Briefings

edited by CONSTANCE HOLDEN

Animal Rights Vet Wins a Round

Nedim C. Buyukmihci won't be punished for refusing to require that his students euthanize dogs as part of a veterinary eye surgery lab. A tenured professor of ophthalmology at the University of California at Davis, Buyukmihci is also president of the Association of Veterinarians for Animal Rights.

He has long been a vocal critic of procedures that ultimately require euthanizing animal subjects. Unhappy with his unauthorized attempts to change course requirements, university officials asked him to relinquish his leadership of the team-taught course, and were considering denying him a merit pay increase. But Buyukmihci fought back, filing suit against the unversity in 1989, and now he has won.

First, a Sacramento federal court issued a preliminary injunction halting disciplinary action pending a trial, which was scheduled for February 1992. Then, on 9 August, the university decided to accept a permanent court injunction prohibiting it from taking any action against Buyukmihci. Furthermore, in what sources say is a highly unusual if not unique instance of reparations, it agreed to pay him $75,000 in damages as well as reimburse him for legal expenses. "This is a critical victory for the First Amendment as well as for the animal rights movement," he proclaimed.

University officials profess themselves "pleased" with the outcome of the case, according to a Davis press release. "The university prefers to reach an agreement with members of the university community rather than solve problems through litigation," says the statement.

A spokesperson for the veterinary school adds that the faculty is now evaluating the possibility of offering alternative courses for surgery instruction. To Franklin Loew, dean of the Tufts University School of Veterinary Medicine, that kind of thinking could have saved the school a pile of trouble. If UCD had been more responsive to the winds of change in the veterinary world, he told *Science*, the Buyukmihci episode could have been prevented. He says that although a very small percentage of veterinary students have qualms about traditional courses, one-third of the nation's 27 veterinary schools now offer alternatives to introductory surgery courses.

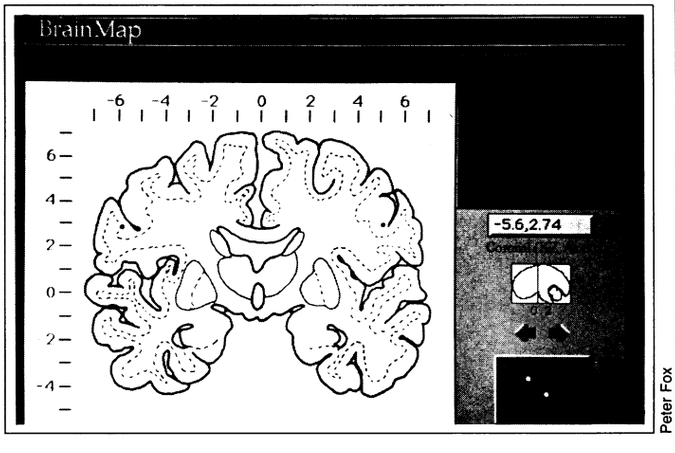
EMF and Male Breast Cancer?

Many studies have suggested a link between occupational exposure to electromagnetic field (EMF) radiation and leukemia, lymphoma, and nervous system cancers. Now, recent research suggests yet another peril: male breast cancer.

In the latest study, published in the August *American Journal of Epidemiology*, scientists at 10 cancer registries surveyed the occupations of 227 men diagnosed with breast cancer from 1983 to 1987. Of these, 33 had been exposed to EMF radiation on the job as electricians, welders, electric equipment repairmen, and broadcast workers. Compared with a control population of men without breast cancer, the researchers estimated that EMF-exposed workers are nearly twice as likely to develop breast cancer. Electricians alone were estimated to be six times as likely to develop the disease.

Scientists, however, are not sure how much importance to attach to the findings. Male breast cancer is exceedingly rare—about one case per 100,000 men is diagnosed each year—and the measurement of EMF exposure is fraught with unknown variables. "The study suggests an association; that's about it," says biochemist Earl F. Walborg Jr., a consultant who prepared a report on the subject for the National Electrical Manufacturers Association.

Johns Hopkins epidemiologist Patrick Breysse, co-author of a study that appeared in the 23 March *Lancet*, has reported two cases of breast cancer in 50,582 telephone linemen. He agrees that scientists have a long way to go to establish a causal relationship between male breast cancer and occupational EMF. And what about females? "Now that more and more women are holding jobs [where they are exposed to EMF]," Breysse says, "it's possible to do this kind of study on women, too."



Peter Fox

Touring the brain. *This plot of lip area sensations projected onto a brain slice is displayed by the new BrainMap program, the first comprehensive database of the human brain. One of the major advances embodied in the program is the generation of a standardized three-dimensional coordinate system covering the entire brain. The user can enter the coordinates for a specific area and retrieve all available information, including literature citations and high-resolution color images. The program can also process data from brain scans and warp them to fit into a standardized image, thus enabling lesions to be located precisely. The system was initiated at Johns Hopkins by neurobiologist Peter Fox, who is now at the University of Texas at San Antonio, and is expected to be available to scientists within a couple of years.*

Aerosol Gene Therapy

Another gene therapy first has been reported by Vanderbilt University lung specialist Kenneth L. Brigham, who has been using positively charged liposomes to introduce novel genetic material into rabbits' lungs.

Liposomes are those fatty globules that cosmetic manufacturers tout as skin moisturizers. They can also, according to pharmaceutical manufacturers, target drugs to particular cells. And now, the tiny micrometer-sized globules have taken on yet another clinical role: As biological couriers, they deliver a gene to prevent certain lung disorders.

In the May issue of *Clinical Research*, Brigham reports that the new genes were coded for the production of alpha-1 antitrypsin, a protein that inhibits the kind of protein breakdown associated with adult respiratory distress syndrome. It is thought that gene treatment works better than conventional medication because it does better at targeting the protein inside cells.

The experiment, says Brigham, marks the first time that liposomes have been delivered by a simple noninvasive technique—an aerosol device—to transform cells genetically in living animals. If the gene-carrying liposomes can be easily sprayed into patients' lungs, thousands of deaths might be avoided, according to Brigham.

As with other gene therapies,