

# Coalition For Animals & Animal Research

## CFAAR Arizona Newsletter

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To join the Arizona CFAAR, please fill out the membership form on the back page. Donations publish 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**

### Researchers' Home Vandalized

By Jennie Herriot

Animal rights protesters vandalized the home of two UCLA researchers last week, according to a police report filed by the victims. On-campus demonstrations that coincided with World Week for Animals in Laboratories were followed by protests in some researchers' neighborhoods Monday.

John Schlag, a neurobiology professor, and Madeleine Schlag-Rey, a neurobiology researcher, two targets of animal rights activists, said their home was damaged by protesters. At 10:15 p.m. Monday night, Schlag said they heard a lot of noise on the street, followed by loud banging and kicking on their door. "The way it proceeded ... we felt that the door was going to be kicked in," Schlag-Rey said.

The Schlags, whose research focuses on the mechanisms of human sight, filed a police report with the Los Angeles Police Department that listed a broken street lamp and a broken door window as a result of the vandalism. Neighbors told the police that the suspects were wearing masks and dark clothing. It is not yet known whether anyone has been arrested in connection to the incident.

The following morning, the Schlags noticed that a screen in the front of their house had been broken by a large rock thrown from the street. "We could have been killed (by the rock)," Schlag-Rey said. The Schlags have sent a photograph of the broken screen and the rock to the LAPD in order to add it to the police report.

Though the police report labels the suspects as "protesters," Erica Sutherland, a member of the loosely organized animal rights group that ran the past week's events on campus, said members of her organization "don't participate in any illegal activity." Sutherland, a third-year sociology student, said that she and other Students for Animal Liberation members were involved in demonstrations outside researchers' homes where protesters "educated

neighbors." "I think it's incredibly important that neighbors know that they are living near animal abusers," Sutherland said.

Sutherland, who said she was involved in demonstrations at another professor's home at about 7 p.m., said her fellow protesters were "friendly (and) happy to dialogue" with neighbors. Joaquin Fuster, the professor whose home Sutherland was protesting at, was out of the country and could not be reached for comment. Sutherland explained that she sees home protests as "completely fair" because the animals that are utilized in research can't escape their cages, and so the researchers shouldn't be able to hide or escape either.

Schlag-Rey had a different view. She said she sees the home protests, along with fliers distributed in their neighborhood that label the Schlags as "fanatics," more as a means of intimidation. She added that though the protests were aimed at turning their neighbors against them, demonstrators succeeded in angering neighbors who were "outraged" by the vandalism.

Sutherland said that neighbors she encountered during the home protest she was involved in were friendly and willing to listen to what she had to say. "I thought it was a really positive and peaceful protest," Sutherland said of the demonstration in which she was involved.

The Schlags agree that animal rights activists can be effective. "When they are reasonable, they are doing a lot of good," Schlag-Rey said. She added that animal rights advocates have alerted researchers to a lot of important animal abuse issues.

While the Schlags recognize the benefit of these protesters' work, they said that their research is also important. The Schlags' studies on visual systems and eye movement in monkeys and humans may help researchers better understand disorders like dyslexia and hyperactivity, they said. Schlag-Rey added that knowing where visual centers are located in the brain is useful for neurosurgeons who remove brain tumors; this information would allow them to steer clear of damaging patients' visual capabilities.

The Schlags emphasize that the protesters actions will not deter them from their research. "We as researchers are not intimidated – we are not hiding," Schlag-Rey said.

(Daily Bruin, 4/30/03)

## **Protesters Challenge Animal Testing**

By Cara O'Connor

Slogans like "Animals feel fear and pain" and "The alternatives are more effective" confronted motorists on North Campbell Avenue in front of University Medical Center yesterday afternoon. About 20 members of various local animal activist groups protested UMC's use of animals for medical research – part of the "World Week for Animals in Laboratories." "It's a time when animal rights groups nationwide bring into public focus the fact that animals are being abused through vivisection," said Gary Vella, Tucson chapter coordinator for the Animal Defense League of Arizona. "We just don't have a right to their life, to imprison them, to do these bizarre Frankenstein procedures on them," he said. "We are frankly tired of our tax dollars paying for the perpetuation of animal suffering."

UMC currently has 15,000 research animals, 95 percent of which are mice, said Dr. Susan Sanders, UA director of animal care. There are about 20 primates being researched. Protesters argued that the treatment of animals in the research centers is cruel, using the story of a monkey named Pepe, who Vella said received a cranial implant while he was attached to a computer by wires, to illustrate their cause. "Everybody has a right to their own opinion. However, as a veterinarian and a patient, I strongly believe in the use of animals in research. It's beneficial to both humans and animals," Sanders said.

Sanders said all of the research animals in university facilities are well cared for and treated humanely, but in animal testing, just as in human medical procedures, a certain amount of pain is involved. "If we find that an animal is in pain or distress, then it is our job to work with the researcher to treat or eliminate it and to euthanize the animal if necessary," she said. Protesters want to see more methods including: clinical studies, autopsies and preventative measures employed by researchers as alternatives to animal testing. Vella also said that physiological differences between humans and animals are a barrier for animal testing. Sanders said the university utilizes alternative models like tissue cultures and computer analysis in about 50 percent of its research.

Sanders also said that research animals are almost identical to humans, physiologically,

and their cells are far more effective in research than human cells. Human cells deteriorate into their simplest forms when isolated, but animal cells stay in the same state and can be observed for longer periods of time, she said. Sanders also said that the university is required by the Nuremberg Code and the Helsinki Accord to test any new drug on animals before it can be tested on humans. "Before we test on humans, we are required by law to test on animals."

But protesters said they want to see animal cruelty end. "I know from so much that I have read and talked to intelligent people that I trust, that there is a lot of unnecessary harm being done to animals," said Bronwin Rhodes, a studio art sophomore. "People getting informed is really important."

(AZ Daily Wildcat, 4/25/03)

## **Exclusion Zone Bars Animal Tests Protest** By Owen Bowcott

Huntingdon Life Sciences, the chemical and pharmaceutical testing company, yesterday won a ground-breaking injunction, preventing animal rights protesters from approaching within 50 yards of employees' homes. The far-reaching decision follows a campaign of intimidation in which staff have been assaulted, subjected to abusive phone calls and had their cars destroyed by arson. The firm employs more than 1,000 people in East Anglia.

Animal rights activists have attempted to drive the company, which conducts toxicity tests on cats, dogs, rodents and other creatures, out of business. Brian Cass, the chief executive, was beaten by baseball bats and the firm's auditors, Deloitte & Touche, were forced to resign earlier this year. The scope of yesterday's injunction, made under the 1997 Protection from Harassment Act, goes some way to answering Mr Cass's public pleas for stricter laws to prevent violent direct action.

Not only are 50 yard "exclusion zones" established around the homes of every employee but protesters are banned from "assaulting, molesting, harassing, pestering, threatening or otherwise interfering with" those named in the high court injunction, "directly or indirectly". The list of those protected includes the company itself,

employees and "their families, servants or agents" and any person "setting out to visit them".

Only one demonstration is permitted every 30 days in the exclusion zones outside the company's two sites in Cambridgeshire and Suffolk. On those occasions the protesters, who must not number more than 25, must park more than half a mile away from the sites and the demonstration must not last more than six hours.

The injunction also prohibits publication of names, addresses, vehicle registration numbers, email addresses or any information identifying "protected persons". Harassment is also deemed to include any "artificial music noise", such as claxons or hooters. Breaching the order is an arrestable offence and allows the police to remove anyone immediately. The harassment act was designed to stop violent husbands intimidating ex-wives and stalkers contacting their victims.

Yesterday's ruling was believed to be the first time the legislation, which allows offenders to be imprisoned for up to two years, has been used to protect so many people from harassment. The interim injunction was granted against nine animal rights activists, Stop Huntingdon Animal Cruelty (Shac), the Animal Liberation Front and London Animal Action. "It's entirely justified and goes some way to compensate the staff of this company and other affected companies who have had to put up with this harassment for years," said a Huntingdon Life Sciences (HLS) spokesman, who declined to be named.

A mass demonstration, organised by Shac, will be held in Cambridge this Saturday to mark World Day for Laboratory Animals. It will not be affected by the injunction. Heather James, spokeswoman for Shac, said both sides were due to return to court in four weeks time when continuation of the order would be challenged. "It just proves we are being effective," she said. "We take it as a compliment that they have gone to these lengths. "This will not stop our campaign against HLS. We will work around it. It doesn't cover customers or their suppliers. We will continue to target them. It doesn't stop us demonstrating against HLS's customers at their premises. We will continue to target companies as far afield as New Zealand."

In 1997 two HLS staff were given community service orders after admitting charges of "cruelly terrifying" dogs. The prosecutions followed secret filming by Channel 4 inside the

company's premises for a documentary, It's a Dog's Life. It showed a beagle being kicked and hurled against a wall.

Ms James, who has been convicted of public nuisance offences for publishing a newsletter containing Huntingdon employees' names and addresses, said the organisation no longer did so. Shac, which has nearly 5,000 supporters in the UK and recently sent a group of supporters to Japan to target HLS customers, insists it does not condone violence. "Huntingdon have brought this campaign on themselves," another spokeswoman said. "We understand why people take it upon themselves to do whatever they do. We believe in direct action, roadblocks, occupations - everything to grind down HLS."

Cambridgeshire police, which has spent nearly £4m protecting the company, also gave evidence to the high court. It has called in officers from Suffolk, Essex, Surrey and the Metropolitan force for Saturday's demonstration. Two Huntingdon employees yesterday told how their lives had been altered by the protest campaign. Neither was prepared to be named. "Two years ago I was attacked as I got out of my car," said one. "Three men in balaclavas jumped on me. They squirted something into my face. "It blinded me temporarily. They punched and hit me. I staggered towards the front door and slammed the door behind me. As I lay on the floor in the front hall with my wife and child looking on, two bricks were thrown, breaking windows."

A second employee, who has suffered depression partially because of intimidation, said he used to search under his car every day. "The things the protesters shout at you as you go to work - like scum or paedophile - is unbelievable. They tell us we are earning blood money. I was scared that people would recognise me; once I was followed home." The British Union for the Abolition of Vivisection, which exposed mistreatment of animals at HLS, said the use of violence by protesters was "a distraction from the pain and suffering endured by laboratory animals."

(The Guardian, 4/17/03)

## **Animal Research Saves Lives!**

## **Feds Target Activists for Animal Rights**

By Brian Donohue

Federal agents from the Joint Terrorism Task Force raided a Somerset County house this week that served as the headquarters for an animal rights organization, authorities said yesterday. The raid on Wednesday was part of a nationwide investigation into possible criminal activities by the group, authorities said yesterday.

Investigators executed a search warrant on the home in Franklin Township, whose occupant is a leader of Stop Huntingdon Animal Cruelty, or SHAC, said Special Agent Steve Kodak, a spokesman for the FBI's Newark division. The group has conducted a years-long campaign against Huntingdon Life Sciences, a company whose laboratory in Franklin Township uses animals for research purposes.

Bill Strazza, an attorney for SHAC, said the house, on Home Street not far from Rutgers University, serves as the organization's headquarters and was rented by Kevin Kjonaas, who is considered the main force behind the group. Kjonaas, who is in his mid-20s and also goes by the name Kevin Jonas, had packed his belongings and was in the process of moving when agents arrived at the 1 1/2-story, red brick single-family home on Wednesday morning. Investigators carted off "just about anything that wasn't nailed down" including notebooks, private journals and computers, Strazza said.

Kjonaas, who was not arrested, served briefly as spokesman for the Animal Liberation Front, a loose organization of radical animal rights activists, which the FBI says is responsible for more than 600 cases of ecoterrorism nationwide. Those cases range from spray-painting buildings and breaking windows to firebombing fur farms and research centers, according to the FBI.

Strazza, however, vehemently denied that Kjonaas or other SHAC members are involved in criminal activity. The group engages only in lawful campaigns and protests, he said. "I have never come across a group of people, let alone a group of activists, who are more peacefully interested in the human condition, and the animal condition, than these people," Strazza said yesterday. "They are pacifists and peace activists."

A spokesman for the U.S. Attorney's Office in Newark confirmed that the raid occurred, but declined to comment on the investigation. Kodak, the FBI spokesman, also declined

comment on specifics of the investigation. Strazza, however, said the raid was part of an ongoing investigation by a federal grand jury that has so far issued subpoenas in California, Texas and Chicago. The FBI has placed SHAC on a list of terrorist organizations, he said. "I think we are unfortunately in a political environment where criminalizing dissent is becoming popular again," he said.

In another development Wednesday, the Joint Terrorism Task Force, comprised of both state and federal agents, raided a home in Seattle, Wash., as part of the same investigation, according to The Seattle Times newspaper, which cited a search warrant on file in U.S. District Court in Seattle. According to the Seattle warrant, agents are investigating suspected arson, violations of federal interstate commerce statutes and "animal enterprise terrorism" - terrorism against companies involved in animal enterprises - by radical animal rights groups. The occupants of the Seattle home have been linked to animal rights organizations, though it was unclear whether SHAC is among them. Lawrence Lincoln, a spokesman for the U.S. Attorney's Office in Seattle, declined to comment.

SHAC has targeted Huntingdon Life Sciences, its insurers and its financial backers in its efforts to end the company's use of animals in scientific research. Founded in the United Kingdom, Huntingdon tests pharmaceuticals and agricultural chemicals, mostly on animals. It has long been targeted by animal rights activists seeking to shut it down. In 1997, People for the Ethical Treatment of Animals (PETA) lodged a complaint against Huntingdon after the group conducted an undercover investigation, which found that 36 beagles were to have their legs broken in order to test an osteoporosis drug. The experiment was called off and the U.S. Department of Agriculture fined Huntingdon \$50,000 for violating the Animal Welfare Act.

In April 2001, 14 beagles that were being used in tests were stolen during a break-in at the Huntingdon's lab in Franklin, hailed as a "liberation" by animal rights groups. In protests the next day, four animal rights activists were arrested on various charges, including resisting arrest, obstruction of justice and disorderly conduct. Two months later, a judge ordered SHAC to stop holding protests of more than 50 people in front of the company's Franklin Park

building, restricting larger demonstrations to a park several hundred feet away.

In a February interview with The Star-Ledger, Sidney Caspersen, director of the state Office of Counter Terrorism, said his office had assigned investigators to monitor hate groups and animal rights groups in New Jersey and elsewhere for alliances with foreign nationals.

(Star Ledger, 4/25/03)

## **Evolving Research - OSU Labs Using More Animals but Fewer Primates, Cats & Dogs** By Mike Lafferty

Researchers say the use of animals in science brings huge and obvious benefits - new drugs and treatments that benefit humans and animals alike. Opponents counter that animal use perpetuates unspeakable cruelty that, in a computer age and given the advances in genetic and cell biology, should end. Look into the stainless-steel cages at the Ohio State University medical college and sets of bright eyes stare back. They belong to Fred, Ernie, Herbert, George, Jimmie and Ike - small monkeys called macaques that help OSU medical researcher John Buford figure out how the human brain works.

The macaques, other monkeys and apes represent "higher animals" used in university research. On the low end, mice and rats. The use of animals in science, researchers say, brings huge and obvious benefits - new drugs and treatments that benefit humans and animals alike. But there's another side - an often vocal opposition that counters that animal use perpetuates unspeakable cruelty that, in a computer age and given the advances in genetic and cell biology, should end.

Since 1989, Ohio State has more than doubled the number of animals its researchers use in their laboratories. But far fewer monkeys, apes, cats and dogs are used these days as Ohio State and other institutions - under fire by animal-rights groups - have dramatically reduced the number of higher animals used in studies. The number of primates used in research at Ohio State has dropped 88% since 1989. During the same period, the number of dogs dropped by 65%, cats by 82% and rabbits by 56%.

Both the U.S. Department of Agriculture and the National Institutes of Health have tightened oversight of animal-research programs in the face of criticism by People for the Ethical Treatment of Animals and other protest groups. "I treat the animals well because it's the right thing to do," said Buford, who has used macaques to study brain function for more than a decade.

His arguments, however, don't cut it with critics. "They are not laboratory animals. They are animals who unfortunately ended up in laboratories," said Mary Beth Sweetland, director of research and investigations for PETA. "It doesn't mean they don't have the desire to do the same things other animals want." There's no doubt that the macaques would rather be on the island of Mauritius, in the Indian Ocean, where they were captured.

Each monkey in Buford's lab has a tiny hole in its skull where a fine probe is inserted and gently threaded to a primitive spot known as the brain stem. Scientists once believed different activities and motions were controlled by individual parts of the brain. Research by Buford and others, however, indicates that several brain areas may work simultaneously to control functions. The macaques are placed in chairs and trained to touch a computer screen that shows a series of colorful geometric images. "When they point to the right one, they are rewarded with apple juice or a treat," Buford said.

Buford records how their brain cells react to the stimulation to learn how a portion of the stem controls motor movement. After the research, which can last several years, the macaques are euthanized so Buford can study their brains and ensure the results are valid. "Your big goal in science is not to be wrong," Buford said. "Not only does it damage a scientist's credibility, but it sends other researchers down the wrong path."

Before the university shipped monkeys to his lab, Buford's proposed research methods were scrutinized by university veterinarians, his department and college, and a special university research board. The same goes for any research that uses animals. The process can last weeks to several months.

The cages at Ohio State are clean and neat. Animal-care specialists interact with the macaques and other animals -- even laboratory white mice are given "enrichment" programs. "You're nice to them. It's just like being nice to

people," said Monique Morgan, a laboratory-animal health technician who keeps an eye on the macaques and other animals.

Dr. William Yonushonis oversees all animal research at Ohio State. He was hired in 1989 after federal inspectors found 17 major violations of the federal Animal Welfare Act at Ohio State. "There's no doubt about it," he said of the need for change. "The rules and regulations were instituted to safeguard animals because people were abusing them." The Animal Welfare Act, enacted in 1965, is not vague about animal research. For example, the minimum size of dog runs is based on measuring a dog from nose to tail, adding 6 inches, squaring the result and then dividing by 144.

At Ohio State, dogs are allowed to move around the cage rooms while their runs are being cleaned. Labs are inspected not only by federal inspectors but by the Association for Assessment and Accreditation of Laboratory Animal Care. "The council does look at research practices to see if there are lower animals that could be used or techniques that could be used to reduce pain and distress," said Dr. Kevin O'Hair, who oversees veterinary care of lab animals at Ohio State.

This accreditation, however, doesn't mean much to PETA. "They are apologists for the research industry," Sweetland said of the association. "Their stamp of approval adds a false layer of legitimacy." Yonushonis acknowledges the gulf between researchers and PETA - one that has widened over the past few years. "An animal in a cage is an animal in a cage," he said. But Yonushonis stressed that lab animals at Ohio State receive the best care possible. "Our animals look at you. If you listen, you can hear rabbits playing with their toys."

While use of higher animals has decreased, the total number of lab animals has increased at Ohio State. In fiscal year 2002, more than 77,000 animals - mostly mice and rats -- were used in research. The number had more than doubled since 1989. Mice and rats, researchers say, are being bred to be used in research that used to require higher animals. For example, so-called designer mice - specially bred to contain a specific gene that allows cancer or some other condition to develop more easily - are used in place of primates. "You can create the system you want to study in a mouse," said John G. Miller, director of the lab-animal care

association, based in Rockland, Md. The increased use of tissue and cell cultures also has helped reduce the need for dogs and other higher animals, he said.

Animal-rights activists remain unimpressed. "The reduction in primates is only due to a lack of funding, not because of any higher motivation," said Rob Russell, of the Columbus group Protect Our Earth's Treasures. Russell, however, was talking about a single project that involved cotton-top tamarins. Yonushonis said the research had run its course. "We identified that colitis was a precursor to colon cancer," he said, adding that the research was continued by a pharmaceutical company hoping to develop a treatment. "I don't think that's not successful."

Research laboratories are inspected at least once a year by the U.S. Department of Agriculture. USDA inspectors have investigated four animal-health complaints at Ohio State since 1988. To resolve the 1988 case, the university paid a \$5,000 fine, half of which was suspended. Ohio State also received a warning about inadequate veterinary care in the Biology Department in 1990 and another warning two years later for failing to list bats as research subjects.

The USDA says inspections are taken seriously, and points to the Coulston Foundation, a defunct research lab in Alamogordo, N.M., as an example. The foundation, which was once home to the largest primate collection in the world, had been investigated 10 times since 1995, including one incident in which primates died, according to Jim Rogers, a spokesman for the USDA's Animal Plant Health Inspection Service. It closed last year.

Although the feds have no problem with OSU animal research, the school has attracted some negative attention in recent years. Three years ago, nationwide protests mounted after word got out that an OSU researcher was infecting cats with feline immunodeficiency virus and then giving them methamphetamines. The \$1.7 million study, funded by the National Institutes of Health, set out to learn how the drug affected the course of the disease, which is similar to the human immunodeficiency virus, or HIV. Dr. Michael Podell, who led the research, killed 42 cats to study brain changes.

The work outraged animal-welfare activists, and Podell reported that protesters broke into his labs. The grant later was placed on hold and Podell eventually left the university,

charging that OSU officials had not backed him up on the research. The research, however, has been revised and the funding has resumed.

While cats may be required in the future, the research now is progressing using tissue cultures, according to Larry Mathes, an immunologist who is continuing the work. Podell's research confirmed that neurologic changes are related to methamphetamines, Mathes said. "We also discovered that the virus mutates. It can now infect cells in the brain it couldn't before and there is some evidence the methamphetamines cause this to happen more rapidly." Cats will be needed again, he said, because tissue cultures, in the end, aren't real enough. "No one wants to do animal studies if you don't have to. They're cumbersome, costly and slow," Mathes said. "Tissue cultures are much faster. Some animal studies take a year or two. "If I could do studies without animals I would."

(Columbus Dispatch, 4/22/03)

## **UA Tests Morphine Alternative**

By Thomas Stauffer

Soldiers wounded in battle may someday benefit from a drug developed by a UA chemist that has the painkilling power of morphine but lacks its dangerous side effects. Robin Polt and his colleagues have spent more than a decade developing a compound known as a glycopeptide, which mimics natural compounds in the brain that reduce pain.

While the drug has yet to be tested on anything but mice, and it probably will take a decade to get Food and Drug Administration approval, early results indicate that it's two to three times as potent as morphine, said Polt, a chemistry professor at the University of Arizona. But the real beauty of the drug lies in what it doesn't do.

Morphine brings addiction, sedation and constipation, Polt said. His compound has yet to show side effects. The phenomenon of morphine addiction first surfaced after the Civil War as "Veteran's Disease," he said. "The first real wave of drug abuse in America came after the Civil War, because there were literally thousands of soldiers addicted to laudanum and various preparations of morphine," Polt said.

The sedative effects of morphine also constitute a major side effect, as it slows

breathing and lowers blood pressure, he said. "Virtually all opiate deaths as overdose deaths are due to this respiratory depression," Polt said. "Essentially, the part of your brain that controls breathing stops functioning and you forget to breathe." Morphine also causes constipation, which is "probably the major reason people are taken off opiates outside the hospital setting," he said.

The Office of Naval Research has supplied a \$1 million grant to fund the next phase of Polt's study, as a safer alternative to morphine would be a great benefit to soldiers, said Cmdr. Stephen Ahlers, deputy director of the Navy's War Fighter Protection Future Navy Capability. "Analgesics that don't cause sedation or cognitive impairment are the holy grail of the pharmacological industry," Ahlers said. "Compounds that relieve pain that are safer and would allow you to remain tactical would obviously have applications for the military."

For years, researchers had sought an alternative to morphine, which has been widely used for pain since 1806. "There is no doubt about it - we're always looking for newer things to do with our patients that have less side effects," said Dr. Kutaiba Tabbaa, director of the UA's Pain Management Clinic.

In the 1970s, researchers discovered a class of molecules called enkephalins, small peptides that the brain uses to regulate everything from pain to appetite. But a decade later, most researchers had abandoned the compounds because they couldn't find a way to deliver them to the brain, Polt said. "In the '70s, the drug companies were very excited about the notion of using these peptides as drugs, and they basically had their hearts and their bank accounts broken because of the blood-brain barrier," he said.

The barrier, a biological membrane in the blood vessels of the brain, stops toxins and viruses from entering the brain. "The chemistry of the brain is very finely tuned, and it doesn't want to be influenced by changes taking place in the rest of the body," Polt said. What Polt and his colleagues set out to do 12 years ago was find a way to get those peptides past the barrier. The answer was attaching a blood sugar to the chain of amino acids they were building in the lab. Glucose is the major source of energy for the brain, and specific transporters in the brain grab it and move it through the barrier.

Glycosylating the peptide - attaching a blood sugar - allows the peptide to "hitch a ride" across the barrier and into the brain, Polt said. Polt and his researchers tested the glycopeptide with mice, which had their tails stuck in water raised to a temperature of 131 degrees. Without pain relief, the mice would pull their tails out in about 15 seconds. With injections of the glycopeptide, the mice left their tails in the water for more than a minute, said Ed Bilsky, a pharmacology professor at the University of New England who works with Polt.

While morphine affects only one receptor in the brain that reduces pain, the glycopeptide affects two, Bilsky said. "There is good evidence that these receptors interact together in some potentially very good ways," he said. "That's why this compound may be a better analgesic, and why it may also decrease the side effects." The study's next step will use pigs and rhesus monkeys to study possible side effects. If the compound sails through those trials, tests with humans will follow.

The notion of attaching a glucose molecule to peptides could lead to drugs that do a lot more than ease pain, Bilsky said. "I think that's one of the most important points, is that there are many other peptide symptoms that could be potential targets to cure all kinds of brain diseases," he said. "In stroke patients or patients with Alzheimer's disease, you might be able to use a glycopeptide to stimulate the brain to start regenerating," he said.

(AZ Daily Star, 4/4/03)

## **Decades of Medical Testing Now Paying off for Animals** By Diane Clay

The often controversial topic of animal research has taken a new twist that may persuade more people to support clinical studies using animals. Many Americans and animal-activist groups deplore testing medical procedures and medicines on animals and question the necessity. Recent polls conducted in each state showed similar results. The polling also showed Americans were less offended by animal research if it helped animals, especially pets.

That belief is the basis of a new campaign by a national research foundation, whose leaders want to show how animal research is benefiting dogs, cats, horses and other animals. "We're not trying to appeal to the people who support PETA," said Frankie Trull, president of the Foundation for Biomedical Research. "We're really trying to appeal to the vast majority of the public, who feel uncomfortable with the issue, even though they know prior to introducing a new procedure it has to be tested for safety and efficacy."

PETA, People for the Ethical Treatment of Animals, is an animal-rights group that has resorted, at times, to extreme tactics. Animal testing - on mice, pigs, dogs, primates - has been used for decades to test the effectiveness of medical procedures or the safety of drugs. About 15 years ago, veterinarians began using a few human treatments on animals, but most procedures remained reserved for people. In the past few years, hundreds of procedures and treatments from MRIs to chemotherapy have been adapted for animals.

One of the newest medical procedures used for animals is open-heart surgery. Dr. Theresa Fossum, a veterinarian at Texas A&M's Veterinary Medical Teaching Hospital, performed open-heart surgery on a 21/2-year-old golden retriever named Luke. Luke suffered from subaortic stenosis, a birth defect that keeps the heart from pumping blood out of the organ correctly. Eventually the heart fails. Luke wasn't expected to live past his third birthday. Fossum used a surgical technique originally developed to correct congenital heart abnormalities in children but which had never been performed successfully on a companion animal.

Fossum first bypassed the dog's heart and lungs, a typical practice during open-heart surgery for people. The 92-minute operation involved entering the right heart ventricle and moving into the left ventricle to remove an obstruction. Fossum said Luke is fully recovered and living a relatively normal dog life. "The surgeries are very much the same (as those for people). We use the same technique for providing a sterile operating field. The instruments are the same. We use gas anesthesia," Fossum said. Fossum is to perform the same surgery today on a 6-month-old Labrador. The procedure costs \$8,000 to \$8,500 and originally was tested on dogs. "In all honesty, I know if animal research doesn't occur, it will be detrimental to animals."

Nancy Megna, an original board member with the Laboratory Primate Advocacy Group, said while the group would like all animal testing stopped, activists understand the position of doctors and others who think the practice is necessary. For that reason, her group has not called for a ban on animal research (except for primates). Instead, they want better conditions for the animals and an end to repetitive and outdated research. "A lot of these things are more extreme than they need to be. ... No one has spent time shifting focus," Megna said. One researcher received a "grant to test alcoholism in pregnant Rhesus monkeys. This was in the late '90s. I think we know about this." She said another recent grant was given to scientists testing the effects of lead paint on baby monkeys. "I think since the 1970s we've known about lead paint and its toxic levels."

Dr. Jill Brunker, an internal medicine resident at Oklahoma State University's veterinary teaching hospital, said she doesn't mind animal research as long as it is done correctly and humanely. "The more information we have about general physiology, the better we're able to come up with new drugs and new therapies. It's going to help humans as well as animals," Brunker said. Brunker said the veterinary school uses many techniques and treatments that were once tested on animals and first used on people.

The techniques include chemotherapy, laser surgery, ultrasounds, CT (computed tomography) scans, MRIs (magnetic resonance images) and using cameras to see inside of animals instead of opting for surgery. Many of the drugs used for veterinary medicine were first used on people. Brunker said in the next few years, veterinary medicine will include the use of the 4D ultrasound on animals as well as continued research on DNA and cloning. "I think we can only benefit by using those treatments derived from human medicine, and hopefully veterinary medicine will go in that direction," Brunker said. "Hopefully veterinarian medicine will be improved by that."

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