

Monsanto

DEPARTMENT OF MEDICINE &
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January 5, 1983

Dr. Marilyn Fingerhut
NIOSH
Robert A. Taft Laboratories
4676 Columbia Parkway
Cincinnati, Ohio 45226

Dear Marilyn:

Enclosed is a copy of the St. Louis Post-Dispatch article on soft tissue sarcomas that I mentioned on the phone. Although it generated the kind of nervousness that publicity tends to engender, plus phone calls from several places like Nitro, I really can't quarrel with the factual content.

My name was mentioned, but not Ralph Cook's, because the story was written for local consumption. These days you can sell more newspapers here with dioxins than you can with sex.

Yours sincerely,

Bill

William R. Gaffey, Ph.D.
Manager, Epidemiology

an

Enclosure

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ST. LOUIS POST DISPATCH 12/28/82

Rare Cancers Studied

By Dioxin Investigators

By William Freivogel

Post-Dispatch Washington Bureau

WASHINGTON — A rare form of cancer has shown up in an unusually high percentage of workers at Monsanto Co. and Dow Chemical Co. who were exposed to dioxin. Included are two workers from the St. Louis area.

The number of workers who developed rare soft-tissue cancers is small — two at a Dow plant at Midland, Mich.; two or three at the Monsanto plant in Nitro, W.Va.; and two at Monsanto's plant in August, Ill., in St. Clair County.

Because the type of tumor is so unusual, scientists are

investigating whether the cases may be among the first pieces of medical evidence that dioxin can cause cancer in humans.

The scientists emphasize that more study is needed to prove or disprove the link. They also note that, overall, no more cancers were found among workers exposed to dioxin than what would be expected from any similar-size group.

Industry scientists generally agree that the finding on soft-tissue cancers may be significant but question some details of the study. They also dispute whether

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one of the stricken workers at the plant in Nitro was exposed to dioxin.

The percentage of soft-tissue cancers was discovered by scientists at the National Institute of Occupational Safety and Health. The scientists are compiling a national registry of workers exposed to dioxin.

The researchers studied deaths among two groups of workers from Dow and two groups from Monsanto. The Dow workers had been exposed to dioxin while manufacturing the herbicide 2,4,5-T and those at Monsanto while making other substances.

The scientists reported in a letter to Lancet, a British medical journal, in January 1981 that three of the 105 workers who had died had suffered from soft-tissue cancers.

That represented 2.9 percent of the deaths in the groups. This contrasts with 0.07 percent of the deaths from soft-tissue cancers in the general population.

The National Institute of Occupational Safety and Health report was followed by reports of other soft-tissue cancers among chemical workers. A Dow scientist reported to Lancet in March 1981 that a worker at Dow had a similar cancer. And two doctors who studied workers at Monsanto's plant in Nitro found that a maintenance worker had died of a soft-tissue cancer.

Finally, in July 1981, Dr. Frank E. Johnson of the surgery department of St. Louis University Medical Center, reported a rare case where a father and son working at Monsanto's plant at Sauget had developed soft-tissue cancer.

The son, David Cluck of Belleville, Ill., died of cancer in 1979 at age 33. His father, Elmer Cluck, lives outside Edwardsville, Ill. He is confined to a wheelchair.

In an editorial in May 1982, Lancet summarized the findings and called them disturbing. It noted that earlier Swedish studies had shown an elevated number of soft-tissue cancers among Swedish lumberjacks exposed to herbicides. But the publication stressed the need for more study.

Dioxin is a toxic chemical that can cause a severe skin disease called chloracne. Dioxin has been found to cause cancer in laboratory mice. But no definite link to cancer in humans has been shown.

Dioxin has contaminated the soil in parts of Missouri. But the workers at Monsanto and Dow who have developed soft-tissue cancers probably were exposed to much larger doses of the chemical than Missouri residents who live at or near dioxin-contaminated sites.

For example, 121 Monsanto workers were exposed to high levels of dioxin in an accident in 1949 at the plant in Nitro in which a section of piping was blown away by a runaway chemical reaction. And 61 Dow workers were exposed to high levels of dioxin when the company

temporarily changed the way it made the herbicide in 1964.

Scientists at Dow and Monsanto's in interviews that the soft-tissue cancers deserved additional attention. But they said that some of the incidents reported in the letters to Lancet should be discounted.

William Gaffey, manager of epidemiology at Monsanto, said it was highly unlikely that the maintenance worker at the plant in Nitro had been exposed to dioxin. The worker had a clerical job for all but a few months the time that the herbicide was manufactured by Monsanto, he said.

And Gaffey also doubted whether David Cluck's cancer could have developed as a result of exposure to dioxin. The son's first contact with chemical would have been only 1 year before his death. Normal cancer takes many years — 20 to 30 — to develop, Gaffey said.

Gaffey says that the excess of soft-tissue cancers deserves study. But consultant for Monsanto who studied the workers involved in the accident at Nitro said he saw significance in the national institute findings.

The consultant, Dr. Raymo Suskind, said in a telephone interview that the soft-tissue cancers in the Dow and Monsanto workers were different that they would not result from the same cause.

That is particularly true, Dr. Suskind says, of the cancer that developed in one of the men he studied at a worker at the Nitro plant.

He said that a pathologist who studied the case for him said that cancer could not have resulted from the same cause as the other soft-tissue cancers noted in the national institute study.

Dr. Suskind's own study of workers at Nitro has found no increase in amount of cancer. Dr. Suskind, director of the University of Cincinnati College of Medicine's Institute of Environmental Health.

Philip Landrigan, director of the division of surveillance and field studies at the National Institute of Occupational Safety and Health, strongly disagreed with Dr. Suskind, said that his pathologists believed that all of the cancers could have resulted from the same cause.

He said that Dr. Suskind was "making a non-distinction — making it after the fact."

Landrigan says he hopes that the national registry of dioxin workers will help determine whether the soft-tissue cancers are related to dioxin exposure.

The results will have little regulatory impact, because American workers are exposed to dioxin.

The Environmental Protection Agency has banned the manufacture of 2,4,5-T herbicide because of potential adverse health effects. Dioxin is an unwanted impurity in the manufacturing of the herbicide.