ers, and the medical device industry have either established or stepped up their own programs. But they have all been subject to charges of bias.

The various plans differ in the type of information they gather. The AMA's new project will take an opinion poll of its members to evaluate a certain procedure or instrument. The AMA staff will review the scientific literature and compare its findings with the poll. As one HHS official says, "It's democratic, but it's not scientific."

At present, the program avoids the subject of cost. But according to one AMA official, that may change. The official says he is not sure how the association will fend off the same charge it leveled at the federal center—that it is dictating medical practice.

The American College of Physicians has set up a project that is more sophisticated than the AMA's. Its reports will be compiled from opinions garnered from various medical specialty organizations and a literature review. Their reports will be peer reviewed by members and nonmembers of the organization.

Blue Cross–Blue Shield has intensified its review program and is working closely with the American College of Physicians. On the basis of its own study, the company recently announced a major change in coverage that is expected to generate annual savings of several hundred million dollars. The company stated that respiratory therapy is administered much too often and unnecessarily. Under new policy it will pay for it only in limited circumstances. The Blue Cross position was endorsed by the American College of Physicians, the American College of Surgeons, and the American Academy of Pediatrics.

The Institute of Medicine is also considering the idea of creating a health care panel, but discussions are very preliminary. The thinking is that the institute group would substitute for the federal center as a neutral body. But there is already grumbling from representatives of medical societies and insurance companies that ideas for the formation and specific duties of the panel are too nebulous.

Many policy analysts would like to see a federal center revived. Morris of national Blue Cross–Blue Shield says that it makes sense if only because the federal government is a major buyer of health care through Medicare.

A place is needed where all the groups can sit down and discuss health care issues, said one HHS official. "But there's no place to go right now."

—**MARJORIE SUN**

After the Shake-up at NSF

Donald N. Langenberg, who was asked to resign last month as deputy director of the National Science Foundation (NSF) to make way for a new management team, has been named chancellor of the University of Illinois at Chicago Circle. He will assume his new post on 1 February. Meanwhile, the National Science Board has established a search committee to look for Langenberg's replacement. The committee, which includes Edward A. Knapp, NSF's new director, will also recommend candidates for three other top NSF posts: assistant director for biological, behavioral, and social sciences, which is being vacated by Eloise E. Clark, who was also asked to resign last month; assistant director for mathematical and physical sciences, which is currently unfilled; and assistant director for astronomical, atmospheric, earth, and ocean sciences, which is currently filled by Francis S. Johnson, who is returning to the University of Texas (*Science*, 24 December, p. 1286). All four posts are presidential appointments, and thus the White House will make the final decision.—**COLIN NORMAN**

Stanford Patent Claim Is Put Under Wraps

Stanford University has decided to keep private its future discussions with the United States Trademark and Patent Office about a key gene-splicing patent application.

The application is based on the work of Stanley Cohen of Stanford and Herbert Boyer of the University of California at San Francisco. In August, it received a preliminary rejection from the patent office.

Because of wide interest in the matter, Stanford—unlike a majority of applicants—had previously made public the documents it submitted to the patent office. But apparently in response to bad press, the university is now going to be tight-lipped about its future responses to federal questions and objections to the patent claim.

Stanford complains that the rejection created "erroneous public impressions," according to Robert M. Rosenzweig, university vice president of public affairs. He said that the rejection is a procedural step by which the patent office secures more information about the application.

Nevertheless, some patent lawyers, after reading the publicly available document that disclosed the grounds of the rejection, expressed doubt whether the patent could win approval. Their concern was heightened more recently by information contained in Stanford's appeal to the rejection (*Science*, 26 November, p. 868).

Rosenzweig said that the initial decision to open the file was "an experiment with some risks attached . . . in our judgment, the experiment has failed." The university, he said, will reopen the file for inspection after the patent office makes a final decision.

—**MARJORIE SUN**

Fallout from Nuclear Power in Space

The Defense Department's plan to build a new generation of compact nuclear reactors to power laser battle stations and other military satellites (*Science*, 17 December, p. 1199) has an ominous history. In 1964, a U.S. nuclear-powered satellite burned up on reentry and contaminated the atmosphere with plutonium. Unlike the breakup of a Soviet nuclear satellite over Canada in 1978, the U.S. accident received almost no publicity at the time. Moreover, a recent military-sponsored symposium on space nuclear power made no mention of the accident and its fallout.

The incident began on 21 April 1964 when a Transit navigational satellite was launched from Vandenburg Air Force Base in California. On board was a power supply known as SNAP-9A, a radioisotope thermoelectric generator that was fueled with about 1 kilogram of plutonium-238. The rocket's engines failed in mid-flight, and the satellite and its lethal payload came crashing back into the atmosphere over the Indian Ocean.

Plutonium is one of the world's most toxic metals. Its radioactivity shows up in bones and lungs.

In 1964, search teams using sophisticated air sampling techniques

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combed the crash site and subsequently decided the satellite had completely burned up during reentry and that the plutonium had dispersed as a fine dust in the atmosphere (*Science*, 10 November 1967, p. 769). Over the years, the plutonium slowly worked its way down to the surface of the earth, mostly in the Southern Hemisphere. By 1970 about 95 percent of the SNAP plutonium had settled out of the atmosphere. The contamination was not unprecedented but it was quite large. During the days of atmospheric nuclear testing, some plutonium had spread throughout the atmosphere. In contrast, the U.S. satellite fiasco was estimated to have resulted in a threefold increase of plutonium-238 contamination (*Nature*, 16 February 1973, p. 444).

The possible health effects of the accident have not been studied in depth. But a 1974 report (WASH-1359) by the now-defunct Atomic Energy Commission (AEC), which managed the space reactor program, said they appeared to be minor.

After the SNAP-9A accident, two other misfortunes befell the U.S. space nuclear power program. In neither case was plutonium released into the atmosphere. The first occurred in May 1968 when a Nimbus weather satellite failed to achieve orbit and plunged into the Santa Barbara Channel off California. Its plutonium power pack, known as SNAP-19, was recovered intact. The final accident occurred in April 1970 when the Apollo 13 moon-landing mission was aborted because of an onboard fire. The command module and the three astronauts were successfully picked up. The lunar lander, however, plunged to the floor of the Pacific Ocean and could not be found. It is estimated that its plutonium fuel pack, known as SNAP-27, will remain intact for about 860 years.—**William J. Broad**

Einstein Papers Project Gets NSF Interim Grant

The National Science Foundation (NSF) has awarded an interim grant of $120,749 to the Princeton University Press project to publish the Einstein papers. The grant will underwrite editorial work while NSF considers long-term support of the project. Publication of the first volume of the papers is expected in 1984. The new NSF funds will also be used to finance an experiment in translation of German to English to determine how much translated material should be included in the full edition.

In accordance with the Einstein will, the original material in the Einstein archive has recently been transferred to the ultimate heir, Hebrew University in Jerusalem. The archive is now stored in the rare books section of the Jewish National and University Library in Jerusalem. Professor Reuven Yaron, who is in charge of the archive, says the material will be photocopied for use there by researchers and that original material will be available if necessary to bona fide scholars.

—**John Walsh**

Lame Ducks Spurn Arthritis Institute, Energy R & D

In the final hectic days of the lame duck session, Congress reprieved the Clinch River Breeder Reactor by a single vote. It was not so kind to basic energy research, however, and failed to pass several measures related to biomedical research.

One prominent casualty was the creation of a new arthritis institute in the National Institutes of Health (NIH). Creation of the institute was originally included in the NIH authorization bill, but Congress did not vote on that measure. A separate bill to establish the institute was passed by the Senate, but died in the House.

Several other proposals related to biomedical research were floating around in the lame duck session, but none of them won approval. In particular, Representative Henry Waxman (D–Calif.) and Senator Robert Dole (R–Kans.), touted animal welfare bills, and Senator Jesse Helms (R–N.C.) and Representative William Dannemeyer (R–Calif.) sought restrictions on fetal research.

The NIH authorization bill was regarded as the vehicle for these proposals, but Senator Orrin Hatch (R–Utah) kept the bill from the Senate floor to prevent Dole attaching an amendment restricting the use of animals in research.

With the NIH bill dead, antiabortion groups and others tried to hook onto another piece of legislation—a bill that would extend the life of the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research. At one point, it seemed that the bill would be loaded down with controversial amendments, but in the end, it, too, was not brought up for a vote.

The commission, which was due to expire on 31 December, was, however, given a 3-month extension under the continuing resolution—the legislation that provides stop-gap funding for all government agencies whose appropriations bills have not yet been passed. The commission requires the extra time to edit and publish its final reports.

The continuing resolution also contains funds for the Clinch River reactor. The reactor, the largest energy project funded by the Department of Energy (DOE), escaped by the skin of its teeth, however. The House voted to knock funds for the project out of the continuing resolution, but the Senate, by a vote of 49 to 48, agreed in the wee morning hours of 17 December to keep them in. By all accounts, the breeder was saved by the direct personal intervention of Senate Majority Leader Howard Baker (R–Tenn.), in whose state the plant will be built. The Senate and House resolved their differences by agreeing to fund the plant, but banning major construction or major equipment purchases unless approved by the next Congress.

Energy research did not fare so well, however. The continuing resolution specifies that DOE's research will be funded during fiscal year (FY) 1983 at FY 1982 levels. This means that increases planned for high energy physics and to operate new machines such as the National Synchrotron Light Source at Brookhaven will not be available. If Congress passes an appropriations bill for DOE next session, these increases could still be approved. But bringing an appropriations bill to the floor could again threaten the funding for Clinch River, and the appropriations committee may thus elect to fund DOE for the whole year under the continuing resolution. High energy physics would then be held hostage to the breeder.

—**Marjorie Sun and Colin Norman**