that materials used in cages must be "substantially impervious to moisture." Thus, if a piece of wood is a fixture in a cage it must be coated with polyurethane, which prevents chewing and scent marking. Metal fixtures may cause tooth damage. "Sanitation and psychological well-being are at some point going to butt heads," said Izard. "Life is not sanitary."

"If APHIS had been properly funded in the first half of the decade the last half wouldn't be in such turmoil," said Tom Wolfle of the National Research Council's Institute for Laboratory Animal Resources. APHIS's research animal inspection functions are being upgraded in a new Regulatory Enforcement and Animal Care Administration reporting directly to APHIS director James Glosser. APHIS, however, is still

struggling with a budget (which the Administration has repeatedly tried to zero out) of \$6.2 million for fiscal 1988. This covers 6732 site visits a year, including inspection of about 500 primate facilities.

Primate researchers may be forgiven if they feel they are in a race with time, money, and animal activists. Franklin Loew of Tufts University School of Veterinary Medicine complained that "costs in this new research environment have fallen on the backs of animal users." He proposed that the National Institutes of Health and the National Science Foundation devise an institutional block-grant program for annual animal care grants, which would be based on past expenditures at the institutions.

As for animal activism, it "is at its highest level yet," said Dale Schwindaman from APHIS. Loew pointed out that as the population has become increasingly urbanized, "human-animal interactions have become increasingly romanticized." Last year, polls showed that almost 15% of the population disapproves of all animal research.

Furthermore, according to Steven Carroll of the Incurably Ill for Animal Research, there is no area where public "misconceptions are greater than that concerning the use of primates." People think they are common research models and are being stolen from the wild, whereas they make up fewer than 1% of research animals and have not been imported since 1976.

Speakers emphasized, as they do at every conference about animals in research, that scientists are little match for the activists when it comes to money and emotional energy. So they must try harder to educate the public and come up with better scientific rationales for how animals should be treated. CONSTANCE HOLDEN



Open Season on USDA

The opportunity for confrontations between animal rights activists and the biomedical community will increase if a bill pending before Congress becomes law. Representative Charles Rose (D-NC) (left) has introduced legislation, H.R. 1770, that would give any interested person or group legal standing to sue the U.S. Department of Agriculture (USDA) as a way of compelling it to enforce the

> provisions of the Animal Welfare Act. This approach of using citizens as "private attorneys general" came in for strong opposition at a recent congressional hearing. Organizations such as the National Association for Biomedical Research (NABR) and the American Physiological Association fear that, if the bill passes, the flood of lawsuits could halt the use of animals in medical research.

> The Animal Welfare Act, originally passed in 1966, regulates the care and handling of animals that are used in research, by dealers, and in exhibitions. USDA's Animal and Plant Health Inspection Service (APHIS) is responsible for administering and enforcing the Act. The Act governs many aspects of animal care including the kinds of records that are kept on animals, the sizes of cages and their cleanliness, the amount of exercise that the animal gets, and the care that is taken

during experiments to avoid unnecessary pain to the animal. Violations can result in loss or suspension of license (for animal dealers), civil fines, or even criminal prosecution. James W. Glosser, administrator of APHIS, reported that there were 16,310 inspections held last year; 351 reports of violations were filed, 145 cases were referred to the Office of the General Counsel as the beginning of legal proceedings, and 180 violators were sent official notices of warning.

However, the USDA is being accused of either not doing anything in the presence of clear violations or not acting quickly enough. "Serious violations that cause unnecessary pain, suffering, and death for animals have occurred at major universities and other research facilities across the country," Rose told a judiciary subcommittee of the House.

There is precedent for laws that give ordinary citizens standing to sue- environmental laws including the Clean Air Act among them. However, organizations opposing passage of this bill believe that the earlier laws are significantly more restrictive than H.R. 1770. NABR presented testimony that the environmental statutes do not give "blanket authority to any citizen to sue" but instead require citizens to demonstrate that they are being directly affected by an alleged violation.

Another difference cited is that citizen standing in environmental statutes has been limited to nondiscretionary violations, such as being in excess of numerical emission standards for pollutants. Opponents contend that H.R. 1770 could place the federal courts in the position of deciding such nonquantifiable issues as whether conditions were available to promote the psychological well-being of primates (an area where there is still considerable uncertainty among scientists) or whether alternative, less painful experimental procedures could have been used by the researchers.

The bill also brings into question the discretionary powers of the USDA itself. The U.S. Department of Justice cites this as one reason for its opposition to H.R. 1770. "Agency decisions reflecting an exercise of the discretion necessary to function effectively routinely would be second-guessed in the courts," wrote Thomas M. Boyd, acting assistant attorney general, in a letter to the House subcommittee.

Enactment of this bill would have a serious effect on the USDA, as agency officials readily acknowledge. "It would shut down our enforcement activities," says Richard Crawford, a senior staff veterinarian at the USDA. Furthermore, the pending bill provides that unless a suit is deemed to have been "frivolous, unreasonable, or without foundation," USDA might have to pay attorney fees and litigation costs for both sides, which would further limit USDA resources. The threat of suits could also extend to members of animal care committees at each research facility.

It is almost certainly too late in this congressional term to see a vote on H.R. 1770. But there is a general consensus that this bill will be back in one form or another.

BARBARA JASNY

Barbara Jasny is an editor at Science.