

# Scientists Say Cigarette Company Suppressed Findings on Nicotine

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Special to The New York Times

WASHINGTON, April 28 — Scientists at the Philip Morris Company found evidence 11 years ago that a substance in cigarettes increased the addictive power of nicotine, but the research was halted by the tobacco company and efforts to publish that and other work were blocked, two scientists testified at a Congressional hearing today.

The researchers, who left the company after their laboratory was abruptly shut down, also said that they and their colleagues at Philip Morris had made another striking discovery at the time: an artificial version of nicotine that seemed to have few of the toxic effects on the heart that the natural substance in cigarettes has.

The researchers, Dr. Victor J. DeNoble and Dr. Paul C. Mele, said their work was suppressed before they could carry it very far.

Under questioning, the scientists acknowledged that their findings had been preliminary and tentative, but they had been excited by where their research might have gone had Philip Morris not suppressed it.

The two scientists painted a picture of a company that started an ambitious research program in the 1970's to learn everything it could about nicotine and its effects on the body. The purpose was that some day the company could modify or replace the nicotine in cigarettes with less-harmful substances. The work was to be so secret that the animals used in the research were brought into labs at night, under covers, and the work was not even discussed with fellow employees.

Both of the discoveries were "scientifically significant and exciting and need to be followed up," Dr. Jack Henningfield, chief of pharmacology research at the National Institute on Drug Abuse, said in an interview. "The idea of increasing addictiveness by combining it with something else is something that I don't believe we

1984. By 1983 the studies began to generate unwanted evidence — like early studies indicating nicotine is addictive — that might cause the company trouble if disclosed in a lawsuit, the researchers testified today.

Dr. DeNoble said he was told by Philip Morris research executives "that the lab was generating information that the company did not want generated inside the company, that it was information that would not be favorable to the company in litigation." An important liability case, a suit against the company by the survivors of Ruth Cipolione, a deceased smoker, had begun August 1 in New Jersey.

The company instructed the researchers that they could not discuss their work and could not publish it, the scientists said. Then, on the afternoon of April 5, 1984, they were abruptly told to halt their studies,

## Work so secret that lab animals were moved at night, under cover.

turn off all their instruments, kill all the laboratory rats and turn in their security badges by morning.

The researchers also told of a trip to the New York headquarters of Philip Morris, where an executive wondered how their work would affect the company: "Why should we risk a billion-dollar business for some rats' studies?"

Dr. David A. Kessler, the Commissioner of Food and Drugs, said today that the testimony about dozens of suppressed studies showed "an extensive and sophisticated research program concerning the addictive potential of nicotine."

"This research, suppressed by the company for a decade, demonstrates the company's interest in the pharmacology of nicotine," Dr. Kessler said, "and the information in this testimony is critically important to our ongoing inquiry into the role of nicotine in cigarettes."

Especially interesting, he said, was the testimony that the company wanted to find an artificial nicotine that would have the addictive and intoxicating properties of nicotine without nicotine's dangerous effects on the heart. Experts attribute to smoking

about 150,000 heart disease deaths per year, with nicotine believed to be a main cause of heart disease.

Earlier this year, Dr. Kessler said that for the first time the Food and Drug Administration was ready to regulate cigarettes as addictive drugs, something the agency had avoided for decades. To establish control over cigarettes it must be shown that nicotine is addictive and that tobacco companies intentionally control the amount of nicotine in cigarettes to maintain smokers' addiction.

Dr. DeNoble said that one discovery he made was identifying for the first time another psychoactive and possibly addictive substance in tobacco besides nicotine. It is acetaldehyde, a natural product of burning sugars and other materials in the tobacco leaf.

One important measure of a drug's addictive potential is whether a laboratory animal will work hard pressing a lever to get the drug. Nicotine will get a rat to press a bar steadily, more than 100 times an hour, and Dr. DeNoble found that the animals will do the same for acetaldehyde, though they will not do so for water or saccharin or other favored substances.

Dr. DeNoble said he was surprised to find that when he gave the animals a chance to have both nicotine and acetaldehyde together, the rats tripled their bar-pressing to more than 500 times a hour. He said acetaldehyde was thought to play some role in alcohol addiction but that nothing had been proved and that his work on the rats was cut off before he could establish more than the simple indicator that acetaldehyde is addicting.

## A Congressional hearing is told that nicotine is as addictive as cocaine.

The other discovery he reported today was the finding of a nicotine-like substance called 2-methylnicotone (pronounced two-prime methyl-nicotine), a man-made chemical that causes animals to behave as if they were getting a nicotine high but without signs of heart distress like a rapid heart beat that usually comes with nicotine. Other researchers have since found several similar nicotine-like substances that act in the brain,

Dr. DeNoble said, but Philip Morris

dropped any attempt to see if these could be used to make a safer cigarette.

Among the other research carried out in the lab not made public, Drs. DeNoble and Mele said, were experiments that showed that secondhand smoke had a strongly toxic effect on plants, withering them, an effect that was even stronger than that for inhaled, or mainstream, smoke. If it had been made public, this would have been early evidence of the hazards of secondhand smoke, several years before the Surgeon General began to cite evidence of the hazard in that office's annual report.

Dr. DeNoble said the laboratories also had painted tobacco extracts on mouse skin and had found that it caused severe lesions or tumors. Other work found that substances in cigarette smoke called nitrosamines impaired the ability of lung tissue to heal itself.

These and other results were not crucial to determining the hazards of cigarettes and were eventually reported by laboratories outside the tobacco industry, though work coming from a tobacco company, the researchers said, might have been more influential if it had been published.



Dr. Victor J. DeNoble, telling a Congressional hearing yesterday that the Philip Morris Company squelched his research on nicotine.

Asked about the testimony of cigarette executives, Dr. DeNoble said: "It was difficult to watch the hearing and feel good about what happened to us. The data we had more than 10 years ago was going nowhere. They asked us to collect it, we did, and then they suppressed it. Even now, the data should come out."

The seven tobacco companies have agreed to turn over all the research they hold on nicotine, addiction and an advertising campaign of R.J. Reynolds to the subcommittee by May 19. Mr. Waxman promised to keep confidential all proprietary data.