, at Medical Biological Laboratory-TNO, P. O. Box 45, 2280 AA Rijswijk, The Netherlands.

2 The abbreviations used are: I.C.P.E.M.C., International Commission for Protection against Environmental Mutagens and Carcinogens; IAEMS, International Association of Environmental Mutagen Societies.

Received June 20, 1979; accepted September 25, 1979.
members so that hopefully they can appear as I.C.P.E.M.C. papers.

Committee 3, chaired by E. Poulsen (Denmark) is preparing an ongoing registry of national regulatory principles and actions. Data sheets for the individual countries are developed. International guidelines and proposals will be considered at the next meeting of the Committee.

Committee 4, chaired by M. F. Lyon (United Kingdom), is charged with evaluation of risk estimate procedures of mutagenic chemicals and the development of practical exposure limits. At the moment, draft reports are in preparation and they will be considered at the next meeting.

Committee 5, chaired by J. R. Miller (Canada), will consider an epidemiological approach to the possible mutagenic consequences of exposure to environmental agents.

To achieve maximum coordination and interaction among the 5 I.C.P.E.M.C. Committees, the Commission organized a simultaneous meeting of all 5 Committees which was held September 17 to 20, 1979, at Château de Ripaille in Thonon. Informal liaison has been established with the United Nations Environmental Programme and the World Health Organization; observers from both organizations attended the Second, Third, and Fourth Commission meetings in Lausanne. Contacts have also been established with the International Commission on Radiation Protection and the International Agency for Research on Cancer.

Dr. P. H. M. Lohman
Secretary, ICPEMC
Medical Biological Laboratory – TNO
P. O. Box 45
2280 AA Rijswijk, The Netherlands

References
International Commission for Protection against Environmental Mutagens and Carcinogens

Paul H. M. Lohman


Updated version
Access the most recent version of this article at:
http://cancerres.aacrjournals.org/content/40/1/186

E-mail alerts
Sign up to receive free email-alerts related to this article or journal.

Reprints and Subscriptions
To order reprints of this article or to subscribe to the journal, contact the AACR Publications Department at pubs@aacr.org.

Permissions
To request permission to re-use all or part of this article, contact the AACR Publications Department at permissions@aacr.org.