Congress and Bush set to clash on stem cells again

In a direct but possibly futile challenge to the only veto of George Bush's presidency, the US Congress is expected to pass a bill for a second time that would dramatically expand researchers' access to human embryonic stem-cell lines. As *Nature* went to press, a vote in the House of Representatives was expected on 11 January, with the Senate likely to act on an identical measure within a few weeks.

The bill would allow federal funds to be used for research on stem-cell lines derived from surplus embryos at fertility clinics and otherwise slated for destruction. The embryos would have to be donated with informed consent and without payment or other inducements.

"We will use every legislative means at our disposal to ensure that the bill is enacted into law. It will happen during this Congress."

The California-based Rand Corporation estimated in 2003 that about 11,000 of the roughly 400,000 embryos stored at US fertility clinics at that time were available for research, from which it should be possible to derive up to 275 cell lines (D. I. Hoffman *et al. Fertil. Steril.* **79**, 1063–1069; 2003). The study's lead author, David Hoffman of IVF Florida Reproductive Associates in Margate, estimates that there may now be 10–15% more embryos in storage. Under current Bush administration policy, only around 20 stem-cell lines, all created before 9 August 2001, are available to federally funded researchers. These ageing lines are contaminated by having been grown on 'feeder' layers of mouse cells, making them impractical for developing human therapies.

Bush vetoed an identical bill last summer after both the House and Senate passed it, and the House failed by 51 votes to muster the two-thirds majority needed to override his veto (see *Nature* **442**, 335; 2006). Bush is likely to veto the bill again, and even with Democratic election gains in November, it is doubtful whether stem-cell supporters in the House have the votes to override Bush. Just 13 of the House members who voted with Bush last summer were defeated in November. And seven of the newly elected Democrats are anti-abortion.

But in the Senate, which passed the bill by 63 to 37 last summer, November's elections ushered in a net gain of three senators who are likely to approve of the measure, bringing supporters within one vote of a veto-proof majority. If the Senate did override a second Bush veto, pressure on House members to do the same could substantially increase.

The Democrats, newly in charge of the House and Senate, have made it an early priority to reintroduce the bill, now dubbed the Stem Cell Research Enhancement Act of 2007. "There is growing support for ethical embryonic stem-cell research in Congress, which is caused by a solid public consensus supporting this research," Representative Diana DeGette (Democrat, Colorado), one of the bill's two House authors, told *Nature* shortly before she introduced the bill on 5 January.

Diana DeGette sees a public consensus in favour of federal funding of embryonic stem-cell research.

Opponents such as Senator Sam Brown-

Indian science is in decline, says prime minister

BANGALORE

For several years, criticisms have been aired at India's scientific meetings and in its journals. Now the country's top politician has spoken out about the talent crisis and poor standards affecting Indian science.

Prime Minister Manmohan Singh voiced his feelings on 3 January, when he opened the 94th Indian Science Congress (ISC) in Chidambaram in southern India. The annual meeting attracts thousands of scientists from across the country. Traditionally opened by the prime minister, it is generally an occasion to praise Indian science. But this year was different.

"While our government will do its utmost to invest in science, I call upon the scientific community to also invest its time and intellectual energy in the revitalization of our science institutions," said Singh. He added that he is "deeply concerned" about declining enrolment in basic sciences, and said that the decaying university system "needs upgrading in a massive way".

Singh was most troubled, he said, by "the decline in the standards of our research work in universities and even in advanced research institutes". For example, the return on billions of rupees invested in alternative energy sources was inadequate. "Be it [hydropower], thermal or nuclear power, we have to improve the productivity of investments already made." To raise quality, Singh warned that he may submit India's research labs to international peer review.

This is the first time that Singh has publicly criticized Indian science. His comments were apparently provoked by briefings from his science adviser, the distinguished chemist C. N. R. Rao, indicating that India publishes only 2.7% of the world's science papers (compared with China's 6%) and describing the flight of talent

D. ZALUBOWSKI/AP

back (Republican, Kansas) are not persuaded. "Right now, the private sector can spend all it wants on destructive human embryonic stem-cell research, but such research is producing no human applications. There is simply no need to waste taxpayer dollars on this," says Becky Ogilvie, a spokeswoman for Brownback.

Critics arguing that human embryonic stem-cell research is unnecessary were given ammunition on 7 January when *Nature Biotechnology* published a paper from a group led by Anthony Atala, director of the Institute for Regenerative Medicine at Wake Forest University in Winston-Salem, North Carolina. The researchers reported isolating stem cells from human amniotic fluid that can differentiate *in vitro* into many of the same major cell types as embryonic stem cells (P. De Coppi *et al. Nature Biotechnol.* doi:10.1038/nbt1274; 2006).

The study provides "yet another reason why there is no need to destroy young human embryos in order to obtain their biological parts", Brownback said in a statement. Supporters of the bill shot back. "This study…in no way replaces the need for expanding the [US government's] embryonic stem-cell policy," Representative Michael Castle (Republican, Delaware), the other author of the House bill, said in his own statement.

Some supporters hope to amend the bill to make it more politically palatable to hesitant senators and more difficult for Bush to veto — perhaps by incorporating support for research on stem cells from adult sources.

But Bush has adamantly opposed expanded federal funding. DeGette notes that she asked to meet the president in November. Last week, she got a response from Bush's appointments secretary. It read: "The president would appreciate an opportunity to visit with you. Regrettably it will not be possible for us to arrange such a meeting at this time."

Democratic senator Tom Harkin of Iowa, a leading supporter of the bill, vows to fight a second veto. On 4 January, the day the bill was introduced in the Senate, he said: "We will use every legislative means at our disposal to ensure that [the bill] is enacted into law. And it will happen during this Congress." ■

Meredith Wadman

from government labs and universities to industry and abroad.

"In the past year our government has launched three new research institutions," he told his audience, adding that the government is considering creating more. He also vowed to increase annual expenditure on science and technology from less than 1% of gross domestic product to 2% over the next five years.

H. SAUKKOMAA/LEHTIKUVA/REUTERS

Manmohan Singh: offered more money and institutes.

India's president A. P. J. Abdul Kalam welcomed Singh's assurance of extra science funding, but in his own address to the congress on 5 January pointed out that more than 20% of the country's science and technology budget in 2005–06 wasn't spent. He called for a plan for how future money will be used.

Rao, who heads the Jawaharlal Nehru Centre for Advanced Scientific Research in Bangalore, says attracting and keeping scientists is tough when companies offer up to six times the salary of government labs: "In two years, I lost eight of my postdocs to the General Electric Company research centre next door." ■

K. S. Jayaraman