many, *Bild* said. Sakharov has been in exile in Gorky since 1980, following his denunciation of the Soviet Union's invasion of Afghanistan.

On 4 November, Sakharov was allowed to telephone relatives in Newton, Massachusetts, for the first time in 6 years. Sakharov told his family that he can see visitors from the Soviet Academy of Sciences and receive mail.

Sakharov's wife, Yelena Bonner, was just recently granted permission by Soviet officials to travel to the West for medical care. Soviet officials granted Bonner a passport after Sakharov went on a hunger strike and was hospitalized for 14 days.

—MARK CRAWFORD

USDA May Be Asked to Police Animal Research

On 28 October, the Senate agreed to consider an amendment that would put the Department of Agriculture in charge of protecting the welfare of animals used in medical research. The proposal is part of the farm bill, which is still in debate.

In addition to protecting against physical mistreatment, it would require that dogs be given regular exercise and that the "psychological well-being" of primates be respected.

The proposal came about as a compromise. Majority Leader Robert Dole (R–Kan.) opened the subject with an amendment on 25 October, a version of an animal welfare bill he had offered earlier. The wording clashed with that of the NIH reauthorization bill, which contains its own section on lab animals. The NIH bill has been sent to the President for his signature or veto.

Orrin Hatch (R–Utah), chairman of the Labor and Human Resources Committee, objected to the proposal. After a weekend of negotiating, Senator John Melcher (D–Mont.) came up with a compromise. It was quickly accepted on 28 October.

However, when NIH took a close look, it found some surprises. Most important, NIH is to have a minimal role in establishing the new animal rules and would defer to the Secretary of Agriculture.

The proposal asks every research institution to create an animal welfare committee composed of at least three members. One must be a veterinarian (Melcher is a veterinarian), and one a nonmember of the institution. The group must inspect the animal facilities at least twice a year. The Department of Agriculture is to make inspections as well. The law asks for new regulations to ensure that in every case "the principal investigator considers alternatives to any procedure likely to produce pain to or distress in an experimental animal." And it seeks exercise for dogs and "a physical environment adequate to promote the psychological well-being of primates." In addition, the amendment seeks to guard the confidentiality of research by imposing heavy fines on animal welfare reviewers who leak information.

The proposal still has a long way to go before becoming law, for it must be passed by the Senate, approved by the House, and signed by the President. In the meantime, Hatch is said to be drafting an amendment to the amendment.—ELIOT MARSHALL

Ownership of Cells Raises Sticky Issues

The commercialization of biotechnology and a novel lawsuit filed last year prompted a House subcommittee recently to review some new issues concerning the responsibilities of biomedical researchers and the rights of patients.

In September 1984, a patient named John Moore sued the University of California, charging that researchers at the Los Angeles campus took unfair advantage of him by using his cells to develop a cell line, which was eventually patented (*Science*, 16 November 1984, p. 813). The cell line produces several potentially valuable substances, including immune interferon, but none has been marketed. Last month, Moore also sued Genetics Institute and Sandoz Pharmaceuticals, which have licensed the patent.

Should a patient whose tissue led to a money-making product be compensated? Thomas Murray, an ethicist at the University of Texas at Galveston, suggested at the House hearing held by the Science and Technology subcommittee on investigations and oversight that out of a sense of fairness, a patient should get a share of the profit under some circumstances. By way of analogy, Murray said, if a person gave a recipe to a friend, who then published it verbatim in a cookbook that hit the best-seller list, the person should probably receive some compensation. But if the recipe was altered to some degree, then the idea of compensation is not so clear-cut, Murray remarked.

The general sense of the biomedical scientists who testified is that reimbursement is not warranted because considerable research and modification of a patient's tissue occurs before patent claims can even be contemplated. David Blake, associate dean for research at the Johns Hopkins School of Medicine, likened a researcher to a real-estate developer. The developer buys land from a farmer, but the farmer is not usually paid according to the selling price of the developed real estate, Blake said.

Witnesses at the hearing contemplated whether informed-consent procedures for patients should be modified to discuss the commercial implications of research. As a practical matter, "for every success [in research], there are hundreds of failures," said Robert Levine, chairman of the institutional review board at Yale School of Medicine. He added that it is difficult to justify compensation and identify who should receive it because researchers build on the work of many other scientists and rely on the participation of many patients—hundreds in some clinical trials.

It is unclear how often patent claims made by researchers are closely related to patient tissue. According to a subcommittee survey of 81 medical schools, 22 percent of the patents the schools applied for between 1980 and 1984 originated from patients' tissue. The subcommittee, however, did not ask about the exact patent claims and their specific relationship to the patients' material.

The crux of the issues raised by the Moore case is to protect the trust between researchers and patients, Murray suggested. The greatest danger as biotechnology raises the commercial stakes in biomedical research is that researchers could be viewed as taking advantage of patients, he said.—MARJORIE SUN