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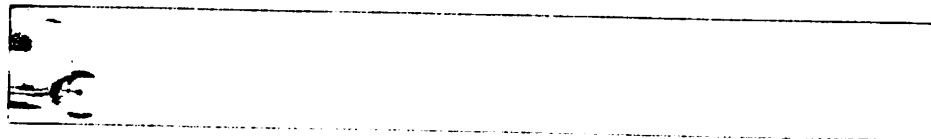
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sierra magazine

Cancer, Inc.

They make the chemicals, they run the treatment centers, and they're still looking for "the cure" — no wonder they won't tell you about breast cancer prevention.

by Sharon Batt & Liza Gross

Every October, the sponsors of National Breast Cancer Awareness Month go into overdrive to spread their message, "Early detection is your best protection." Organizers stage walks, hikes, races, and other events around the country "to fill the information void in public communication about breast cancer"—the sponsors' official goal. For the most part that void is filled with the mantra: "Get a mammogram." As for reducing risk, the campaign's elaborate 1998 promotion kit says only that "current research is investigating the roles of obesity, hormone replacement therapy, diet, and alcohol use."

In other words, the people who bring you Breast Cancer Awareness Month tell you to find out if you already have the disease. And they tell you to take personal responsibility for staving off what's become a scourge throughout the country. What they go to great lengths to avoid telling you is what the country can do to help stop the scourge at its source.

It's no mystery why prevention gets the silent treatment. The primary sponsor of Breast Cancer Awareness Month, AstraZeneca (formerly known as Zeneca), is a British-based multinational giant that manufactures the cancer drug tamoxifen as well as fungicides and herbicides, including the carcinogen acetochlor. Its Perry, Ohio, chemical plant is the third-largest source of potential cancer-causing pollution in the United States, releasing 53,000 pounds of recognized carcinogens into the air in 1996.

When Zeneca created Breast Cancer Awareness Month in 1985, it was owned by Imperial Chemical Industries, a multibillion-dollar producer of pesticides, paper, and plastics. State and federal agencies sued ICI in 1990, alleging that it dumped DDT and PCBs—both banned in the United States since the 1970s—in Los Angeles and Long Beach harbors. Any mention of what role such chemicals may be playing in rising breast cancer rates is missing from Breast Cancer Awareness Month promos.

After acquiring the Salick chain of cancer treatment centers in 1997, Zeneca merged with the Swedish pharmaceutical company Astra this year to form AstraZeneca, creating the world's third-largest drug concern, valued at \$67 billion. "This is a conflict of interest unparalleled in the history of American

medicine," says Dr. Samuel Epstein, a professor of occupational and environmental medicine at the University of Illinois School of Public Health. "You've got a company that's a spinoff of one of the world's biggest manufacturers of carcinogenic chemicals, they've got control of breast cancer treatment, they've got control of the chemoprevention [studies], and now they have control of cancer treatment in eleven centers-which are clearly going to be prescribing the drugs they manufacture."

Even the nation's leading cancer organizations are not immune from corporate influence. The American Cancer Society has the vice president of a major herbicide manufacturer sitting on its board of directors. High-ranking officials in the National Cancer Institute routinely accept lucrative posts in the cancer-drug industry. Such tangled financial interests explain why the cancer establishment-the medical institutions, corporations, and agencies that control cancer research, treatment, and education-continues to ignore mounting evidence that many cases of cancer are avoidable.

These conflicts may also help explain why, 28 years and billions of dollars after President Nixon declared war on cancer, the risk of breast cancer is higher than ever. In 1950, an American woman faced a lifetime risk of 1 in 20; today that risk has more than doubled to 1 in 8. Breast cancer will strike some 175,000 women in the United States in 1999, and kill 43,000. The cancer business is booming, but the selective brand of awareness the cancer industry promotes comes at a price.

Samuel Epstein predicted 30 years ago that cancer rates would increase, citing an explosion in the use of synthetic chemicals. From 1940 through the early 1980s, production of synthetic chemicals increased by a factor of 350. Billions of tons of substances that never existed before were released into the environment. Yet only some 3 percent of the 75,000 or so chemicals in use have been tested for safety. Forty of them are recognized human carcinogens.

The widespread presence of carcinogens in our environment is clearly linked to rising cancer rates, Epstein says. He points to a number of avoidable risk factors, but pollution, estrogenic medications, toxic ingredients in consumer products, and carcinogens in the workplace top his list of culprits. One thing ties all these things together, he says: "Corporate recklessness."

Signs of that recklessness are most evident in the workplace. Of 4 million women employed in the chemical industry, Epstein says, "about a million are exposed to chemicals which have been shown to cause breast cancer in rodents." In cases where scientists conducted epidemiological studies, women exposed to these chemicals had higher rates of breast cancer. Evidence that women in the plastics industry face increased risk emerged over 20 years ago. A study published in the Journal of Occupational Medicine in 1977 noted higher-than-expected breast cancer deaths in women exposed to vinyl chloride, which not only produces mammary tumors in animals even at very low doses but causes breast, liver, brain, and nervous-system cancers in humans.

Living near hazardous-waste sites also appears to increase risk. "A number of intriguing studies show that breast cancer rates are higher in places that have toxic-waste dumps," says Sandra Steingraber, who explored the links between toxic hot spots and cancer incidence in her book *Living Downstream* (see "Rachel's Daughter"). A 1985 study published in the *International Journal of Epidemiology* found that in New Jersey-a state with 111 Superfund sites-breast cancer mortality among white women increased the closer they lived to a dump site.

Many of these chemicals-and waste dumps-are produced by companies with a financial interest in cancer products. "General Electric is a major polluter in PCBs in the Hudson River. GE also manufactures mammogram machines," says Ross Hume Hall, a biochemist who advised the Canadian government on environmental issues in the 1980s.

An estimated million pounds of PCBs lie buried at the bottom of a 40-mile stretch of the Hudson, where GE dumped PCB oil until the mid-1970s, contaminating the entire 200-mile length of the river below Hudson Falls. Although PCBs (a family of 209 organochlorine chemicals) were banned in 1977, the chemicals persist in soil, air, lakes, and oceans. Classified by the EPA as probable human carcinogens, PCBs are found in the fatty tissue, sperm, blood, and milk of animals and humans the world over. Although PCBs vary in their effects, several studies link some PCBs to human breast cancer.

Faced with a government-proposed cleanup plan that would cost hundreds of millions of dollars, GE launched a local media offensive assailing the measure as unnecessary because the river is "cleaning itself." These PR efforts (which happened to be aimed at a community with one of the highest breast cancer rates in the United States) prompted EPA Administrator Carol Browner to complain to the New York Assembly in 1998: "GE would have the people of the Hudson River believe, and I quote, 'living in a PCB-laden area is not dangerous.' The science tells us the opposite is true."

Responding to mounting evidence of organochlorines' harm, in 1992 a staid scientific advisory group, the International Joint Commission (IJC), proposed a global phaseout of whole classes of the roughly 15,000 chlorinated compounds in use. (The IJC advises the U.S. and Canadian governments on pollution in the Great Lakes region.) Among the evidence was research from Israel showing that three organochlorine pesticides detected in milk and other dairy products caused 12 types of cancer in 10 different strains of rats and mice. After public outcry in 1978 forced the Israeli government to ban the pesticides-benzene hexachloride, DDT, and lindane-something remarkable happened. Breast cancer mortality rates, which had increased every year for 25 years, dropped nearly 8 percent for all age groups and more than a third for women ages 25 to 34 by 1986.

Unimpressed by such findings, the American Cancer Society (ACS) sided with the Chlorine Institute and issued a joint statement against the phaseout. This alliance between the world's largest cancer charity and the chemical industry, says Epstein, amounts to a "frank hostility" to prevention.

The American Cancer Society was founded with the support of the Rockefeller family in 1913. Members of the chemical and pharmaceutical industry have long had a place on its board. The society strengthened its industry ties in 1992, when it created the American Cancer Society Foundation to solicit contributions over \$100,000. The foundation's corporate-heavy board of trustees includes David Bethune, president of the multinational drug company Lederle Laboratories and vice president of American Cyanamid, a manufacturer of chemical fertilizers and herbicides.

The Cancer Society's anti-prevention efforts include opposing the now-defunct Delaney Clause, passed in 1958 to safeguard food from substances that cause cancer in animals, because the law "would severely limit the use of valuable pesticides and food additives and...probably increase food costs." In 1977 and 1978, it opposed regulations for hair dyes that cause mammary and liver cancer in rodents. And since 1982, the ACS has insisted on unequivocal proof that a substance causes cancer in humans before taking a

position on public health hazards.

Ironically, this is the posture of the tobacco industry, which the ACS has long battled, and explains why decades after the U.S. Surgeon General warned in 1964 that smoking causes lung cancer, tobacco executives were still saying that smoking isn't dangerous. It was the Surgeon General's courage to act on what Steingraber calls "good but partial evidence" that would protect people "while the wheels of science slowly grind on." Thirty-two years later, scientists finally isolated the carcinogenic agent in smoke and determined exactly how it causes lung cancer. True to form, the Cancer Society's latest report on cancer prevention, the 1998 "Cancer Risk Report: Prevention and Control," makes no mention of environmental factors.

The primary source of support for cancer research in the United States comes from the federally funded National Cancer Institute (NCI). Senior executives in both the Cancer Society and the Cancer Institute routinely move through a revolving door to board and executive posts at companies that make cancer-treatment drugs.

Such conflicts of interest extend to the petrochemical industry. While serving as chairman of the National Cancer Advisory Panel (a three-member committee appointed by the president) in 1990, Armand Hammer announced a drive to add a billion dollars to the NCI's budget "to find a cure for cancer in the next ten years." At the time, he was also chairman of Occidental Petroleum, which would later have to pay the federal government \$129 million and New York State \$98 million to clean up its infamous toxic dump, Love Canal.

It's no surprise, then, that reducing exposures to environmental carcinogens gets short shrift in the NCI's breast cancer prevention efforts, and that the agency embraced a study in "chemoprevention" in 1992. The Breast Cancer Prevention Trial, involving over 13,000 women throughout North America, was designed to see if the chemotherapy drug tamoxifen would reduce the risk of breast cancer in healthy women. Zeneca supplied the tamoxifen, and the NCI provided \$50 million in funding. With activists demanding prevention, says Cindy Pearson, executive director of the National Women's Health Network, "the NCI needed a prevention initiative." It chose what seemed the easiest way to go—a pill.

Pearson's group opposed the study at a Food and Drug Administration hearing. "Tamoxifen shouldn't even be mentioned in the same breath as population-wide prevention," she says. Studies later revealed that the women on tamoxifen developed 44 percent fewer breast cancers, but twice as many endometrial cancers, three times as many blood clots in their lungs, and 160 percent more strokes and blood clots in their legs. (Major studies in Italy and Britain found no reduction of breast cancer risk.) In October 1998, the FDA approved tamoxifen for healthy women at "high risk," expanding AstraZeneca's \$526 million market for the drug to some 29 million more women.

The National Cancer Institute's latest "prevention initiative" will compare tamoxifen and Eli Lilly's raloxifene—another drug that appears to reduce breast cancer risk—in tests on 22,000 women in the United States and Canada.

While these advances in chemoprevention win funding and acclaim, less-toxic prevention efforts have met fierce resistance. When the International Joint Commission launched its organochlorine phaseout, the chemical industry first responded with a media offensive attacking the proposal, then

went after women's-health activists. In a memo prepared for the Chlorine Chemistry Council, the public-relations firm Mongoven, Biscoe and Duchin outlined a strategy to "mobilize science against the precautionary principle"- the idea that when there is evidence of serious risks to public health, we must act to reduce those risks even in the absence of absolute proof. Singled out was a series of conferences on organochlorines and women's health in 1994 that featured a keynote talk by Dr. Devra Lee Davis on synthetic chemicals. Davis, an epidemiologist, was a health-policy advisor in the Clinton administration at the time, a post the memo complained gave her "unlimited access to the media" and helped validate her "junk science."

Industry's efforts to stifle evidence of environmental links to breast cancer has even infiltrated the medical journals. Two incidents that grabbed national headlines involved The New England Journal of Medicine in 1997. The first, an editorial by toxicologist Stephen Safe of Texas A&M University, reviewed studies correlating chemical residues in blood samples with increased breast cancer risk. Safe judged the evidence unconvincing, dismissing public concerns as "chemophobia." The Journal did not disclose that Safe had received research funds from the Chemical Manufacturers Association six months before his article appeared.

On the heels of Safe's editorial, the Journal ran a book review panning Sandra Steingraber's Living Downstream. The author, a physician identified only as Jerry H. Berke, said Steingraber was obsessed with environmental pollution as the cause of cancer. Berke, it turned out, was a senior official at W. R. Grace, the chemical giant forced by the EPA to help pay for a \$69 million cleanup of contaminated wells in Woburn, Massachusetts, the setting for the book and movie A Civil Action.

These events had one positive outcome, says Steingraber: they revived an important public conversation that Rachel Carson, the anti-toxics pioneer, initiated toward the end of her life. "She was beginning to document the interlocking structures of industry and medicine and how the chemical industry may be using the medical literature as a mouthpiece for its own views."

Carson, herself a victim of industry attacks, saw no contradiction between preventing cancer and developing better treatments. But a "search for the cure," she said, misrepresents the slow nature of scientific discovery. As we single-mindedly chase that elusive cure, we miss opportunities to prevent the cancers of the next generation. "It is a disservice to humanity to hold out the hope that the solution will come suddenly, in a single master stroke," she warned in Silent Spring.

Carson was dying of breast cancer when she wrote these words. No less tragic, the pattern of missed opportunities continues more than 35 years later.

PROTECTING OUR HEALTH

What You Can Do to Reduce Toxics

Toxics activists in Sierra Club chapters and groups nationwide are working on two major campaigns to protect public health. In a global effort, the Club has joined the International POPs Elimination Network, an alliance of 100 non-governmental organizations advocating a worldwide ban of at least 12 persistent organic pollutants (POPs), the most hazardous chemicals known to science. All of these "dirty dozen" chemicals are organochlorines that can

travel thousands of miles through the atmosphere, linger in the environment, and concentrate in the fatty tissues of wildlife and humans. For more information, contact Michael Gregory of the Environmental Quality Strategy team at aztoxic@primenet.com

And in the United States, the Club has teamed up with Health Care Without Harm, a coalition of more than 170 groups dedicated to environmentally responsible health care. The campaign focuses on reducing the toxic output of medical incinerators-the leading source of mercury emissions and second-leading source of dioxin. For more information, contact Doris Cellarius, HCWH coordinator, at doris.cellarius@sierraclub.org —*Liza Gross*

More Resources on breast cancer research and treatment.

Sharon Batt, a breast cancer survivor, is the author of *Patient No More: The Politics of Breast Cancer*. Liza Gross is Sierra's copy editor.

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