

## HEALTH POLICY

# New Studies Trace the Impact Of Tobacco Advertising

A packed press conference held last week showcased two new studies guaranteed to get the tobacco industry's goat. One indicates that cigarette advertising incites adolescents to start smoking—rather than persuading adults who already smoke to switch brands as the industry claims. The second shows that the industry's marketing efforts at least double the risk that certain adolescents would start smoking. Both studies were described at the press briefing by behavioral epidemiologist John Pierce of the University of California, San Diego, who directed the research.

The studies come just as the Food and Drug Administration is spearheading a drive to reduce smoking among children by 50% in the next 7 years. Among the agency's proposed strategies: restrict tobacco advertising. So not surprisingly, the tobacco industry came out swinging. "For people who are truly scientifically orientated, Pierce's study should

be an affront to objectivity," says Thomas Lauria, spokesperson for the Tobacco Institute, the industry's lobbying group. "We'll be taking a much closer look at the study because of [Pierce's] blatant advocacy [of smoking restrictions]."

But Pierce told the press conference that his methodology will withstand efforts to discredit the studies. *Science* decided to put his claim to the test by sending the studies to a handful of experts to critique. The verdict was mixed. Some said that the studies—which are notoriously hard to do—failed to distinguish cause and effect. But most were supportive: The first report is "strongly suggestive" that advertising causes teenagers to

smoke, "but not conclusive," says epidemiologist Malcolm Maclure of the Harvard School of Public Health. Nevertheless, he adds, it's "certainly enough to justify action."

The first Pierce study, due to be published in the November issue of *Health Psychology*, found that since the 1880s each of four major advertising drives correlated with increases in smoking among 14-to-17-year-olds, but only of the sex targeted by the advertising. For example, increases in smoking rates among adolescent women—but not teenage boys—coincided with marketing campaigns for Chesterfield and Lucky Strike in the mid-1920s, which included the famous "Reach for a Lucky Instead of a Sweet" advertisement. The only other times the study found that smoking increased without a major promotion was during

the two world wars when soldiers were given free cigarettes.

That study focused solely on advertising. The second, published in the 18 October



**Persuasive.** Promotions like this increased smoking in target groups.

## Researchers Protest Attack on Tobacco Study

Public-health researchers are protesting what they view as an "unprecedented" case of meddling by Congress in a peer-reviewed research project. Twenty-nine health leaders and academics—including Patricia Buffler, dean of public health at the University of California (UC), Berkeley—signed a newspaper ad last week blasting the House appropriations committee for trying to cancel a National Cancer Institute (NCI)-funded study of pro-tobacco lobbying. The ad attacks by name Representative John Porter (R-IL)—prime mover in the House's vote to boost biomedical research this year and chair of the key appropriations subcommittee—because he inserted language into a report asking that the study be ended.

The study that drew Porter's ire is being conducted by Stanton Glantz, professor of medicine and expert on heart function at UC San Francisco. Glantz has become a thorn in the side of the tobacco industry. In 1994, he testified as an expert opposing industry witnesses in regulatory hearings on the risks of ambient cigarette smoke. This year, he created an Internet file at which anyone can view thousands of pages of memos from the Brown & Williamson Tobacco Company—internal documents that were dumped anonymously in Glantz's mailbox. (To view the file, see <http://www.library.ucsf.edu/tobacco/>.)

In 1993, Glantz won a 3-year, \$600,000 grant from NCI to "determine the extent and nature of tobacco industry influence on state tobacco policy-making," according to an abstract. Glantz and his research team have been collecting data on contributions to state legislators by tobacco companies and analyzing the impact on state efforts to control smoking.

Porter inserted language into a report on the National Insti-

tutes of Health (NIH) in August, saying that the appropriations committee was "disturbed to learn about" Glantz's study. Porter's press aide, David Kohn, says the congressman learned about it from a newspaper reporter, who appears to have learned of it from pro-smoking lobby organizations. The House report says that "such research projects do not properly fall within the boundaries of the NCI portfolio, especially when nearly three quarters of approved research projects go unfunded." The report calls for the grant to be stopped in this, its second year.

Instructions contained in congressional reports do not have the force of law but are usually obeyed, especially when they come from committee chairs, and particularly if both the Senate and House agree. In this case, the Senate has not endorsed the attack on Glantz's project, but could do so in the final NIH bill, which is still pending in Congress.

Last week's newspaper ad said Porter's move would let "tobacco companies pollute and limit scientific inquiry." But Kohn says Porter regards such criticism as "irresponsible" and "absurd." Kohn points out that Porter—"an 18-year champion of biomedical research"—has voted in the past against tobacco subsidies. He wants NCI to drop this study because it doesn't qualify as genuine clinical or behavioral research, Kohn says.

Kohn adds that Porter would be delighted if NIH could find a way to pay for the study from "other sources," such as a discretionary account controlled by NIH Director Harold Varmus. Indeed, Porter met on 14 September with Varmus and NCI chief Richard Klausner, in an attempt to end the furor amicably. At the moment, neither NIH nor NCI is saying what will happen to the hot project.

—Eliot Marshall



**Congressional target.** Stanton Glantz of UCSF.

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issue of the *Journal of the National Cancer Institute (JNCI)*, also investigates the influence of peer pressure in inducing adolescents to take up smoking. It is based on telephone interviews with 3536 Californian adolescents who said they had never smoked.

To assess the adolescents' receptiveness to advertising, the Pierce team rated them on a five-point scale according to the answers they gave to a series of questions about, for example, whether they owned or would like to own any cigarette-related promotional items, and what was their favorite cigarette ad. The researchers gauged the influence of peer pressure by asking the adolescents about use of tobacco among their family members and best friends. Finally, adolescents were considered susceptible to taking up smoking if they failed to state unequivocally that they would not in the future try a cigarette in response to two questions—one of which asked "If one of your best friends were to offer you a cigarette, would you smoke it?"

Pierce and his colleagues found that adolescents who were exposed to family members and peers who smoked were almost

twice as likely as others to be susceptible to taking up smoking. But even when peer pressure was taken into account, adolescents rated as receptive to advertising were two to four times more likely to be in the susceptible group than those rated as unreceptive. Because a third, as yet unpublished study by the Pierce team indicates that susceptibility predicts which adolescents eventually smoke, the *JNCI* paper concludes "that tobacco marketing may be a stronger current influence ... than exposure to peer or family smokers" in encouraging adolescents to begin smoking.

Maclure says that the study "shows fairly clearly that even when you control for peer pressure, receptiveness to advertising is a major factor" in inducing teenagers to smoke. But both Maclure and epidemiologist Charles Poole of Boston University, another ardent supporter of increased control of cigarettes, disagree with Pierce's claim that the results show that "tobacco marketing was twice as powerful" as peer pressure. Poole also points out that both published studies suffer from "the classic chicken-and-egg problem,"

making it difficult to separate out cause and effect. For example, he says, in the second study, "kids who are contemplating taking up smoking may be more aware of advertising."

Pierce, however, is unfazed by the studies' limitations. In public health, he says, "if something appears dangerous we pull it. The prudent public health policy would be to pull [cigarette] marketing until they can prove it does no harm." Poole and Maclure agree. Maclure points out that in the 1980s some epidemiologists were skeptical that aspirin causes Reye's syndrome, but after then—Surgeon General C. Everett Koop issued a warning, drug companies changed their aspirin labeling. And, says Maclure, "hundreds of lives have been saved."

But Pierce is not hopeful that the tobacco companies will follow suit. Instead, he said, expect more advertising of the type the R.J. Reynolds Tobacco Co. has placed in the *New York Times* and other major newspapers: It argues that "the answer [to teenage smoking] isn't more bureaucracy ... [but] to teach young people how to resist peer pressure."

—Rachel Nowak

## GENETICS

### Rajewsky to Head EMBL's Italian Lab

LONDON—European plans to create a major new center for mouse genetics in Italy received a big boost this week when Klaus Rajewsky, one of Europe's most distinguished immunologists, agreed to head part of the venture. Rajewsky plans to divide his time between his current post at the University of Cologne's Institute for Genetics and a new program to be established in 1996 by the European Molecular Biology Laboratory (EMBL) at Monterotondo, 30 kilometers northeast of Rome. EMBL is establishing the program to help address Italian complaints that the country hasn't been getting sufficient return for its contribution to the organization.

Rajewsky, whose appointment was announced this week, will head three or four new research groups—funded by EMBL at up to \$1.4 million per year—focusing on mouse genetics and the use of mouse mutants for understanding basic biological mechanisms and modeling human diseases. In a separate move, the European Union (EU) is also planning to establish a mouse repository at Monterotondo—the European Mouse Mutant Archive (EMMA)—and Italy's funding body, the Consiglio Nazionale delle Ricerche, is planning to relocate the Institute of Cell Biology from Rome and relevant

research from other centers in Italy to the site.

"Rajewsky brings immediate credibility and recognition for Monterotondo which didn't exist before," says Peter Gruss, a developmental biologist at the Max Planck Institute for Biophysical Chemistry in Göttingen, Germany. "The three separate components planned for Monterotondo should create sufficient research density to make it a major European and worldwide center for mouse genetics, and with Rajewsky's appointment interest in it will soar," Gruss predicts.

Rajewsky's appointment is seen as a personal success for Fotis Kafatos, director-general of EMBL. Kafatos led efforts last year to keep Italy in EMBL after it threatened to quit, complaining that it was not getting enough back for its 16% contribution to the laboratory's \$44 million annual budget. The threat was withdrawn late last year following EMBL's efforts to get some member countries more involved in the work of the laboratory. EMBL promised to establish the new genetics program at Monterotondo, alongside the EU's proposed EMMA facility. "Rajewsky has the seriousness and commitment for something quite new like the EMBL program," says Kafatos.

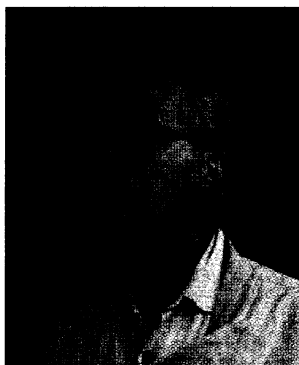
The Monterotondo campus was built as a

biotechnology facility for the ENI company, which decided not to go ahead with its plans and made the laboratories available for academic use. "The buildings are very pleasant, and there's room for expansion," says Kafatos.

Rajewsky's own research interests dovetail neatly with the new center's agenda, and he will be establishing his own research team at the site. He and his team have pioneered techniques that allow researchers to remove genes precisely from specific cells of the body and at specific stages of development. Although Rajewsky initially developed the techniques to study antibody production, they are applicable in many fields of research, says Tak Mak, an immunologist at the Ontario Cancer Institute in Toronto. "The techniques are opening a new era of potentially much more sophisticated experiments," he says.

Although Rajewsky's new job does not involve EMMA directly, researchers hope that he will also lend credibility to the archive. EMMA will act as a collecting and distribution center for novel mouse mutants created by European researchers, on the lines of the Induced Mutant Resource at Jackson Laboratories in Maine. Rajewsky says most laboratories do not have the people and resources to test mouse mutants and distribute them to other laboratories on a large scale. "You need the professional skills of places like the Jackson Laboratories," he says. "A center like the Jackson Laboratories in Europe would be wonderful."

—Nigel Williams



**Double duty.** Klaus Rajewsky will divide his time between Monterotondo and Cologne.

INSTITUTE FOR GENETICS/UNIV. OF COLOGNE