TC

5/11/87

DISCUSSION COMMENTS

SUBJECT: Epidemeology Study of Hoechst Dye Plant in Frankfurt; Drs. Fritz Trevitz's and Heiz Schuckman's comments.

TO: Walt Waldrop/Dough McKinney-- CDM Special Review

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cc: Albin B. Kochialski, Ph.D., T.B.
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A. Animal studies. CDM, the Formate and the 5-CAT have been carcinogenic in mouse only; neg. in rats and dog. There have been no bladder tumors or renal problems in any of the animal studies. Metabolism studies differs amoung the different species (including man) and is incompletely known.

B. Exposues. Neither Schuckman or Trevetz were able to quantify the exposures the dye workers had nor could they discuss in detail what equipment and processes were being used. Dye factories are noted for the variety of chemical exposures workers get. The workers in this study were obviouly exposed to very high concentrations from 1929 to 1970 based on the history of being a dirty plant as well as Schuckman's comments that 25% of the workers had to stop work in the summer time because of cyanosis (methemoglobin, a problem with a number of different aromatic amines) and hematuria, a problem of excessive exposure to chlordimeform. We need to see what else might cause hematuria.

Dr. Schuckman indicated that Hoechst did not have a way to quantitate exposure (air levels) or urinary metabolites. According to Schuckman, 80% of the chemical exposure was to 5-CAT however, Hoechst did not a quantitate method for measuring it. I wondered how Hoechst made measurements for various chemicals required to meet the determination of action levels for the German MAK (max. acceptable concentration for occupational exposures). I feel that Hoechst chemists or industrial hygienists probably do know what exposures were in the past plant and in the current new one.

C. Dye Plant Carcinogenesis. There have been several epidemeolo studies that have been reported as negative for carcinogenesis that should be look at. According to Patty, aniline, o-tolulidine, xylidine and other phenyl amines have not caused bladder cancer in humans, where as benzidine and beta-naphthylamine, magenta, auramine have. Hoechst has had to drop the uses of benzidine and b-naphthylamine in the past. We need to look into what might have caused brain tumors in the Hoechst workers. Further, the SMR's for this study was not based on the German population from that area.

Summary: The above comments are only some of the reasons why we need to look further before assuming 5-CAT is the only cause for the development of bladder tumors in these workers.

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