able to "restore a youthful state" to the donor cell's nucleus. But he cautions, "What you want to know is, will these cloned animals live longer?" The scientists will have to wait a while to answer that question, as sheep can live 12 years and cows about 20.

No one is yet able to explain the difference between Dolly and the cloned calves. It might be due to random variation, species differences, a difference in the cell type, or different methods of nuclear transfer. Telomere expert Jerry Shay of the University of Texas Southwestern Medical Center in Dallas hypothesizes that starting with relatively short telomeres in the senescent cells might prompt the early embryo to overcompensate and grow unusually long telomeres.

Whatever caused the difference, the Lanza team's results are consistent with preliminary findings of two other groups. In as yet unpublished work, Xiangzhong Yang of the University of Connecticut, Storrs, has found that the telomeres in calves cloned from adult cells were of at least normal length. And Teruhiko Wakayama of The Rockefeller University in New York City says that he, with colleagues in Hawaii and Japan, found a similar pattern in telomeres of cloned mice.

The researchers hope the findings will provide insights into the source of the egg cell's rejuvenating power. "Ultimately we want to understand how that reprogramming goes on in the oocyte so we could do it in vitro" and skip the embryo stage, Martin says. Several groups are working toward that goal, hoping to produce replacement tissues without the ethical baggage.

–GRETCHEN VOGEL

As you were. Prospective nominee Fischbach *(top)* and acting director Kirschstein.

BIOMEDICAL POLICY

NIH Nomination on Hold for This Year

Four months after Harold Varmus resigned as director of the National Institutes of Health (NIH), the agency has learned that it will have to go without a permanent chief for at least the rest of this year and probably for part of 2001. Deputy NIH director Ruth Kirschstein, a veteran research manager and former head of the National Institute of General Medical Sciences, who took charge of NIH in January, will continue as acting chief.

A federal official confirmed last week that Secretary of Health and Human Services Donna Shalala urged the Administration not to nominate a permanent replacement for Varmus at this time, and that White House officials agreed. In addition, sources say, Shalala consulted with the leading candidate for the NIH job, whose name has not been disclosed officially but privately is acknowledged to be Gerald Fischbach, director of NIH's National Institute of Neurological Disorders and Stroke. Varmus recruited Fischbach to NIH in 1998 from his position as chair of the departments of neurobiology at Harvard Medical School and Massachusetts General Hospital in Boston. Shalala and the candidate "mutually agreed" that it would be best not to send his name to the Senate for confirmation, the source said, primarily because time is running out for the Clinton Administration.

Fischbach and NIH officials aren't discussing the decision. But a Senate democratic aide who follows NIH affairs says that "NIH people were up here last week," explaining that they had shelved the nomination because of the "short time frame for moving a name through the Senate." In a nomination hearing, the aide said, "any nominee would have to expect tough questions regarding the use of fetal tissue and embryonic stem cells." Even if the review went smoothly, the new NIH director would have only a few months in office before the arrival of a new Administration—and possibly a move to change NIH's leadership. The decision to stick with the status quo, the Senate aide argued, is also a "vote of confidence" in NIH and "a recognition that Kirschstein is getting high marks for her handling of the job."

–ELIOT MARSHALL

CREDITS: NIH

NATIONAL ACADEMIES

Task Force Tinkers With Research Council

After several years of public turbulence, the U.S. national academies of science and engineering are about to embark on some private upheaval. The chiefs of the National Academy of Sciences (NAS) and its sister groups, the National Academy of Engineering (NAE) and the Institute of Medicine (IOM), have set their sights on restructuring the National Research Council (NRC), the huge think tank–like operation responsible for most of the reports, meetings, and workshops carried out each year by the academies.

A 15-member task force, chaired by retired Howard Hughes Medical Institute president Purnell Choppin and retired Honeywell vice president Gerald Dinneen, was formed in August 1998 and began meeting last spring. Its fourth and final session is scheduled for next month, with a report due in August. On the agenda are proposals that would streamline the Byzantine NRC structure, raise additional revenue from state governments and other nonfederal sources, and extend its influence beyond its bread-and-butter reports on topics ranging from defending the country against nuclear attacks to improving minority health care.

"It's not going to be simple to get members to recognize that changes will be good."

—Bruce Alberts

"It won't be wallpaper," predicts Mary Jane Osborn, a microbiologist at the University of Connecticut Health Center in Farmington and a member of the task force. But neither will it be as radical as the last review, instituted by then–NAS president Frank Press in 1981, that redrew the entire NRC map. "The layers of approval [for individual NRC reports] need streamlining, not removal," says NAS president Bruce Alberts, who also chairs the NRC.

There is widespread agreement that some sort of an overhaul is long overdue. The NRC, created in 1916, produces about 200 reports a year with help from a full-time staff of about 1000. However, its revenues—

$182 million in 1998—have remained stagnant in recent years, and many customers have complained about the high cost and long wait associated with many NRC studies (*Science*, 9 May 1997, p. 900). In addition, its rigid and complicated structure—the council has seven commissions that oversee most of the work of innumerable boards, task forces, and working groups—is poorly suited to interdisciplinary problems.

The question of restructuring the NRC has been on the table for several years. But a messy fight that resulted in the departure of former NAE president Harold Liebowitz (*Science*, 1 March 1996, p. 1222) and legal wrangling over whether the NRC must abide by a law that requires government advisory committees to conduct their business in public (*Science*, 14 November 1997, p. 1219) left top officials with little time to address possible changes. "We were kept busy with a series of crises, and now things have quieted down," says Alberts. The task force's charge, he adds, is to come up with a system that is "more efficient while providing equal quality." NAE president William Wulf says that the growing need for crosscutting approaches and the increased role of states in science and technology initiatives demand a review of the NRC's products, processes, and organization. "Everything is on the table," says Wulf.

Tall order. Choppin's task force is trying to make NRC more efficient.

Currently, the NRC's governing board approves requests for a report, which is then assigned to the appropriate body. A draft report, put together by a committee of outside experts, is typically reviewed by its parent commission, as well as by a separate report review committee that monitors the quality of the draft. Many voices inside and outside the NRC say that the commissions are a weak link in a process designed to ensure accurate and objective reports. "You could take out that layer," says one former NRC official. Another former official complains about the drain on time, money, and effort from frequent "dog-and-pony shows" performed by staff to keep commissions up to date.

Task force members agree that the commission structure should be revised to enhance the work of the boards. "You cannot mess with the boards—they are the ones in the trenches, the front-line troops," says member Brad Parkinson, a Stanford University physicist and engineer. Alberts says he would welcome "more standardized procedures" for the commissions. But sources familiar with the task force's deliberations say it is unlikely that the commissions—created in the 1982 reorganization that followed the 1981 study—will disappear. That approach was tried unsuccessfully in the policy division, says Alberts.

The scope of the NRC's work is also under scrutiny. Parkinson says the group is rethinking the mix of core activities in light of a flattening of federal requests. "Less [federal] work comes in over the transom," says Thomas Deen, a former NRC staffer who sits on the task force. At the same time, he says that the NRC "is uniquely positioned" to help states in such areas as transportation, education, and health care delivery. The NRC derives only about 15% of its revenues from nonfederal sources.

The panel is also looking at how to supplement the NRC's primary diet of reports with roundtables, workshops, fellowship programs, and other activities. "No one is trying to denigrate the studies, but there can be more synergy" in what the NRC accomplishes, Deen says. Creating a body of work in a specific area is another approach, notes IOM president Ken Shine, as the IOM has done to much acclaim with health care issues.

Once the report is submitted, it will fall to Alberts, Wulf, and Shine to win over the membership, volunteer community, and NRC staff. "We have to be strategic," says Alberts, who plans to start lobbying members this week during the academies' annual meeting in Washington. "It's not going to be simple to get members to recognize that changes will be good for the organization in the long run." One thing that may not change, however, is the academies' penchant for secrecy. The document outlining the 1982 reorganization remains confidential, and academy officials say there are no plans to release the new report, either.

–ANDREW LAWLER

CREDIT: RICK KOZAK

GLOBAL WARMING

Draft Report Affirms Human Influence

For the past several years, an international panel of climate scientists has been testing alternatives to the idea that people are affecting global climate. They examined climate's natural variability, changes in solar radiation, and volcanic outpourings, among others. But none of those factors fit the past century's observed warming as well as the explanation they suggested in 1995: an increase in greenhouse gases generated by human activity. So last week, the group, the

ScienceScope

Just Say No? Prompted by critics who say gene patents are being given out too freely, the U.S. Patent and Trademark Office (PTO) offered to "raise the bar" last year. But some prominent critics say the new standard isn't high enough.

PTO's proposed new guidelines ask its examiners to demand more information about a gene's biological function before awarding a patent (*Science*, 18 February, p. 1196). PTO invited comments, which are now available on the Web (www.uspto.gov). Although most are favorable, an exception comes from the advisory council for the National Human Genome Research Institute, the federal government's main sequencing funder. Twelve members, including human genome sequencers Maynard Olson and Robert Waterston, wrote en bloc to argue that PTO should issue tighter guidelines that would rule out claims on gene functions not specifically described in an application. For example, the group objects to a broad patent obtained by Human Genome Sciences Inc. of Rockville, Maryland, based on the human CCR5 receptor, which may be useful in AIDS therapy (*Science*, 25 February, p. 1375).

Despite such complaints, the PTO isn't likely to raise the bar any higher. "We're taking the guidelines to the executive council" early this summer, one official notes. "My guess is that you'll see very little change" in the final version, due out in 3 months.

New Look The Canadian government says a planned overhaul will restore the luster of Health Canada, its scandal-prone health protection bureaucracy.

Agency officials last week announced a restructuring designed to prevent the repeat of regulatory controversies—involving inadequate oversight of products from silicone breast implants to bovine growth hormone—that have tarnished Health Canada's reputation over the last decade. The redesign (www.hc-sc.gc.ca/english/realign.pdf) calls for creating new branches to track diseases and regulate products, and appointing a new chief scientist to oversee research and field potential complaints about political or industrial influence. Responding to criticism of its 1997 decision to close in-house scientific labs conducting research on food toxins, Deputy Minister David Dodge said Health Canada will also spend the bulk of some $230 million in planned funding increases on hiring new scientists and extending its research partnerships with academe.