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## Status report of the International Programme on Chemical Safety's Collaborative Study on plant test systems

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One of the priorities established within the International Programme on Chemical Safety (IPCS), which is a cooperative venture of the United Nations Environment Programme (UNEP), the International Labour Organization (ILO), and the World Health Organization (WHO), is the development of methodologies for improving the assessment of risks from chemical exposures. International validation of these methodologies is extremely important. An example of such activity within the IPCS has been the collaborative study on short-term tests (both in vitro and in vivo) for mutagens and carcinogens.

The growing concern that genotoxic agents may

be ubiquitous in our environment (air, water, soil, consumer products, food, drugs, work place, and home) led to the formation of national and international environmental mutagen societies as well as international programs for protection of the human population against environmental mutagens and carcinogens. Since 1969, a large number of in vitro and in vivo short-term assays have been developed to identify environmental chemicals with mutagenic and carcinogenic potential. The Gene-Tox program of the U.S. Environmental Protection Agency (Waters and Auletta, 1981) was started to coordinate the evaluation and tabulation of existing data on various assay systems already in the scientific literature. In addition, 4 different international collaborative studies were designed to evaluate the utility of short-term assays for detecting mutagens/carcinogens. Starting in 1972, a series of such studies were developed: (1) by the Joint Environmental Panels of the US-Japan Cooperative Medical Sciences Program (de Serres, 1976; Poirier and de Serres, 1979), (2) by the National Institute of Environmental Health Sciences and the Imperial Chemical Industries Ltd (de Serres and Ashby, 1981), and (3) by the IPCS (Ashby et al., 1985, 1988). Most of the in vitro and in vivo bioassays included in these international

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Authors are the members of Ad Hoc Steering Committee of IPCS Collaborative Study on Plant-Test Systems.

Dr. Shahbeg S. Sandhu participated in the study described in this document, as a scientist and not as a representative of the U.S. Environmental Agency (U.S. EPA). Mention of trade names or commercial products does not constitute endorsement or recommendation by the U.S. EPA.