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OFFICE OF  
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

DATE: November 10, 1980

SUBJECT: Completed Contractor Studies - Mutagenicity

FROM: Irving Mauer, Ph.D., Geneticist  
Toxicology Branch/HED (TS-769) *I. Mauer/caw*

TO: Toxicology Staff

Additional reports of studies performed by Stanford Research Institute International (SRI) under contract to EPA (HERL/RTP) have been received in the TOX Branch. They are available from Irving Mauer.

- I. "An Evaluation of the Effect of TRICHLORPHON on Sister Chromatid Exchange Frequencies in Cultured Chinese Hamster Ovary Cells." (July, 1980)
- II. A number of compounds have been retested and the contractor is in the process of preparing a summary final report which will include the appropriate corrections. (The list of substances under retest is available from me).
- III. A revised report dated May, 1980 on the mouse heritable translocation assay in CAPTAN originally reported out in March, 1977 is also available (along with the original). "Mutagenesis Studies of Pesticide Compounds--Mouse Heritable Translocation Test--Captan" May, 1980, Final Report -- Revised.
- IV. Finally, there are a number of summaries of the schedule of testing for mutagenic effects of pesticides under this contract. An overview of qualitative information is presented in the pre-publication copy of the manuscript, "An Overview of Short-Term Tests for the Mutagenic and Carcinogenic Potential of Pesticides", that describes the short-term battery which can be used in a phased approach to evaluation of mutagenic and carcinogenic potential of pesticides. Qualitative results for 38 pesticide chemicals in this approach are discussed in detail. Correlations are made for these 38 compounds between results of short-term tests for mutagenicity and findings from long-term in vivo studies for carcinogenicity. (See Table 6 and associated discussion in text).

Previously reported quantitative data contributing to this overview are found in the following reports (all available):

Phase I - EPA 600/1-77-028, May, 1977 "Evaluation of Selected Pesticides as Chemical Mutagens: In Vitro and In Vivo Studies."

Phase II - EPA 600/1-79-041, October, 1979, "In Vitro Microbiological Mutagenicity and Unscheduled DNA Synthesis Studies of Eighteen Pesticides."

Phase III - 'Draft' "In Vitro Microbiological Mutagenicity and Unscheduled DNA Synthesis Studies of Fifteen Pesticides" August, 1979.