# Cat Study Halted Amid Protests

*A study at Cornell University of barbiturate addiction in cats, which had been targeted by animal rightists, has been halted; the university is now facing criticism from researchers and federal officials*

A DECISION by Cornell University to terminate a research project that had been the target of animal rights protests has sent tremors through the biomedical research community. It has also prompted a blistering letter to Cornell officials from Charles Schuster, the director of the National Institute on Drug Abuse (NIDA), which had funded the project for 14 years. Terminating the research, said Schuster, "will set a disastrous precedent in our battle against those who would eliminate the use of animals in research."

Cornell officials say they had no option but to close down the project, which involved the use of cats to study the physiological processes underlying addiction to barbiturates and other central nervous system depressants. The decision, they insist, should in no way be interpreted as capitulation to the demands of the protesters, or an indication that Cornell is backing off from studies using animals.

University officials say they were boxed in by an unfortunate letter they wrote last year when the protests to save "the Cornell cats" were at their height. The letter stated that the project was winding down and that future studies would not use cats. Although university officials say they did not mean the letter to imply that the project had ended, most people who received it—including several members of Congress—interpreted it that way.

After the letter had gone out, Cornell applied for renewal of the grant to continue the studies. The grant was awarded in July, after receiving a very high priority rating in NIDA's peer review process. Those who had received Cornell's letter promptly accused the university of lying. Thus, "I felt, and the university felt, we would have no credibility left" if the research were continued, says Tom Shires, the current dean of the Cornell Medical College in New York City. On 22 September, the researcher who headed the project, Michiko Okamoto, a professor of pharmacology, informed NIDA that she could not accept the grant.

Whatever the explanation, a project deemed highly meritorious by NIDA and by outside review panels has been shut down at least indirectly because of protests by animal rights activists. What makes this episode particularly worrisome to researchers is that, unlike most other cases when animal studies have been halted, the protesters have not charged that animal care rules have been violated. Rather, they waged a highly effective campaign claiming that information derived from the experiments does not justify the use of animals, and they have vowed to use the same tactics against other projects they dislike. Indeed, the organization that fought the Cornell project, Trans-Species Unlimited, has now turned its attention to a project at New York University that uses monkeys to investigate the effects of inhaling solvent fumes.

The following account of the events that led to termination of the Cornell project is based on a sheaf of documents obtained under the Freedom of Information Act and interviews with university and federal officials. Okamoto has been traveling in Japan and could not be reached for comment.

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The project began in 1973. In the early days, large doses of barbiturates were administered and abruptly withdrawn, but later studies used smaller doses that produced less severe withdrawal symptoms. Precise doses were administered through surgically inserted stomach tubes, and brain functions were monitored through implanted electrodes.

Over the years, Okamoto built up a well-characterized model of barbiturate dependency that demonstrated, among other things, that chronic administration of small doses can produce as strong a dependence as large doses given over a short period; that drug tolerance is determined by two distinct physiological processes; and that the severity of withdrawal depends on the rate at which a drug is eliminated from the body, rather than on the potency of a particular drug. The project has been given high ratings from peer-review committees at NIDA several times over the past 14 years.

The work was targeted by Trans-Species Unlimited early last year. According to George Cave, the organization's president, it was chosen very carefully. Trans-Species looked for a project at a respected institution in a large city where the group had a strong organization. "Our tactic," says Cave, "was to deliberately confront a major animal research project head on, with no mention of laboratory conditions, in order to demonstrate that the research was unjustifiable on scientific, financial, and ethical grounds." A computer search of projects in the New York City area turned up Okamoto's. It caught the organization's attention in part because of its use of cats.

Cave asked four scientists—three veterinarians and a clinical psychologist—to critique research papers produced over the years by Okamoto, and he drew up a bill of particulars against the project. He argued that the cat is a poor model for studying barbiturate dependence and that the research had no relevance for treating addiction in humans.

Trans-Species organized a demonstration outside Cornell Medical College on 27 April last year, which was attended by several hundred protesters, and the group picketed the college for 4 months after that. In addition, the organization conducted a national campaign to draw attention to the project, including distribution of pamphlets with pictures of cats with electrodes implanted in their heads.

The campaign was highly effective. According to one NIDA official, some 10,000 postcards and letters poured into the institute and inquiries were received from 75 to 80 congressional offices. Cornell officials were similarly deluged, and Okamoto herself received numerous telephone calls at home and in her lab. The scientific community mostly stood on the sidelines. Cornell officials say they did not receive a single letter of support for Okamoto.

A committee chaired by Keith Killam, professor of pharmacology at the University of California at Davis, was, however, put together under the auspices of the American Society of Experimental Therapeutics, the

American College of Neuropsychopharmacology, and the Committee on Problems of Drug Dependence, to review Okamoto's published work. The committee has not yet finished its assessment, but Killam calls her work "impeccable," and "a shining, crystal example of how to do science."

In the meantime, the university mounted a response. In August 1987, a letter was drafted by a committee consisting of officials from the medical college and from the main campus in Ithaca, and it was sent out over the signature of Gregory Siskind, associate dean for sponsored programs at the medical college. It defended Okamoto's work, but stated: "The research . . . that required the use of the cat model has essentially been completed. New and important information has been obtained. Some has already been published. The remainder will soon be published in appropriate scientific journals. The research on drug addiction that will be pursued in the future by this laboratory requires the development and use of new methods and experimental systems that do not involve cats." Colleagues say Okamoto did not see the letter before it went out.

The protesters claimed victory and several congressional offices, including Senator Daniel Patrick Moynihan (D–NY), sent letters to their constituents saying that the research had ended. Two months later, however, Okamoto applied for renewal of her grant. The protocol was reviewed and approved by Cornell's Institutional Animal Care and Use Committee, and the application was cosigned by Siskind.

Okamoto requested funding to develop an experimental model using rats instead of cats. But she also proposed to continue cat studies, investigating the effect of barbiturates on sleep cycles, using doses so low that no overt signs of withdrawal are produced.

A peer-review committee at NIDA approved the cat studies with a very good priority rating of 124, according to one source. However, it concluded that the proposed development of the rat model was not so well thought out and recommended that it not be funded. The decision was approved in July by NIDA's advisory council.

When the protesters heard that the cat studies had been funded for another 3 years, they raised hell. NIDA and Cornell got another spate of congressional queries. At that point, says Siskind, "it became an issue of institutional credibility, not an issue of animal rights." Siskind and Shires—who became dean in October 1987, after the original Cornell letter went out—met with Okamoto, and it was agreed that the grant would be declined. According to Shires, Cornell will support Okamoto from university funds at the same level as the NIDA grant, while she develops a new program.

The central question in all this is why did Cornell indicate in its letter that cats would not be used in the future? According to Siskind, that was not the intent, "but it is easy to see that it could be misinterpreted that way." He says "we thought we were leaving the door open if she wanted to do some more of the [cat] studies." Shires likens the letter to "a horse built by a committee that came out like a camel."

Because the cat research described in the renewal proposal differed from the earlier studies, and because it did provide for development of an alternative model, "we didn't think [the proposal] was inconsistent with anything we had said," Siskind says.

NIDA is not at all happy. In a letter to Siskind dated 28 October, which was copied to Shires, Cornell president Frank Rhodes, and Austin Kiplinger, chairman of the university's board of trustees, Schuster said, "I am disturbed that the productivity of public funds that we have invested in this project has been compromised." Pointing out that NIDA funds more than $1-million worth of research at Cornell, Schuster warned, "It is my responsibility to ensure that other research projects formally sponsored by Cornell and funded by NIDA will not be terminated for non-scientific reasons."

In a letter to Representative Bill Green (R–NY), Frederick Goodwin, head of the Alcohol, Drug Abuse, and Mental Health Administration, NIDA's parent agency, said "we have learned from hard experience that the chances for effective drug abuse treatment improve with the extent of our knowledge about the underlying biological processes. In the light of this, it is particularly unfortunate that Dr. Okamoto's research will not be continuing." ■ COLIN NORMAN

# Science After the Election

The transition from the Reagan to the Bush Administration got under way the day after the election, when President-elect George Bush named James A. Baker III as his choice for Secretary of State. It was the first of many similar announcements expected over the next 2 months, as Bush prepares what he says will be a sweeping change in the Administration's top political appointees. The transition period will also see an array of outside groups offering advice to the next president (see accompanying box).

Just how far Bush will reach into the subcabinet ranks in making personnel changes is not yet clear. But it should be noted that at least two posts that have direct responsibility for basic research programs—the directorships of the National Science Foundation and the National Institutes of Health—have traditionally not changed hands during a change of Administration.

Erich Bloch, the current director of NSF, pointed out to reporters last month that he has a 6-year term of office that extends until 1990, and he said he has no intention of changing jobs in the "foreseeable future." As for NIH, although the director's term of office is open-ended and he serves at the discretion of the President, the only time the incumbent was removed immediately after an election was in 1974, when Robert Marston was fired in the housecleaning that took place between the first and second terms of President Richard Nixon. That episode prompted a loud outcry from the scientific community.

One post whose status will change, if Bush lives up to a preelection promise, is that of the President's science adviser. In a speech delivered on 25 October, Bush promised to elevate the job from the lowly position to which it has sunk in the past several years to the rank of Assistant to the President. He also pledged to make his science adviser a "an active member of the Economic Policy Council and our national security planning process," and to appoint a Council of Science and Technology Advisers (*Science*, 4 November, p. 665).

At the other end of Pennsylvania Avenue, there will be some changes next year in the Senate lineup that will affect committees with jurisdiction over science and technology. The major changes will be in the Senate Appropriations Committee. The chairman, John Stennis (D–MS), did not seek reelection, neither did William Proxmire (D–WI), chairman of the subcommittee that writes the budgets for NSF and the National Aeronautics and Space Administration (NASA), and Lawton Chiles (D–FL), chairman of the subcommittee that writes NIH's budget. In addition, Senator Lowell Weicker (R–CT), the ranking Republican on Chiles's subcommittee and a longtime supporter of NIH, narrowly lost a bid for a fourth term. Because most of the contenders for the Appropriations Committee chairmanship are also competing for the job of Senate Majority Leader, the lineup is unlikley to be settled until after Congress returns in January.

Over on the House side, the only major change with relevance to science and technology is expected to be in the chairmanship of the appropriations subcommittee that writes the budgets for NSF and NASA. Edward Boland (D–MA), who has served in the House for the past 36 years and chaired