

Preface

This publication reports the first endeavour of the Scientific Group on Methodologies for the Safety Evaluation of Chemicals (SGOMSEC). SGOMSEC grew out of an organizational meeting sponsored by the Rockefeller Foundation in Bellagio, Italy, 15–17 June 1978. The proposals developed at that meeting have been endorsed by the World Health Organization (WHO), the Scientific Committee on Problems of the Environment (SCOPE) and the United Nations Environment Programme (UNEP). The Scientific Group operates under their general sponsorship, guided by an Executive Committee.

The objective of SGOMSEC is to examine methods for the predictive evaluation of the adverse effects of chemicals on humans and other forms of life. It is the intention of SGOMSEC to review the methods which are in an initial stage, have not yet become routine procedures, but are urgently needed in the assessment of the effects of industrial and environmental chemicals. Such reviews will be concerned mainly with laboratory procedures and also with epidemiological approaches and field studies, and with up-to-date diagnostic methods where these are required.

Because of widespread concern throughout the world regarding chemical assaults on human health and the natural environment in the widest sense, there is a growing need for reliable methods to evaluate possible adverse effects. National and international agencies and individual scientists need precise methods to establish priorities, develop controls, and plan regulations.

SGOMSEC undertakes these studies to support scientists in their endeavours to select methods for assessing potential chemical injury. In many cases, of course, adequate methods are not available, and this report undertakes to identify the gaps and suggest research that may be needed to fill them.

Whilst injury to the reproductive function in the individual is of major concern in humans and farm animals, in other animals and in plants the concern is with the survival of the entire species or population rather than of individuals. Both areas are obviously very broad and some omissions had to be made. In the case of mammalian reproductive function, the study group has decided to give very little attention to the two areas, germ cell injury and teratology. This does not imply the unimportance of these fields, but some restriction is imperative, the more so as these areas have been extensively reviewed elsewhere.

The breadth of the non-mammalian areas is so vast that even with the

deliberate omission of some important areas, the present review can only be regarded as a beginning. As such, we hope it will provide a solid base for future more detailed examinations of the methods available.

The development of this publication has extended over a year and has involved scientists from many parts of the world, individually in the review of their fields, and collectively in the preparation of the joint conclusions and recommendations. This report thus consists of two main parts: 24 contributed papers, each representing the efforts of individual scientists, and a Joint Report which represents the collective conclusions and recommendations of the scientists working together at a Workshop in Ispra, Italy, 4-8 May 1981. The authors alone are responsible for opinion expressed in the signed contributions.

The Joint Report was drafted by the work groups listed in each section of the report, and reviewed at the closing plenary session of the Workshop. The comments and suggestions of the plenary session were incorporated into the drafts of work group reports. Scientific editing was carried out in consultation with an Editorial Committee whose members were Gordon C. Butler (Co-Chairman), W. LeRoy Heinrichs, V. Landa, Thaddeus Mann, Norton Nelson (Co-Chairman), J. Pařizek and J. Piotrowski; and assisted by K. G. Davey, Robert L. Dixon, Rune Eliasson, Arne Jensen, A. G. Johnels, J. B. Kerr, Donald Mattison, D. A. T. New and Linda R. Wudl.

Those responsible for organizing this activity are well aware of the effort put into the preparation of the individual papers and the Joint Report and wish to express their appreciation of the time, effort and skills that have contributed to this publication. They are also grateful to the sponsoring agencies, WHO, SCOPE and UNEP, to those organizations that sent working representatives to the Workshop, the Organization for Economic Cooperation and Development (OECD) and the Commission of the European Communities (CEC), and to the Joint Research Centre for their generosity in providing facilities for the Workshop in Ispra. Thanks also are due to agencies who provided the funding for this activity, WHO, SCOPE, the Rockefeller Foundation, A. W. Mellon Foundation, the National Institute of Environmental Health Sciences, and the Research Division and the Occupational Health Programme of the Commission of the European Communities.

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