

**The Abuse of Non-human Primates
in Federally Regulated Laboratories**

by

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Introduction

The use of non-human primates (rhesus monkeys, squirrel monkeys, baboons, marmosets, chimpanzees, etc.) in experimentation is an extremely controversial issue. According to 2010 USDA statistics over 125,000 non-human primates are confined within laboratories in the U.S., this is an all time high.

Additionally, information obtained from the National Institutes of Health indicate that over \$1.9 billion is spent annually funding the use of non-human primates in experimentation in the United States.

The people of the United States believe that animals used in experimentation are protected from abuse by federal regulators, such as the USDA. However, government documents and whistleblower statements paint a very different picture.

Are non-human primates protected from abuse in U.S. laboratories?

The use of all animals, including non-human primates, is regulated by the Animal Welfare Act (AWA). This law, enacted in the 1960s, now includes requirements for housing, diet, veterinary care, psychological enrichment, and experimental procedures. This law is enforced by the United States Department of Agriculture (USDA) through the Animal Care division of the Animal & Plant Health Inspection Service (APHIS).

However, questions exist regarding the effectiveness of this law. Is this law even followed? Have U.S. laboratories seriously violated this law involving primates? Do the regulations which arise from this law actually protect non-human primates from abusive practices? Some recent examples of violations are listed below. This is followed by a section that discusses legally allowable “exceptions.”

One section of the Animal Welfare Act that is specific to non-human primates is section 3.81 Environmental Enhancement to Promote Psychological Well-Being. A search of the USDA Animal Care database reveals that in the last 12 months 16 facilities violated the Environmental Enhancement requirements of the Animal Welfare Act.

Examples of Serious Primate Abuse within Registered Research Facilities

A. From USDA Inspection reports

A USDA inspection report dated 8/2/11 cites **McLean Hospital** (Boston, MA) for an incident in which a primate was found dead after only 10 minutes in an experimental chamber. The lab is cited for insufficient supervision of experimentation, as well as inadequate housing and insufficient environmental enhancement for primates.

A July 19, 2011, USDA inspection report cites the **Harvard Medical School** five times for violations including unqualified personnel, inadequate supervision of experimentation by the lab’s Institutional Animal Care & Use Committee, and inadequate housing for primates. Several of the citations were directly relevant to a February 2011 incident in which a non-human primate was given an overdose of anesthetic causing irreversible renal failure requiring euthanasia. This is just over a year after a June 9, 2010 incident at a Harvard Medical School facility in which a dead non-human primate was found in an enclosure which had just gone through a cage-washing machine.

A USDA inspection report from May of 2010 reveals an incident during which eight marmosets escaped from a cage at the **University of Massachusetts, Amherst** (UMASS). While running loose, they pulled an infant marmoset through the bars of a cage which housed another group. The infant died as a result of this incident. UMASS was cited for inadequate primary enclosures. UMASS was cited for several other AWA violations including inadequate supervision of experiments by the lab’s Institutional Animal Care & Use Committee as well as inadequate housing/facilities.

An August 3, 2011, USDA report reveals that improper animal handling at **MPI Research** (Mattawan, MI) caused severe traumatic injuries to four animals. The injuries to these animals were so severe that no treatment was possible, requiring euthanasia. USDA sources have confirmed that two of these animals were non-human primates.

In an April 27, 2011 USDA inspection report **Princeton University** is repeatedly cited for experiments that deprive monkeys of access to water. The citations include inadequate functioning by the Institutional Animal Care & Use Committee (a repeat violation), inadequate watering, and the filing of a fraudulent report with the USDA. In an unrelated incident the lab is also cited for inadequately observing a marmoset who was giving birth. Princeton was the target of a scathing USDA inspection report of June 23, 2010. In issuing 13 separate citations against Princeton, the USDA focused on the same highly invasive project which deprives primates of water and implants devices into the skull.

Princeton University has also been the target of a recent whistleblower who disclosed major Animal Welfare Act violations including primate deaths through malnutrition, deaths due to lack of veterinary care, and other primates being killed in a cagewasher. The full statements, as well as leaked photos, are contained in other sections of this report.

A May, 2011, USDA inspection report for the **University of Rochester, School of Medicine,** and Dentistry reveals citations for depriving several primates of food for extended periods. Primate #940 was starved for 4 days and primate #631 was denied food for two days. The University is also cited for filing fraudulent reports for not listing these animals as experiencing distress. In a news story University staff admitted that the food deprivation was done intentionally and was not part of an experimental protocol.

A June, 2011, USDA inspection report cites **Vanderbilt** repeatedly for the performance of illegal, unapproved and highly invasive brain surgeries on at least one primate by unapproved and unqualified surgeon(s). The USDA report cites Vanderbilt repeatedly for incidents surrounding experimentation on primate 4414. An unapproved, and botched, surgical procedure was attempted by an unapproved surgeon in September of 2010. Further illegal surgeries and other illegal procedures were performed on the same primate in December of 2010 and April of 2011.

A USDA report dated 5/31/11 cited the **University of Louisiana, Lafayette,** for: “. . . deaths of 3 Rhesus monkeys which became trapped in a chute in one of the outdoor breeding colonies. The remains were autolyzed therefore they had been trapped for some time and not properly monitored.”

B. From USDA Official Warnings/Fines

In June of 2011 the **Lovelace Respiratory Research Institute** of Albuquerque (NM) was fined \$21,750 by the USDA for several violations including inadequate housing because an infant cynomolgous monkey had escaped, and another primate became trapped and suffocated.

In March of 2011 the **University of Washington, Seattle**, paid a \$10,893 fine for violations which involved the deaths of three non-human primates, one from malnutrition, and two from infection of cranial implants.

An Official Warning made public by the USDA in July of 2011 revealed that the **Weill Medical College of Cornell University** killed a non-human primate through lung hyperinflation when a breathing tube was kept clamped during a surgical procedure.

In September of 2010 **Northwestern University** received an Official Warning from the USDA for a thermal injury (burn) to a non-human primate during a tail amputation procedure.

In July of 2010 **Vanderbilt University** was fined \$8156 for multiple violations of the AWA, including an incident in which an infant galago monkey was found dead in bedding that had been run through a washing machine.

A January, 2011, Official Warning cited the **Southern Research Institute** for the death of a primate whose head had become caught in a cage.

Oregon Health Science University currently has two open Animal Care Enforcement cases. Case OR09023 is relevant to a primate escape, while case 10002 is of undetermined nature.

C. Exclusion of Primates from AWA Standards

Basic standards for care and treatment are a major part of the Animal Welfare Act (AWA). These standards include frequency of feeding, watering, cage cleaning, social housing, frequency of surgical procedures, etc. However, the AWA also allows animals to be exempted from these standards for 'scientific' reasons. And so, animals such as primates can be exempted from requirements for feeding, watering, cage cleaning, social housing, etc. Essentially they can be placed outside the coverage of the law in these areas. Is this done very often? Does it involve a substantial number of animals?

While it would be difficult to answer this question fully, due to the number of laboratories that utilize primates, it is possible to get a snapshot of this situation by examining a relatively small number of the larger primate facilities. The facilities examined are: Emory University, Harvard Medical School, University of Louisiana (Lafayette), the National Institutes of Health, Oregon Health Sciences University, the University of Wisconsin (Madison), and Wake Forest University. Individually, these labs run the spectrum on these issues, but one example should suffice. Emory University exempted 1835 primates from the standards of the AWA. 4 primates were used in painful experiments without anesthesia. 381 primates experienced restraint (i.e. confinement in a primate restraint chair). 1356 primates were singly housed, exempting them from having social contact with members of their own species. 94 primates had restricted access to either food or water. Emory used a total of 2369 primates in experimentation. This means that 77% of the primates used in experimentation at Emory were exempted from the standards of the Animal Welfare Act.

Collectively, these labs experimented on 15,324 primates or 21.5% of the national total, or slightly over 1 out of every 5. These labs exempted 6273 animals (as listed in the exceptions to standard care section of their annual reports) to at least one of the standards contained in the AWA. This could mean that these animals were prevented from having access to food/water for extended periods, or they may have been exempted from socialization, or housing standards, cage cleaning standards, etc. This accounts for 41% of the primates used at these facilities. If this statistic is generalized to the national total then 29,240 primates were exempted from at least one regulation that is part of the Animal Welfare Act. Additionally, USDA national statistics for 2010 indicate that 1395 non-human primates or 2% were used in painful/stressful experiments without benefit of anesthesia. In total, then, an estimated 43% of all non-human primates used in experimentation are legally excluded from at least some level of protection under the Animal Welfare Act.

Who decides on these exceptions? These practices are approved by the Institutional Animal Care and Use Committees which are mandated by the AWA and charged with the responsibility of approving all animal experimentation within a facility. These committees are routinely comprised almost entirely of staff that is employed at the facility at which the experimentation will be conducted. These committees are required to have only one member who represents the views of the community. In other words, the committees empowered to approve protocols which exempt animals from Animal Welfare Act regulations are comprised of employees of the institutions that receive funding to perform the experiments. These individuals have a vested interest in approving experiments because that keeps the federal funding rolling into their employer.

Whistleblower Statements

Another source of information relevant to the use of non-human primates within laboratories is contained in statements made by present/former laboratory animal care staff. Due to potential repercussions of both professional and legal nature, the identities of insiders must be protected. These courageous individuals provide an unprecedented look inside the labs, with direct observation of the daily lives of non-human primates in laboratories. As such, these statements will be identified only with the names of the laboratories in which the whistleblowers work/worked so that their identities can be protected.

The Oregon Health Sciences University, subject of the statement by the first whistleblower, held over 4600 non-human primates during the 2010 reporting year. 3432 primates were actually used in experimentation and 1187 were held for breeding or later use. This laboratory is also depicted photographically later in this report.

The New Iberia Research Center of the University of Louisiana, Lafayette (ULL), is the focus of the statement by the second whistleblower and holds approximately 7500 non-human primates, (1773 used in experimentation and 5716 held for later use or breeding). The New Iberia lab is mentioned in several other sections of this report.

Princeton University held 24 primates during 2010 and is the subject of the statement of the third whistleblower.

These present/former laboratory staff persons have uniformly stated that they are not opposed to the use of animals in experimentation. However, they have been uniformly horrified by what they observed within these laboratories. In many instances these statements discuss situations which may have involved violations of the AWA. However, the information contained in these statements also sheds light on the daily lives of non-human primates within laboratories. They all speak of barren enclosures, highly invasive procedures, and psychological disturbances. This is a disturbing look into three well-known research facilities.

Oregon Health Sciences University/Oregon Primate Research Center

The Primate Center at the Oregon Health Sciences University is made up largely of white concrete rooms, steel cages, and only a shelf of barred steel for the primates to sleep on. Some rooms had lots of macaques, two cages high and on both sides of the room, some less. They get monkey biscuits every day, their main diet, and a few veggies.

Psychological enrichment consisted of a piece of white plastic/acrylic, maybe two inches by five, with holes drilled in it to stuff raisins into, hanging on the outside of the cage. Or an apparatus similar to a bird feeder, tall and narrow, that we put granola into. Only macaques that were self-injuring or pulling out their hair had these. And, I believe, there was only one television that I ever saw for the whole section of the lab I worked in. It got moved to different rooms, of which there were many, but not very often. It took either four or five of us to hose the cages, and yes, the monkeys got wet. It took awhile to gain skill in that area and the hose had a lot of pressure. And there were a lot of feces under the cages when we cleaned. That done, many had been taught to jump into a small metal cage and to stick their arm out for blood draws and for a treat.

There were studies on aging, cocaine, and aids in a separate unit, and tests regarding genetic altering. I was cautioned too not touch the syringe even.

I remember that one rather large male macaque was made to walk down the hall, with a ring around his neck and steel bars extending to walk him at a safe distance. Then he was walked into a room and strapped into a chair and what looked like tinfoil wrapped around his penis with wires going to it and a shock delivered to cause him to ejaculate almost instantaneously. Then he was taken back to his steel cage, he seemed to almost fill it, in a white concrete room.

Other than facing each other across the room, their lives were isolated, except for a few rare couples. One macaque was in a room alone, in the standard metal cage. Some monkeys had vests with a tube which ran out of the back.

I was once allowed to watch a necropsy. No medications, the monkey was made to bleed, then cut open and organs removed as he bled to death. Was told it was necessary for accurate studies.

At some point, it became my duty to hang tags indicating surgery or euthanasia. Each had a different color, and I believe the monkeys knew the difference. I know what anthropomorphism is, and as a caregiver, I knew something about objective observation. I kept seeing the same behaviors. The monkeys with the euthanasia tags crouched further back in the cage and hardly screeched. I saw cowering in the corner, loud vocalizing, and grimacing when I hung the tags. They were colored differently for surgery or necropsy, and the tags for their termination were recognized. The macaques who were going for surgery continued to scream and fuss. They knew they were coming back.

New Iberia Research Center of the University of Louisiana, Lafayette

These are things that I remember, that have stuck with me, saddened me.

Jackets

There was a study that required the monkeys, (rhesus and cyno's), to wear white net like jackets. The jackets zipped in the back. This was to prevent the animal from touching the spot on the back where they received an injection. The injection was given subcutaneously. It made the area where the injection was given become inflamed and rise up a bit. The animals were sedated for this of course. The animals would start to wake up from the sedation and try to remove the jacket. Still being a bit sedated the animals would end up getting the jacket stuck on the bottom part of their mouth, sometimes cutting their gums, because they would raise their head up trying to remove the jacket from off their mouth. At this point the animals are too awake for us to assist them.

Year long study

In the beginning this study involved 40 young rhesus monkeys. In was in an area called "Shiv." We had to wear protective suits and respirators. The animals were sedated every day for a year. They were given 2 or 3 injections a DAY. Some injections were subcutaneous, some intravenous, either in the leg or the arm. The monkeys were given a subcutaneous injection in the back, EVERYDAY. The animals become addicted to the ketamine (anesthetic). So they were given more and more of the drug. We got pretty quick with the routine of the study from doing it everyday. So if the animal wasn't completely sedated, the injections were given quickly while techs held the animal down. Some animals didn't survive the study. Some animals were removed.

Chairs

Animals are sedated and metal, sometimes plastic, collars are fitted around their neck. They are tightened with a power tool. The animals are "chair trained." The cage door is lifted a bit and two techs insert "pole catchers" into the cage. The object is for the pole catcher to hook onto the collar. The cage door is then completely lifted and the animal is then walked out of the cage, by force of course. I have seen some animals that really are trained, but the training did not come easily. The majority of the animals fight and try to pull away, once they are caught. The techs must then use force to "train" the animal to walk to the chair and sit down. Once they are seated, the collar is screwed into the chair, preventing the animals from moving their heads. The arms are put through holes in the chair so they can still move but cannot grab the techs. They cannot flip, turn around, or lie down. There were times when monkeys (rhesus and cynomolgus) were left in the chairs for hours! The animals have no access to water during this time in the chair. If they have food, it was given by a tech. But most studies require "NPO," nothing permitted orally, during the chair study. The animals are chaired and put back in their cage many times throughout the day.

I have seen animals with diarrhea for days upon days, but because of the study are simply given half of a banana and a Pepto-Bismol, and the Pepto-Bismol never helps. The techs from the veterinary department would sometimes leave the Pepto-Bismol on the door of the cage. The animal would reach for it and most times the Pepto-Bismol would fall in their feces to the tray below.

I remember one chair study that I wasn't present at, but heard about. The intravenous injection was mixed incorrectly, even though it had been sent by the client. The monkey in the chair died instantly.

The animals waking up from sedation affected me a lot. I was made to "recover" most times since I was new. The animals would wake up and stumble around their cage, hitting their head and mouth on the walls and on the swing. I had one small African Green monkey stop breathing entirely. Thankfully, the vet was right outside. He was able to save him. But what if he hadn't been right outside? I was in a protective area wearing tyvex so I couldn't just grab the animal and run for help. In protective areas animals cannot leave until it has been proven that they are not infected with an airborne disease. Also, I had about 20 something other animals that were recovering at the same time and needed constant observation. And I had no phone. What would I have done? This issue has been brought up multiple times. After the vet revived him, the African Green monkey, I held him as I walked around the room, until he woke up from sedation. I'll never forget that little guy. I was sometimes responsible to "recover" over 30 animals at once. How is that possible??

Max Bleeds

We did these around the time when I started at ULL. The animal is weighed and a calculation is done. The maximum amount of blood possible is taken based on the animals' weight. Can you imagine already being sedated AND losing a large quantity of blood at the same time? There were times when the calculations were done wrong.

Anonymous Statement about Animal Experimentation at Princeton University

During my career at Princeton I observed many cases of animal abuse.

On or about June of 2005, marmosets were not transferred during a routine cage change. A Princeton employee named Philip (I do not remember his last name) was responsible for change cages. This cage was taken to cage wash where another employee, Sylvanus Ashamole, put the cage into cage wash -- where temperatures reach 185 degrees. The marmosets were scalded to death. I do not know if the Princeton IACUC was informed or not. Vicki Eng was the attending veterinarian at the time. The marmosets were part of a study being conducted by Professor Gould.

About this same time the marmosets' diet was changed by either the vet or other Princeton staff. As a result of this change, 2 or 3 marmosets eventually died of malnutrition due to lack of monitoring, which was common knowledge. This was all kept quiet. I do not believe that anyone was informed about this incident.

On or about Oct 2004 one of the marmosets was noticed to be afflicted with "wasting" disease on a Sunday. Dr. Garret Field, temporary supervisor/temp veterinarian, was notified by the animal caretaker. It was not until the next Sunday that the same caretaker was again assigned to marmosets. Immediately he noticed the animal curled up in a ball in a corner -- losing fur, unable to eat or drink because of the disease. The log book was checked to see if vet had even observed the animal. The animal had not received adequate care. The next morning, Monday, the same caretaker went to the veterinarian and informed the vet of the marmoset's condition. The caretaker told the veterinarian to at least euthanize the poor animal to stop its suffering. The caretaker and the veterinarian went to room 1e24 where the marmoset was housed. The animal was still curled up in the corner of the cage -- dead. The vet had not examined the marmoset for 7 days despite the serious and eventually fatal illness of this animal. In the first half of 2006, Professor Gould terminated all of her marmoset studies.

From 2003 to the summer of 2006 Liz Gould was the only researcher using marmosets. In January of 2010, 10 marmosets (5 pairs) were brought to Princeton for Asif Ghazanfar. The marmoset enclosures used by Ghazanfar were old and at this point only one staff person had actual experience with marmosets but this person only cared for them occasionally. This meant that much of the staff was not experienced in marmoset care. Students fed and watered Gould's marmosets on weekends and animal care staff cared for them during the week. Eventually animal care staff provided weekend coverage as well, because students assigned for this would not always come in to feed them.

At Princeton all the monkeys had names: Bush, Calvin, Hobbes, McCartney, Lennon, Gobi, Poncho, and Franco just to name a few. At one time all monkeys were housed in "quad" cages which are about 84 inches high, 44 inches wide, and 60 inches deep. Four monkeys were in a quad. Each one had a living area 42 x 22 x 60 inches. To my knowledge, this was their only home. Once they arrived at Princeton, they never again saw daylight. In 2009 some newer cages were ordered, but not enough to accommodate all the primates at Princeton.

About 4 years ago the partition between 2 of the monkeys was left unsecured. As a result one was so severely wounded by the other as to be almost totally emasculated. This primate was euthanized shortly after this injury. I believe their names were Bauer and Sir-Mix-a-Lot.

Between 3 and 4 years ago Bush, a monkey in Professor Mike Graziano's study was on a restricted water schedule which meant that the researcher was responsible for providing all water to the monkeys, unless animal care staff was instructed otherwise. On a 4-day Thanksgiving week end the researcher did not notify animal care that they were to give Bush water. It was Saturday before a staff member saw that Bush was not eating and saw Bush had no water. There was another incident where a monkey was totally without water for 2 days because a cage change was performed on a Friday, but the water source was not connected until Monday, which again shows Princeton's total failure to oversee animals.

Professor Ghazanfar had a monkey named Poncho. He was the Houdini of monkeys and was constantly escaping. Eventually Ghazanfar he gave Poncho to Professor Graziano where Poncho continued his escapes. It was reported to me by other animal care staff that at one point Poncho again escaped and was subdued by being clubbed with a hockey stick by a researcher and a student. Poncho was euthanized shortly after this incident.

Four years ago Hugo, a member of care staff, went into room oe14 where Poncho was housed. Poncho was loose and attacked Hugo. If he hadn't been wearing a full shield he would have lost his eyes.

Monkeys were usually chaired and transported to the MRI machine at night to avoid anyone seeing them chaired.

The most brazen professor is Ghazanfar. He constantly refuses to cooperate with animal care staff, and also refuses to do things in compliance with regulations, or to cooperate with required inspections.

Regarding all of all the above incidents, I am not aware of any IACUC intervention. I am also not aware of Princeton reporting these incidents to any regulatory agencies.

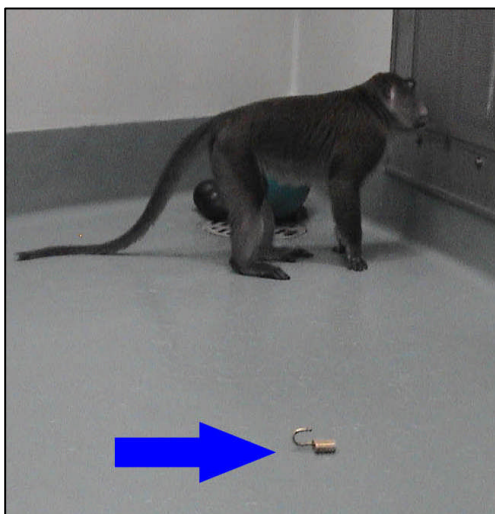
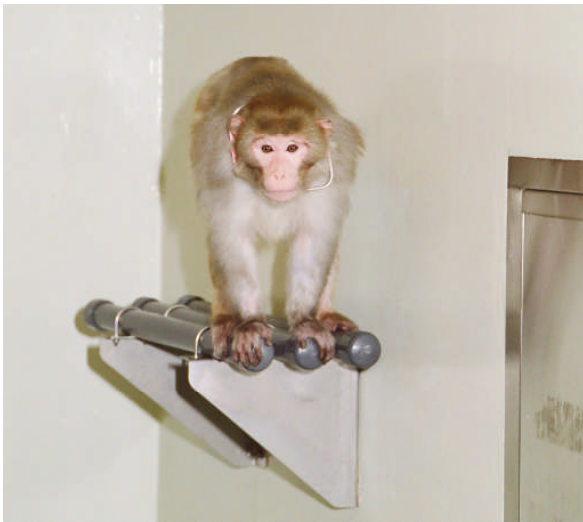
When an inspection was due we were ordered to go and check log books, etc. and fill in or correct anything as needed, after the fact. AND because a member of our staff had an outside connection it was always known EXACTLY what day and time the FDA and/or USDA would be at Princeton for inspections.

Photos

Photos from the Oregon Primate Research Center were obtained legally through the public records act process. They illustrate many things. However, they clearly support the statement made by the whistleblower, above. This person discussed the enclosures at this facility as though they were very barren, composed of concrete and steel bars. Clearly this is accurate. Clearly, this is not the kind of place that non-human primates should call home.

Photos provided to us by a whistleblower from within Princeton University reveal a picture of laboratory life that is no less disturbing. The cages for the primates are no less barren, only composed of steel instead of concrete. They are still often individually housed, denying them contact with members of their own species. These cages are more reminiscent of storage boxes than homes.

Oregon Health Sciences University Photos



Princeton University Photos



Summary

The data discussed in this report clearly demonstrates that non-human primates are not adequately protected from abuse within U.S. laboratories. Within approximately one year 10 U.S. labs (University of Washington (Seattle), McLean Hospital, Harvard Medical School, University of Massachusetts, MPI Research, Vanderbilt University, University of Louisiana, Lovelace Respiratory Research Institute, Cornell University, and the Southern Research Institute) were either fined, warned or cited for incidents that involved violations of the Animal Welfare Act which killed a total of 16 non-human primates. Others were cited for basic violations such as depriving primates of either food or water. These abuses were considered to be violations of the Animal Welfare Act.

Many other primates suffer from abusive situations that are allowed by the AWA due to the practice of allowing Institutional Animal Care & Use Committees (IACUC) to self-approve "exceptions to standard care." The practice of allowing these exceptions promotes practices such as depriving primates of contact with members of their own species, depriving primates of water/food for extended periods, use of severe confinement techniques, allowing cages to go for weeks without cleaning, or even use of anesthesia in potentially painful procedures. As much 43% of all primates used in experimentation are exempted from at least one part of the requirements of the Animal Welfare Act.

The bottom line is that even in facilities that follow the law, as many as 43% of the primates used in experimentation are exempted from real protection under the law. As long as an animal care committee will approve a procedure anything goes. And IACUCs are typically composed almost entirely of people employed by the facilities who profit from performing primate experimentation.

Whistleblowers have provided insight into several well-known U.S. labs. They have often described previously unknown AWA violations. Even when the conditions described are not illegal, they are clearly not supportive of natural behaviors for non-human primates.

These statements are supported by photographs. Enclosures vary from concrete rooms with steel bars for perches to small stainless steel box like cages. In the laboratory setting primates are often deprived of social interaction, and see nothing that resembles their natural environment (trees, sunlight, fresh air, etc.). The meager attempts at psychological enrichment are momentary distractions at best. No species of non-human primate is evolutionarily suited to living in steel cages with only a few square feet of space or concrete rooms with steel perches.

With the annual cost for primate experimentation estimated to be roughly \$1.9 billion in federal funding, we must begin to wonder what we are getting for this money. If the labs who receive this money are incapable of following even the most basic husbandry and care requirements, or simply self-exempt animals from regulations, why should we believe that these same labs are capable of science? If malnutrition, bacterial infections, cage washers, water deprivation, suffocation, traumatic injuries from mishandling, etc. are allowed to kill primates due to negligence, why should we believe that research protocols are followed? Why should we accept scientific conclusions from labs who negligently allow starvation to kill animals, or who lose track of primates, to find them only when their rotting corpses have begun to smell.

At a time when we cannot provide adequate healthcare to millions, why are we providing \$1.9 billion in federal funding to labs that can't follow basic laws? Isn't it time to redirect this mountain of money into clinical research which will provide knowledge that is directly relevant to humans?