

“Consider the most commonly used species in toxicology research, the rat. Rats have no gall bladder. They excrete bile very effectively.... Drugs bind to rat plasma much less efficiently. Rats always breathe through the nose ... so rats get a different mix of substances entering their systems.... Their gut flora are in a different location. Their skin has different absorptive properties than that of humans. Any one of these discrepancies will alter drug metabolism. And these are only differences [from humans] on a gross level.”

L. Fain

– Ray Greek, MD, and  
Jean Swingle Greek, DVM,  
*Sacred Cows and Golden Geese*

“Convulsions, tears, diarrhea and bleeding from the eyes or mouth and ‘unusual vocalizations’ are typical symptoms in the dying animals.”

– Robert Sharpe, MD,  
*Cruel Deception*, on the  
Lethal Dose 50 (LD50) toxicity test

## BAD SCIENCE BAD ETHICS

As this brochure goes to press, NEAVS, an anti-vivisection organization committed to exposing and ending ALL vivisection on ALL species, continues to work with other organizations to secure AWA coverage for rats, mice and birds.

A study described in *Science* magazine indicates that the majority of scientists who routinely review animal research protocols as part of Institutional Animal Care and Use Committees (IACUCs) also believe these animals should be covered.

The opinion of these individuals who are on the front lines of seeing what is done every day to these animals adds enormous weight to the argument that all animals ought to be included.

Yet, heavily funded lobbying efforts by those who profit from the unregulated, anything-goes use of rats in research continue to try to deny these animals any coverage at all.

### What YOU Can Do to Help

Visit the NEAVS Web site at [www.neavs.org](http://www.neavs.org) for updated information on the status of including rats, mice and birds under the AWA, and to whom to write.

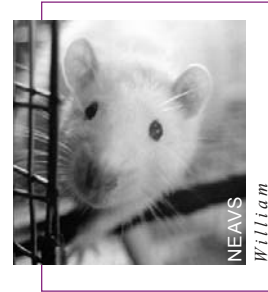
Write to the two federally funded agencies that provided a \$6.7 million dollar grant for the establishment of the Rat Resource and Research Center at the University of Missouri. Tell them that you don't want your tax dollars used to fund rat – or any other animal – research.

- **National Center for Research Resources (NCRR)**  
Dr. Judith Vaitukaitis, Deputy Director  
6705 Rockledge Drive, Suite 5140  
Bethesda, Md. 20892-7965
- **National Heart, Lung and Blood Institute (NHLBI)**  
Dr. Claude Lenfant, Director  
31 Center Drive, MSC 2480, Room 4A21  
Bethesda, Md. 20892-2480

Join NEAVS and support our ongoing campaigns. Visit our Web site at [www.neavs.org](http://www.neavs.org) for more information on becoming a supporter.

Distribute copies of this brochure. You can download a copy from our Web site at [www.neavs.org/downloads/ratbrochure.pdf](http://www.neavs.org/downloads/ratbrochure.pdf).

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NEAVS



### About NEAVS

The New England Anti-Vivisection Society (NEAVS), founded in 1895, is dedicated to ending animal experimentation. NEAVS advocates for animals in laboratories, product testing, veterinary and medical schools, and public and private classrooms.



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# When is an animal not an animal . .

## RATS AS RESEARCH “TOOLS” IN LABORATORY EXPERIMENTS

A Message to People Who Care about Animals from the  
NEW ENGLAND ANTI-VIVISECTION SOCIETY (NEAVS)

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**MILLIONS OF RATS ARE BEING USED IN PAINFUL AND USELESS EXPERIMENTS**

## Did you know that...

Since its inception in 1966, **rats have not been considered “animals”** under the Animal Welfare Act (AWA), the only U.S. federal law that provides even minimal protection for animals in laboratories?

Consequently, **millions of rats are used annually** in experiments, **without ANY guarantee of anesthesia, analgesics, adequate husbandry\*** or even a **“humane” death**.

**Though treated like “things,” rats suffer greatly from the stress and hardship of life and death in the laboratory.**

In U.S. laboratories, millions of animals suffer and die. Approximately 90-95% of these animals are rats, mice and birds – perhaps the most exploited of all research “tools.” Yet rats, mice and birds are not covered by the AWA.

**Here are just a few examples of what is going on ...**

\* “Husbandry” includes feeding, cleaning, enclosure size, and housekeeping. In approved protocols, even these minimal “protections” can be withheld if deemed “necessary” to the study.

## Behind the Laboratory Door...

“The lab had a room where technicians practiced on rats. Often I would open the lid of the boxes and see mother rats nursing and trying to protect their babies. Techs would reach into the boxes and grab one of the rats to practice, for example, intubation. Because speed was of the essence – a tech was required to intubate a certain number of rats per minute – rats were often injured. **I saw many bleeding from their mouths and squirming in pain. They were just thrown back into the box to be used again and again until they died.**”

– laboratory technician

“...[the researchers] made an incision in his neck and ... inserted a catheter in his heart. The tube was passed behind his ear to keep the rat from going after it. Now the anesthesia was stopped and the rat was turned onto his stomach. A plastic dome ... was put over him. The tube to his heart passed out a hole in the dome, and the rat was left for the anesthetic to wear off ... but his back feet and legs were taped down, because he’d try to get away. Then it was time for the heart attack.... First a paralyzing drug is shot into the catheter ... and then a drug to cause a heart attack. The injections were done quickly... but death was not quick, nor was he paralyzed completely.... He jerked many times and his head turned from side to side.... **Tears started to run down my face. I wanted to take the little guy and gently bury him. I keep seeing that poor helpless little creature trying to escape, twitching in pain, and lying there discarded like a used tissue.**”

– member of an Institutional Animal Care and Use Committee (IACUC)

**In addition, researchers themselves inadvertently tell us how callously they handle rats:**

“... [the researcher] would try to inject the rats, miss them, drop them, spend half the morning chasing the rats around the room or vice versa, flailing with a broom to get them out from behind the sink, and so on. At the end of a number of months of this, [he] examined the rats and discovered ... **the rats had peptic ulcers, greatly enlarged adrenal glands ... and shrunken immune tissues ... the tip of the iceberg of stress-related disease.**”

– Robert Sapolsky, PhD, *Why Zebras Don't Get Ulcers*



## Feeling Beings, Not Research “Tools”

Contrary to what researchers want you to believe, **rats are sensitive and experience pain, fear and stress**. They show emotions that scientists are only beginning to acknowledge, including pleasure, playfulness and joy. According to *Discover* magazine (May 2002), “... [laboratory] rats responded with playful nips and ultrasonic chirps when psychologists tickled their ribs and bellies.”

People who know rats as companion animals know that they are inquisitive, intelligent, affectionate and social. Rats in laboratories are no different, although science conveniently strips them of these qualities to try to justify their cruel and careless use and abuse. Rats destined for laboratories are bred for their sweet and docile nature, making them even more vulnerable.

## Big Business in Rat Research

Rats have historically been **completely deprived of any protections**. Through decades of AWA revisions granting minimal protection to other species, rats were exempted. Why? Because billions of rats used in research and testing generate billions of dollars for breeders and provide a never-ending supply of “cheap,” “disposable,” living organisms. The price of rats for experiments and testing ranges between five and hundreds of dollars for specially bred and “engineered” rats. Multiply this by millions of animals a year and the industry’s profit-driven motive is clear.

The breeding and sale of rodents is an expanding industry that includes, along with caging and equipment, the production of dozens of varieties of rats, including ones who are genetically altered. There is even a “rat boutique where researchers can browse for rare breeds and special genetically engineered models.” According to a spokesperson, the Rat Resource and Research Center offers a variety of inbred, hybrid and genetically modified rats including one strain whose “brain has been chemically damaged” and another engineered to become obese.

## Unsound and Invalid

The motivation behind rat research is **profit**, not shuman health and well-being. There are many reasons why the rat is an unsound model for toxicity testing and other experiments. Rat anatomy and physiology differ enormously from that of humans’, and the dissimilarities render research invalid and harmful when extrapolated to humans. For example, rats rarely vomit; do not have a gall bladder; do not have sweat glands; cannot pant; are poor regulators of body temperature; have twice the concentrating ability for urine; and, have a heart rate four times that of a human.

**Many drug studies on rats were inaccurate and dangerous when extrapolated to humans**, including Flosint, an arthritis medication, which proved fatal to humans; Zelmid, an antidepressant, which caused neurological damage in humans; and Clioquinol, an anti-diarrheal, which caused blindness and paralysis in humans – **all despite animal testing**.