Monsanto

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SUBJECT: NIOSH PCB study

REFERENCE:

TO D. L. Coleman, M.D. - G2WF

As far as I can determine from the written account, the study appears to be a good one as far as design and data collection are concerned. The industrial hygiene measurements are of course of little significance to the study, except to suggest that past exposures were probably higher than the current levels.

However, I disagree entirely with the conclusions concerning liver cancer and I believe that the conclusions about rectal cancer should be weakened.

The authors find the excess liver cancer to be "consistent with" findings of liver effects in animals, thus implying (without saying so) that the excess is occupational (top of pages 15 and 17). In fact, there is an inverse relationship between the occurrence of liver cancer and both duration (Table 5) and latency (Table 4) of exposure, so that the pattern is just the reverse of what one would expect of an occupational cancer. Further, 2 of the 3 liver cancers occurred within 10 years of the beginning of exposure, so they are unlikely to be occupational no matter what.

The excess of rectal cancer is described as "surprising" (page 17). However, the NCI Cancer Atlas shows high values for rectal cancer mortality in the Northeastern U.S., with a fair number of counties in New York and Massachusetts, where the plants were located, having rates above the 90th percentile for all U.S. counties. This makes it completely unsurprising that the study population shows an excess of rectal cancer, although I would not quarrel with the need to investigate further.

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