Can adult stem cells really be reprogrammed?



Russia and Kyoto



2134 Origins of high-energy cosmic rays

of Infectious Diseases in Fort Detrick, Maryland, is also "not completely convinced" that the Aralsk strain is an unknown, exceptionally virulent strain, in part because of the small numbers on which Zelicoff based his conclusions.

Such questions could be resolved by studying the strain or tissue samples from the 1971 outbreak, which Zelicoff is convinced are stored somewhere in Russia. But when he tried to enlist his counterparts at VECTOR, the biodefense lab in Siberia where the Russian smallpox isolates are kept, they initially denied any knowledge of the incident, he says. Only after announcing that he would go public did they agree to look in their freezers.

Zelicoff and Jahrling find this reticence troubling—especially because U.S. financial support keeps VECTOR and several other former Soviet bioweapons labs running, and mutual visits have fostered close ties between the former enemies' scientists. "These people are my friends," says Zelicoff, "and yet it appears that they are lying."

-MARTIN ENSERINK

CLONING

Moratorium Replaces Ban as U.S. Target

Biomedical research advocates appear to have won a major victory in the U.S. Senate. Senator Sam Brownback (R–KS) last week announced that he was abandoning his efforts to persuade the Senate to pass a bill outlawing all human cloning—including some types of research aimed at developing new medical treatments. Instead, Brownback says he will work to win congressional approval for a 2-year moratorium on such work. But critics say even that step would cause unacceptable delays for studies that could result in important medical benefits.

Science advocates are pleased with the latest turn of events, but they don't plan to pack up and go home. "We've made great progress, but there is a very long way to go," says Kevin Wilson of the American Society for Cell Biology, one of many research groups opposing Brownback's bill. And Brownback's allies, who just months ago seemed likely to prevail, promise that "the issue isn't going to go away. There is going to be a sort of guerilla campaign now," says Nigel Cameron of the Council for Biotechnology Policy, a conservative think tank in Reston, Virginia.

For months, senators and science lobby-

ists have been preparing for what was expected to be an emotional and historic debate over how the government should regulate cloning, an array of techniques that can produce genetically identical embryos. The predebate tension was heightened by reports that some scientists were on the road to cloning humans. Last summer, the House of Representatives passed legislation that would make it a criminal offense to engage in either repro-

ductive cloning or so-called therapeutic cloning, in which scientists would transplant the nucleus from an adult cell into an embryo to produce genetically matched cells that might be useful for medical treatments. Brownback sponsored a similar bill in the Senate. But biomedical researchers and patient groups felt that Brownback's bill went too far. Instead, they supported a competing proposal that would ban reproductive cloning but allow related research to con-

tinue with greater regulation (*Science*, 10 May, p. 997).

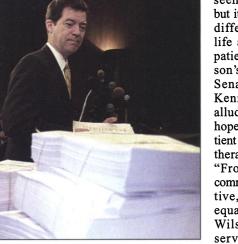
Brownback, who had the backing of several conservative groups and President George W. Bush, once appeared to have the votes to pass his bill. But a broad coalition of research and patient groups fought back with an arsenal that included television ads and Capitol Hill visits from Hollywood stars, Nobel Prize-winning scientists, and children suffering from currently incurable conditions. Their message: Don't lump therapeutic research in with the reproductive cloning ban. The tide turned in their favor last month after Senator Orrin Hatch (R-UT), a leading antiabortion conservative, announced that he would oppose Brownback's bill.

Last week, Senate leaders seemed close to a deal to bring the dueling bills to a vote. But negotiations collapsed after neither side could show that it had at least the 60 votes needed to overcome procedural hurdles and bring their bill to a vote. As a result, Senate Majority Leader Tom Daschle (D–SD) put the gridlocked issue aside.

The move angered Brownback, who told reporters last week that opponents—including Daschle—had set ground rules that were "stacked ... against me." He has since moved—so far unsuccessfully—to attach pieces of his bill, including a cloning moratorium and a ban on cloning-related patents, to unrelated bills before the Senate.

Brownback's opponents have vowed to block a moratorium. "A moratorium of a

year or two may not seem like much ... but it could mean the difference between life and death for a patient with Parkinson's disease," says Senator Edward Kennedy (D-MA), alluding to the high hopes that some patient groups have for therapeutic cloning. "From the science community's perspective, a moratorium equals a ban," adds Wilson. Some observers say that Brownback's tactics reflect his growing desperation. "The



Strategic retreat? Senator Sam Brownback now says he'll settle for cloning moratorium.

fact that he has fallen back to the idea of a 2-year moratorium suggests that he can't find the votes he needs," says Pat White of the Federation of American Societies for Experimental Biology.

The current stalemate doesn't bother White and other science lobbyists. "[Having] no bill is better than [passing] Brownback's bill," says one. However, the inaction also leaves in limbo the one issue on which all sides can agree—the need to ban human reproductive cloning.

—DAVID MALAKOFF

RADIOLOGICAL TERRORISM

New Effort Aims to Thwart Dirty Bombers

CAMBRIDGE, U.K.—Russia and the United States have agreed to join forces on an unprecedented effort to hunt down stray radioactive materials—the potential stuff of dirty bombs—across the former Soviet Union. Under the agreement, expected to be announced next week, Russia will provide information on "orphaned" sources that could