

Tobacco Can Cause Cancer In Animals, Liggett Admits

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WASHINGTON — Liggett and Myers Co. apparently has become the first cigaret maker to acknowledge that tobacco causes cancer in laboratory animals.

The acknowledgement, which appeared in a patent application for a possibly safer cigaret, was the first public admission by the industry of a link between tobacco and cancer, a number of researchers said.

However, Dan Provost, a spokesman for Liggett and Myers in Durham, N.C., said such experiments prove nothing about the possible effects of smoking on humans. The industry has maintained that such a link has not been established.

The patent was granted last Oct. 25 to Liggett and Myers and to two of the company's researchers, Vello Norman and Herman G. Bryant Jr., who are listed as the inventors. Norman, of Raleigh, N.C., and Bryant, of Durham, N.C., assigned the ownership of the invention to Liggett and Myers.

THE APPLICATION described experiments with mice, whose skin was painted with three different kinds of tobacco substances. Mice

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painted with untreated tobacco developed skin tumors more frequently than those painted with various chemical additives.

The patent application claimed that when a form of the metallic substance, palladium, was added in minute amounts to tobacco along with other chemicals, "the amount of hydrocarbons in tobacco is reduced and a substantially diminished biological activity of the tobacco smoke ... on experimental animals ... is achieved."

Dr. Dietrich Hoffman, a biochemist and a leading tobacco researcher for the American Health Foundation, said the tobacco industry frequently uses the phrase "biological activity" to describe bodily changes such as the growth of tumors.

To support their claim, inventors Norman and Bryant painted or swabbed the skins of three different groups of 50 mice with condensed

ONE GROUP OF mice called "A," was painted with a condensate containing tobacco treated with palladium alone. Group "B" was painted with condensed tobacco smoke containing palladium and magnesium nitrate hexahydrate. The "control" group was painted with smoke condensate from untreated tobacco from nonfilter ciga-

rets. In one of their key conclusions, Norman and Bryant reported that "untreated tobacco produced the earliest and highest incidence of tumors" among the three groups of mice.

That wording, said Hoffman, is "the first time experimenters working directly for a tobacco company has acknowledged such a relationship between tobacco and cancer. They have never made such an admission before."

On occasion, Hoffman added, researchers under contract to the industry or a tobacco company have made the same findings in experiments with mice.

"THE COMPANIES, in such cases, do not legally accept responsibility for the conclusions of these independent researchers," said Hoffman.

Dr. Richard Ellis, a tobacco researcher for a private consulting group, agreed: "I am not personally aware of anyone (in the tobacco industry) making such a comment about the relationship between tobacco and cancer, even in mice, for public disclosure."

Richard Karlberg a spokesman for the American Health Foundation and for Dr. Ernest Wynder, who devised the mouse studies that have been used by anti-industry scientists to establish a link between smoking and cancer, agreed.

Dr. Robert C. Hockett, researcher director for the industry-funded Council for Tobacco Research, said, "I don't know that that assertion has been made by someone in the industry. The industry has not gone out of its way to make such statements."

Even so, Hockett added, painting concentrated tobacco condensate on the skin of mice, "is not relevant to man."

"Human beings may develop yellow fingers from ciga-

rets, but they have not developed skin cancer," Hockett said. "Perhaps skin cancers develop in mice, but that has nothing to do with smoke and lungs."

health researcher with the government's Office of Smoking and Health, noted, however, that the patent claim by Liggett and Myers used the mouse-skin experiments.

"They can't have it both ways," he said. "They can't say experiments on mice are not relevant and at the same time use such experiments to support their (patent) claim."