

that private patient fees be turned over to the university, but officials say Berger has not been dunned for any such fees. Berger and the university are still at odds over his consulting activities, which the university claims to have been in excess of those permitted by the rules (which permit consulting one day in seven—fees from anything more must be turned over to the university). The university has deducted an unspecified amount from his salary, although officials say Berger claims that much of this consulting was “public service.”

Berger's problems seem to have come as a surprise to everyone. He has a reputation as a brilliant teacher as well as researcher and an eloquent spokesman for mental illness research. A graduate of Dartmouth College and Harvard Medical School, Berger had been at Stanford since he arrived there as a psychiatric resident in 1970. He became a full professor in 1984. He has participated in the authorship of more than 200 books and published papers on subjects ranging from the biochemistry of schizophrenia and depression to alcoholism, amphetamine psychosis, and the neurobiology of aging.

According to a lengthy article in the 7 June San Jose *Mercury News*, Berger's personality may have had a lot to do with turning potentially remediable errors into serious offenses. The newspaper quotes several sources to the effect that people who worked for Berger felt he was arrogant and unable to admit mistakes.

Barchas, whose esteem of Berger's professional accomplishments knows no bounds, says, “I have a feeling that he has learned a very profound set of lessons from all this.” Ironically, he adds, Berger “is more the type to be brought in as chair of a committee to look into a matter like this.”

NIMH is still reviewing the case, although after a site visit in April it decided that scientific activities at the clinical center had not been compromised. Stanford does not plan any further action at present. There have been some internal conflicts over the university's attempt to stay as mum as possible. Although officials are allegedly concerned with protecting the privacy of psychiatric patients, the silence seems to have more to do with protecting Berger's privacy.

Berger's lawyer, Michael Flicker, has little to say other than that the reason the audit and faculty review have been kept confidential is that they are not “complete”—that is, Berger chose to resign rather than follow procedures to dispute them. Berger, who has declined to be interviewed, has given no reason for his departure other than “I believe that this is the appropriate time for me to seek a new position elsewhere.” ■

CONSTANCE HOLDEN

Religious Groups Join Animal Patent Battle

Farm organizations, religious leaders link with animal rights groups and activists to campaign for a moratorium on animal patents

ON 3 April the Patents and Trademark Office ruled that genetically engineered animals could be patented. The decision produced an outcry from animal rights groups and activists. A wave of press reports and congressional hearings followed. But the issue seemed to fade in June after a House-Senate conference committee rejected a proposed moratorium on animal patents. Now, however, it is apparent that the controversy is growing more intense.

Religious leaders and farm organizations are joining with an informal coalition of animal rights and public interest organizations to add new dimensions to the debate. These groups have seized upon the patent controversy as a way to force Congress to address broader moral and economic questions related to genetic engineering.

At issue is how far industry should be allowed to go in using biotechnology to make livestock production more profitable, and how farmers will be affected by the technology and animal patents. “The gift of life from God, in all its forms and species, should not be regarded solely as if it were a chemical product, subject to genetic alteration and patentable for economic benefit,” says Arie R. Brouer, general secretary of the National Council of Churches. “Moral, social, and spiritual issues deserve far more serious consideration before binding decisions [patent awards] are made in this area.”

The effort to intertwine religion, morality, and farm economics with patent policy has presented the biotechnology industry with a challenging political problem. “The interjection of religion into the issue of patenting will undoubtedly heighten the emotionality of the debate,” says Bruce Mackler, general counsel for the Association of Biotechnology Companies. Mackler and other industry officials contend it is improper to use the patent system as a forum for raising moral, religious, and economic issues.

“The act of issuing patents is morally neutral and ought to be kept that way,” asserts William H. Duffey, a patent attorney for Monsanto. Arguing on behalf of the biotechnology industry on 23 July before

the House subcommittee on courts, civil liberties and the administration of justice, Duffey said it would be “wrong . . . to consider limiting protection for biotech inventions in response to those groups who play upon the emotional components of a burgeoning science. . . .”

Mackler contends that a moratorium on patents will hurt industry and curtail private sector support for research that could produce patentable animal inventions. Representative Charlie Rose (D-NC) is not persuaded by such arguments. He plans to introduce legislation soon for a 2-year moratorium on new animal patents.

Rose says the historic step of patenting animals “should not simply be done through the patent office without any direction from Congress.” Companion legislation is expected to be sponsored in the Senate by Senator Mark Hatfield (R-OR), whose earlier moratorium bill was rejected by a House-Senate conference committee. These legislative efforts are sure to be aided by other House subcommittee hearings on the animal patent issue that are scheduled for August and September.

Predictably, social activist Jeremy Rifkin, head of the Foundation on Economic Trends, has played a central role in forming the loose coalition of animal patent opponents. So far, it consists of 14 animal welfare organizations, 13 farm groups, 5 religious denominations, and assorted other activists. Rifkin claims he will broaden the coalition to include Catholics and Jews in the coming weeks.

The concerns of these crusaders vary. The National Farmers Union, for example, says it favors a moratorium on patenting animals until the impact on the farm animal gene pool can be assessed and royalty obligations understood. The Humane Society of America worries that animals will suffer as a result of human genes being spliced into their genetic code for experimental and possibly for commercial purposes.

Whether the opposition can ignite a meaningful debate in Congress may hinge on the imposition of a moratorium on animal patents. There are about 15 applications for animal patents before the patent office.

Charles Van Horn, director of the biotechnology patent group at the patent office, says the agency is actively evaluating a number of the pending animal patent applications. The first series of decisions could be issued within 6 months, he says. The coalition is lobbying Congress to impose a moratorium before the patent office can issue any ruling.

Richard Godown, executive director of the Industrial Biotechnology Association, contends that the coalition will weaken in time. "We are going to meet the issue with facts," he says. "As the dialogue advances I anticipate that some [religious groups] will back away from supporting a moratorium."

But, Rifkin says the controversy will not go away. The animal patent decision (*Science*, 10 April, p. 144), he argues, is fueling a political movement that is forcing Congress to confront questions of morality versus commercial expedience as they relate to genetic engineering.

The challenge for industry is to separate these issues from the animal patent process, says Steve H. Holtzman, vice president of Embryogen, Inc., an Athens, Ohio, company that has two animal-related patent applications pending. As things stand now, Holtzman says, Congress faces "a mélange of issues that are confused and run together." ■ **MARK CRAWFORD**

Research Whaling on the Table

A joint statement on recent Iceland-U.S. talks in Washington notes that a "pause in the taking of whales for scientific purposes" by Iceland would be continued while further discussions on the subject are held. Over the next few months, such negotiations are likely to decide how well the International Whaling Commission's moratorium on commercial whaling will withstand its most serious current challenge—so-called research whaling.

Whaling for research purposes during the moratorium had been proposed by several countries that were more or less heavily engaged in commercial whaling (*Science*, 15 August 1986, p. 718). Their rationale is that such activities would support the comprehensive assessment of whale stocks that is linked to the moratorium. (An IWC vote on extension of the 5-year moratorium is scheduled for 1990.) Conservation groups argue that research whaling is a pretext for continued whaling operations, with the whales taken being sold on the commercial market.

Under the rubric of research whaling, Icelandic whalers operated last year and resumed whaling this year, catching some 80 fin whales in the North Atlantic before the pause began on 19 July.

The IWC moratorium specifically prohibits its commercial whaling; until this summer, research whaling was not dealt with directly under commission rules. This year, however, when Iceland, Japan, and South Korea submitted proposals for research whaling to the IWC, the commission's scientific committee, which rules on the technical merits of such requests, rejected each of the three proposals. At the IWC meeting in Bournemouth, England, in late June the commission, debating each case separately, concurred.

Regarded as more significant, however,

was the commission's approval of a general policy on research whaling embodied in a resolution put forward by the U.S. delegation. The resolution sets up detailed criteria for research whaling and provides for formal notification of governments whose proposals do not satisfy the criteria. The resolution passed by a 19 to 6 vote with 7 abstentions.

Despite the decisive vote, most observers did not expect the resolution to resolve the issue. The IWC operates on consensus and wields no enforcement powers. The major force behind its decisions in recent years has been U.S. legislation. Countries that violate IWC rules may be penalized through limits on their fishing rights in U.S. waters or restrictions on sales of fish products in U.S. markets. The U.S. government has proved hesitant, however, to act punitively against countries that are allies or important trading partners.

Fish products sold in the United States make up a significant part of Iceland's exports. Icelandic whaling, therefore, makes the country a clear candidate for "certification" for U.S. sanctions. Representatives of U.S. conservation organizations say that the pattern of Icelandic whalers is for them to complete the hunt for fin whales in July and to resume whaling a short time later for a different quarry, sei whales. As part of their plans for scientific whaling, the Icelanders had announced they would take some 40 sei whales this year.

The Washington talks left the issue of whether the pause would be permanent very much in doubt. Uncertainties also surround the intentions of Japan, Norway, and South Korea. But the outcome of the current negotiations should indicate how effective the United States will be in bargaining in behalf of the IWC strictures on research whaling. ■ **JOHN WALSH**

Presidential AIDS Panel Named

Last week, Ronald Reagan announced the appointment of 12 members to a presidential commission on the human immunodeficiency virus epidemic, none of whom is recognized as having medical or research experience with the AIDS epidemic. Their AIDS-related credentials notwithstanding, commission members were "drawn from a wide range of backgrounds and points of view," according to the White House.

Commission members are W. Eugene Mayberry (panel head, named 25 June), chief executive officer of the Mayo Clinic in Rochester, Minnesota, a medical administrator with research experience in disorders of the thyroid gland; Coleen Conway-Welch of Vanderbilt University in Nashville, Tennessee, a professor and dean of nursing; John Creedon, chief executive officer of the Metropolitan Life Insurance Company in New York City; Theresa Crenshaw, director of the Crenshaw Clinic in San Diego, California, a former president of the American Association of Sex Educators, Counselors and Therapists; Richard DeVos, president of Amway Corporation; Burton Lee III of Memorial Sloan-Kettering Cancer Center in New York City, a physician who specializes in the treatment of lymphomas; Frank Lilly of Albert Einstein University Medical Center in New York City, chairman of the genetics department and the panel's only known gay member; Woodrow Myers, Jr., health commissioner of Indiana and the panel's only black member; John Cardinal O'Connor, archbishop of New York City; Penny Pullen, Republican leader of the Illinois State House of Representatives; Cory SerVaas of Indianapolis, Indiana, editor and publisher of *The Saturday Evening Post*; William Walsh, founder, medical director, and president of Project HOPE; and Admiral James Watkins (Retired), chief of naval operations from 1982 to 1986.

More than 6 years have passed since doctors in the United States first diagnosed a handful of patients as having AIDS; more than 4 years have elapsed since researchers identified the virus that causes AIDS; and more than 22,300 of the 39,000 people reported as having AIDS have died as of 20 July.

The commission's primary duties will be to issue a preliminary report in 90 days and a final report next year describing measures that government officials can take to stop the spread of AIDS, assist in research, and improve care for AIDS patients. ■

DEBORAH M. BARNES