

Coalition For Animals & Animal Research

CFAAR Arizona Newsletter

P.O. Box 210101, Tucson, AZ 85721-0101 (520)621-3931 Volume 11, Number 3

Editor: Grace Aranda (antrnweb@ahsc.arizona.edu)

To join the Arizona CFAAR, please fill out the membership form on the back page. Donations purchase our newsletter and educational materials. A year's subscription is included with your contribution.

CFAAR: Who We Are

CFAAR is a nonprofit educational organization which formed in response to activists who were attempting to discredit animal research and animal researchers in 1988. Several local CFAAR chapters have since sprung up across the country. These groups share the following objectives:

- 1) To **organize** students, faculty, and staff at institutions where animal research is performed so effective letter writing campaigns can be initiated quickly.
- 2) To **educate** the public, in general, and the campus, in particular, about the true nature of animal research and animal researchers.
- 3) To **support** responsible and humane use of animals in biomedical research.

The first of these objectives will be the primary function of the group. As legislation is introduced that affects animal research, we need to respond so our representatives know exactly how we, the people, want them to vote. Accordingly, through our newsletter, we will help inform you about legislation and other "happenings" concerning attacks on animal research. Our goal is to make it as easy as possible to contact your Washington, D.C. representatives.

The key to the effectiveness of this organization is you! We need your willingness to write an occasional letter, perhaps talk with a school group and, of course, give a few dollars to cover the cost of printing the newsletter and educational materials.

**HELP SUPPORT CFAAR
SO WE CAN SUPPORT YOU**

Houston Flood Wipes Out Years Of Medical Research

By Terri Langford and Bruce Nichols

Try to put a value on the cure for a disease. In some cases, numbers of at least 22 people killed and \$2 billion in property damage tell the story of heartache and loss because of Tropical Storm Allison and the pain that will be felt in the Houston area for years to come.

But researchers at Baylor College of Medicine and the University of Texas Health Science Center at Houston see an additional, devastating toll: the loss of key weapons in the worldwide battle against misery and illness. As floodwaters poured into the Texas Medical Center where the two institutions are located, researchers lost tissue samples, long-term cell cultures, genetically engineered lab animals and, in one instance, data that took hundreds of people 25 years to accumulate. "Incalculable," said Dr. Jim Patrick, Baylor's vice president and dean of research, describing the loss. The famous as well as the unknown were touched. Dr. Michael DeBakey lost a calf scheduled to test a heart-assist machine. Other work affected included research on breast cancer, infantile diarrhea, osteoporosis and asthma. Losses are still being tallied.

Luckily, UT's M.D. Anderson Cancer Center and its valuable research were spared, but flood losses stunned both Baylor and the UT Health Science Center. Some Ph.D. candidates, postdoctoral researchers and others will have to restart work they began years ago. Careers will be altered, officials said. "It's a tragedy a scientific tragedy," said Dr. Nicholas Vogelzang, who heads the University of Chicago's Cancer Research Center, one of the national network of institutions whose researchers often team with Baylor, UT and others to solve mysteries and create medical miracles.

Allison came ashore in Houston on June 5, packing minimal winds but a lot of rain. It stayed in the area for five days, causing scattered flooding the first few days, then unleashing its full fury the night of June 8. The Texas Medical Center, home to 42 institutions, including some of the world's most important, suffered a knockout blow as 8.5 inches of rain fell from midnight to 2 a.m. on June 9. At that rate, the 24-hour total would have been 102 inches. Flood defenses were overwhelmed and power was knocked out. Basements of several institutions, including Baylor and the UT Health Science Center, were flooded, and that's where much of the key data was kept, including research animals in cages, tissue samples in freezers and cell cultures in incubators. Even the freezers that weren't flooded lost power.

Confronted with catastrophe, researchers, graduate students and other faculty rushed from their homes to the sprawling campus, which is larger than New York's Central Park. But it was too late. Many broke down in tears at what they found. As floodwaters were pumped out, Baylor researchers discovered more than 30,000 caged rats, mice and other animals drowned. Cell cultures in incubators were swamped and compromised. Tissue samples in freezers that weren't swamped warmed up to dangerous temperatures.

At the UT Health Science Center, about 5,000 monkeys, dogs and other animals drowned and other data was lost. At Baylor, Katherina Walz, a 33-year-old postdoctoral researcher, was one of the most devastated. For 2-years, she had labored to breed mice with a particular genetic flaw believed to be key to mental retardation in humans. She had 150 of the carefully nurtured animals in cages in a basement lab at Baylor.

Although she knew there was a storm, she thought her mice were safe until a fellow researcher brought her the horrifying news: 147 had drowned. "All of Saturday, I was crying," Dr. Walz said. "It's really bad. It's really upsetting," said Kelly Dineley, a neuroscience fellow working on Alzheimer's disease at Baylor. Although most of Dineley's animals survived, she said the outlook is dim for many in a community used to dealing in esoteric theories but now confronted with harsh reality. "There are people who are severely compromised as far as their life's work,"

Dineley said. "I think there's going to be a pall on the place for a while." The damage has taken such a toll on morale that Baylor's psychiatric staff has offered counseling to those affected.

UT Health Science Center's preliminary estimate on damage was at least \$72 million. Baylor estimates were incomplete but were expected to add many millions. "It's hard to quantify until people can work with this on a lab by lab basis," said Dr. Ralph Feigin, Baylor's president. But the non-dollar costs may have been more devastating, officials said. "It's partly about your life and career, but it's also about 'truth and beauty,' Dr. Patrick said, citing a famous phrase for man's never-ending reach for higher values.

The effects almost certainly will reach beyond Houston, said Carol Alderson, a grants policy official with the National Institutes of Health, who called the Texas Medical Center "one of the heartbeats" of medical research. "If you really want to think about the group value it's not on the dollar value of the samples, it's on the value of finding an effective drug," Patrick said, citing one example.

Researchers elsewhere doubtless (sic) were involved in work being done in the flooded labs in Houston, officials said, because institutions around the globe share data and cooperate in research projects. "They build on each other, from bench to bedside," Alderson said. "More people than not will have more than one collaborator," said Dr. George Stancel, Interim Vice President of Research for the UT Health Science Center. "I think there is a rather substantial domino effect when you consider the size of the Texas Medical Center."

In Houston, several programs were affected. One of the most serious blows at Baylor was to breast cancer research. In the last 25 years, scientists have collected about 60,000 breast tumor samples. The samples were kept in 30 special freezers in a basement lab. The samples are valuable because when researchers find a new suspected factor in disease, they can look back over years of samples to see if that factor was present. Also set back was a 10-year-old Baylor program on infantile diarrhea, a nuisance for most Americans but one of the major killers of children elsewhere in the world.

Researchers were trying to develop vaccines to block the particular bacterial toxin that

causes diarrhea. "The research process has slowed down," Patrick said. In another Baylor lab, many mice used to research osteoporosis were killed. Parts of that program will have to be restarted. At the UT Health Science Center, asthma research was set back when genetically engineered animals were lost. "The great hope was that by knowing how individual genes were being affected in these animals we might be able to identify why we have this epidemic and how we can screen children at risk," Stancel said.

UT Health Science Center also suffered setbacks in other programs, including behavioral science studies, officials said. There was hope. Some samples may be partially salvageable. For example, samples that were supposed to be kept at minus 82 degrees warmed up to minus 45. "We don't know if they're OK or not, but we can try culturing them and see," said Mona Shahbazian, 37, a Ph.D. candidate working on a nerve disorder called Rett's syndrome.

There was some good news. Baylor's research into the human genetic code, as a key participant in the Human Genome Project, was untouched by the floods. More than 120,000 other lab animals escaped flooding in a new facility at Baylor, which is a major supplier of lab animals to institutions around the world. Tissue samples similar to the Baylor breast cancer collection are kept at other institutions around the country, and some of the Houston work may be reconstructed using those.

Also on the plus side, help was pouring in from elsewhere, including M.D. Anderson, where colleagues offered lab space for affected Baylor and UT Health Science Center researchers to try to salvage their work or begin anew. Phone calls have come in from across the nation, with fellow researchers giving advice on how to recover damaged data and offering tissue samples to replace those that were lost. Teamwork at the medical center warmed hearts. More than 25 tons of dry ice was trucked in, and medical students, doctors in training, staff and volunteers have been carrying it up hot, dark stairways and down dank corridors to try to minimize losses.

Many in the medical complex are already focusing on the future. Officials said they will look for ways, including the redesign and reconstruction of facilities and such changes as addition of redundant power, to prevent a repeat catastrophe. In some cases, backup generators were safe but key switches were in lower-lying locations that were swamped. "We have to do

everything we can to rethink how we organize and operate a lot of things, not just where the switch boxes go," Stancel said.

A week after the flood, Walz, the young researcher, was trying to look ahead. It will take her six months to get back to where she was before the disaster, she said, but three of her 150 specially bred mice survived, so she at least has a start. And she's been buoyed by the can-do spirit pervading the flooded but unbowed medical center. Shahbazian agreed. "It's a lot of heartache and disappointment, but we need to do the best we can and move on," she said.

(Dallas Morning News, 6/21/01)

Eco-Vandals Gum up Bank ATMs

By Leonard Greene

Eco-terrorists have made ATM stand for A Terrible Mess at several Long Island banks. Customers of the Bank of New York got a sticky surprise yesterday when they tried to get money out of cash machines - the card slots were jammed with plastic, and the keypads were covered with glue.

Five branches in Nassau and Suffolk counties were vandalized by animal-rights zealots who claim the bank does business with Huntingdon Life Science, a European company that tests pharmaceuticals on animals. The most severe damage was found at the branch at the Suffolk County Office Building in Farmingdale. There, 25 windows were smashed, and the slogans "ALF" and "ELF" were spray painted on walls outside.

The Animal Liberation Front has close ties to the Earth Liberation Front, a radical underground environmental group. One ELF member is facing arson charges for fires this year at several Suffolk County construction sites. The fires have caused nearly \$37 million in damage.

At BNY branches in Commack and Babylon, vandals spread glue on the ATM keypads and jammed the card slots with plastic strips. In the town of Huntington, the zealots glued the locks, and they spray-painted slogans at the branch in Kings Park.

(New York Post, 6/14/01)

Researchers Identify Mice Cells That Heal Hearts By Lee Bowman

Researchers at the Wistar Institute in Philadelphia have found that their "healer mice" can heal a hole in the heart. "In these adult mice, cells in the region of an injury to the heart tissue were replaced over time by new cells that were indistinguishable from neighboring healthy heart cells," said Ellen Heber-Katz, an immunologist at the institute who has been working with the mice for nearly a decade. "After two months, the damaged heart tissue looked normal and functioned well." Other experiments have shown that mice can re-grow liver tissue and bits of their tails that have been removed.

Until recently, scientists thought that the heart muscle was incapable of repair. "It has long been assumed that when the heart is damaged after a heart attack, heart muscle cells do not regenerate and the damage is permanent," said Dr. Claude Lenfant, director of the National Heart Lung and Blood Institute. But the Wistar study, published Tuesday in the Proceedings of the National Academy of Sciences, is the latest work to show that hearts can make new cells that repair damaged tissue.

The most significant finding in the experiment was that the mice were able to make the repairs without the use of drugs, transplanted cells or tissues or any medical intervention. Similar injuries to the heart tissue of control mice showed that only 1% to 3% of the heart cells around the region of the injury were capable of dividing. In the special strain of mice, up to 20% of the cells around the injury divided. "In more than 15 years of investigations involving muscle tissue, I'd never seen anything quite like this," said John Leferovich, first author on the study. "The observation was quite stunning."

Heber-Katz and colleagues are working to understand the specific genetic and molecular differences between the healer mice and other strains of lab mice. They already know that there are significant differences in the immune response of the animals. Eventually, proteins or other substances gleaned from the mice may be turned to medical use in people, promoting organ replacement, enhancing healing of wounds and burns, even repairing spinal cord injury.

Other researchers in New York, working with human patients, reported in June that they had found rates of cell division up to 70 times higher in a zone around heart damage compared to cell division in a group of patients with normal hearts. Just last week, Israeli scientists reported they have succeeded in growing precursors of heart cells from human embryonic stem cells.

Scientists at several locations around the United States are experimenting with transplanting stem cells derived from a patient's own skeletal muscle cells back into their damaged hearts. All the experiments suggest that getting heart cells to divide fast enough to restore the heart's function will probably require speeding up natural processes, using some combination of injected cells or growth factors. The Wistar Institute is an independent, non-profit research institution affiliated with the University of Pennsylvania and dedicated to discovering causes and cures for major diseases.

(Washington Times, 8/6/01)

Researchers Optimistic about Alzheimer's Vaccine By Will Dunham

A new vaccine blocked the development of Alzheimer's disease in mice genetically engineered to carry the human gene for the degenerative brain disease, researchers said on Thursday. Researchers at New York University School of Medicine said they expected to test the vaccine in initial human clinical trials within a year. They also expressed optimism that the vaccine would prove to be safer than another one already being tested in human clinical trials.

"The potential for vaccination as a therapeutic approach for Alzheimer's disease is something that's very exciting," Dr. Thomas Wisniewski, an author of the study, said in an interview. "But this (new vaccine) is a particularly good line of investigation. And it looks like it will be translated very rapidly to human use."

Alzheimer's disease is characterized by the destruction of nerve cells, especially in the areas of the brain responsible for memory and learning. Abnormal structures in the brain called plaques are one of the hallmarks of the disease.

As the plaques accumulate, nerve cell connections are reduced. The plaques are made

up of deposits of a protein called amyloid beta, which is toxic to cells and can damage and kill them.

Wisniewski and colleagues Dr. Blas Frangione and Einar Sigurdsson injected the new vaccine into 11-month-old mice that had been genetically engineered with a human gene for Alzheimer's disease. At that age, the mice already had formed amyloid plaques in the brain. Seven months later, the researchers examined the brains of the mice.

They found that the amount of amyloid plaque was reduced by 89% in the cortex, the center of higher thought, and by 81% in the hippocampus, the memory center, compared to the brains of mice that also had been genetically engineered but were not given the vaccine. The vaccinated mice also had 57% less of the protein that fosters the development of amyloid plaque. The study appears in the American Journal of Pathology.

Four million Americans have Alzheimer's disease, including one in 10 of people over age 65 and nearly half of those over 85, according to the Alzheimer's Association. The group said that without a cure or prevention, the number will jump to 14 million by 2050. Alzheimer's is a progressive, degenerative brain disease whose victims experience confusion, personality and behavior changes and impaired judgment. Most people with Alzheimer's disease become unable to care for themselves.

The vaccine already in human clinical trials showed promise in mice less than two years ago. That vaccine is made of a fragment of amyloid-precursor protein. Wisniewski expressed concern that the make-up of the first vaccine could be toxic to nerve cells in the brain and by itself may lead to the development of plaques.

In previous studies, the NYU team blocked the formation of amyloid plaque in the brains of rats by creating a short peptide, a fragment of a protein. This peptide prevented the formation of a toxic, insoluble form of amyloid that is deposited in plaques in the brain. The new vaccine is based on a modified, nontoxic peptide, the researchers said. "We believe that our peptide vaccine isn't toxic to nerve cells because it doesn't aggregate into clumps; it remains in solution," Frangione said.

Wisniewski said he hoped the new vaccine could be "a much more appropriate

choice for future human studies" than the one already being tested. He said the NYU team is looking for a corporate partner as the vaccine moves into human trials. "The hope here in particular is that this will work well because the effect in the animal model is so dramatic, and also because the amyloid lesions that you have in the animals are so similar to what you have in humans," Wisniewski said.

(Washington Post, 8/2/01)

Of Mice and Mischief By Zina Moukheiber

The only time investment bank Stephens Inc. deals with mice is when they have to be chased out of the office. So why are animal rights protesters staging demonstrations outside its Little Rock, Ark. headquarters? Seems the bank has agreed to lend \$30 million to Huntingdon Life Sciences Group of the U.K., a big contract-research organization. The lab, which counts Pfizer, GlaxoSmithKline and Merck among its clients, uses mice, rats and guinea pigs to test compounds before beginning human trials.

No one is safe these days from the mouse protectors. They're stepping up their protests, employing terrorist tactics not seen since the 1970s. The Huntingdon lab itself has been under vicious attack by the group calling itself Stop Huntingdon Animal Cruelty. Recently, masked hoodlums attacked a managing director with pickaxe handles. The company nearly went bankrupt. In January Stephens, a 15.7% shareholder, agreed to put up money after the Royal Bank of Scotland bowed out -- vandals were pouring glue into the bank-card slots of its cash machines.

Now Stephens is the target. The Huntingdon protesters have jammed its Web site and are planning to demonstrate at a financial conference Stephens is holding in Las Vegas in late March. In Washington, the mouse saviors are trying to get the medical industry entangled in red tape. After being sued by an animal rights group called Alternatives Research and Development Foundation, the Department of Agriculture agreed last September to place rats and mice under the Animal Welfare Act -- requiring labs to keep endless records on every animal, something most already do. But

biomedical industry lobbyists got Congress to withhold appropriations for the new rule.

All this would be mildly amusing if it weren't so serious. Scientists use at least 20 million rodents a year in experiments in the U.S., to test foods, drugs and chemicals and to unearth basic truths about the causation of disease and the functioning of the human immune system. Without the test animals, whole swaths of medical research would grind to a halt. Imagine a world where the mice are confined to the attic.

(Forbes, 4/2/01)

Threats Made To Ohio State U. Vet School Doctor

Threats have been delivered to Dr. Michael Podell of the Ohio State University veterinary school after he received funding to begin a study that has spurred protests from animal rights activists. "It has come to my attention that there have been several e-mail threats directed to Dr. Podell in relation to his research project," said Earle Holland, director of research communications in the office of university relations. "University Police have been in contact with the local police in the area in which Dr. Podell lives."

Podell has received \$355,000 from the National Institutes of Health to study the effects of methamphetamines, commonly known as speed, on 120 cats with the feline version of HIV, known as FIV. The study is estimated to take five years and cost \$1.68 million to complete. "I think this violent opposition to the project has manifested from cat owners who do not understand why their cats should be sacrificed for the sake of AIDS patients that misuse drugs," said Andreas von Recum, the associate dean of research for OSU's Veterinary School Hospital. He has received more than 30 e-mails from people objecting to the study.

"I have seen the evolution of animal rights from the beginning, to what it is today," von Recum said. "This is an especially violent reaction." During a previous interview, von Recum acknowledged that he did not know exactly how many AIDS patients use methamphetamines. Podell has been on edge since receiving the threats, von Recum said.

"When you are threatened with your life, where can you go without being afraid that something might happen to you?" he said.

Keith Alley, senior associate vice president of research, said OSU is very concerned about the threats on Podell's life but doubts they will stop research from continuing. "Clearly we don't take them (threats) lightly," Alley said. "There are probably situations in which the university would step in but I do not know that the university will in this case." Alley said that he hopes Podell will continue to alert police when he receives threats.

"It takes a lot of courage to go on with what you think is important in situations like this," he said. Bob Klal, a representative for the office of information technology, said that they can trace e-mails to some degree but that police should be notified immediately when a person receives a threat. "We would cooperate with the police to give them whatever they need," he said. "But at that point it's a police matter." University Police and Podell were not available for comment.

(Lantern OSU, 10/12/00)

**Coalition For Animals & Animal Research - CFAAR
2001 Membership Application**

Name: _____

Mailing Address: (Campus, if available) _____

Phone: _____ Fax: _____

Electronic Mail: _____

Institutional Affiliation (if any): _____

Faculty ()

Staff ()

Student ()

Other ()

I have enclosed a contribution of \$20 \$50 \$100 Other _____

A years subscription to CFAAR News is included with your donation.

Make checks payable to **CFAAR** and return to: **CFAAR**, P.O. Box 210101, Tucson, AZ, 85721

CFAAR ARIZONA

University of Arizona

P.O. Box 210101

Tucson, AZ 85721-0101

Address Correction Requested

113010

Please take a moment to join!

**Your Donations Make Our Publications Possible.
Renew Your Membership Today!**