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STEM CELLS

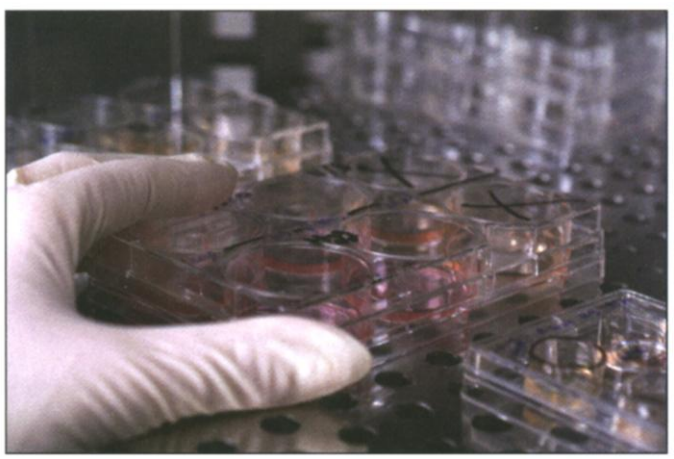
HHS Inks Cell Deal; NAS Calls for More Lines

A month after President Bush came out with his policy on embryonic stem cells, the National Academy of Sciences has weighed in with a report stating that far more cell lines need to be available for research. It has also endorsed the ethically controversial practice called "therapeutic cloning" for the purpose of producing tissue that is genetically matched to patients.

The report, by a committee headed by Johns Hopkins University biologist Bert Vogelstein, stresses that existing lines will have increasingly limited use as they age and accumulate mutations. The group repeated concerns that have been voiced since Bush's 9 August announcement: that many of the 64 cell lines that qualify for federal funding are not yet, and may never become, viable for research. At hearings last week, Health and Human Services Secretary Tommy G. Thompson admitted that only 2 dozen lines are currently ripe for use. The panel also noted that all the cells that qualify for federal funding are cultured with the aid of mouse cells, which could mean that their products would be unsuitable for human therapies.

The panel says that public funding is the most efficient way to further stem cell research. It also recommends that a national advisory group of scientists and ethicists be established at the National Institutes of Health to oversee the research.

Meanwhile, true to its promise to move rapidly on the stem cell front, the Public Health Service (PHS) signed an agreement the day after Labor Day designed to make existing cell lines more readily available. The government's "groundbreaking" agreement with the U.S. group that holds the patents on human embryonic stem cells, announced by Thompson at a 5 September Senate hearing, clears away some legal underbrush, enabling government researchers to obtain cell lines, do basic research, and publish unfettered by intellectual-property restrictions. WiCell, the provider, says it is committed to making similar agreements with other research institutions that receive federal funds.



Ready to roll. Trays of embryonic stem cells in James Thomson's lab.

Now, for $5000, a would-be stem cell researcher can obtain two vials of cells and technical assistance in cultivating them, says Carl Gulbrandsen, president of WiCell, the nonprofit stem cell research institute run by the University of Wisconsin, Madison. Gulbrandsen says WiCell has enough cells to supply all comers. "We could supply hundreds," he said. As of 5 September, he said, WiCell had had more than 100 inquiries.

Under the memorandum of understanding between WiCell and PHS, scientists at the National Institutes of Health (NIH) will have a free hand as long as they stick to basic research. "This provides a template" that universities can use to negotiate their own agreements, says Maria Freire, who until last week headed the Office of Technology Transfer at the NIH. She says WiCell's earlier cell-transfer agreements have not been "nearly as user-friendly as this one." The new accord was promptly reached, she says: "Wisconsin understood it was critical to get these [cells] in the hands of researchers."

Like WiCell's earlier agreements, this one prohibits using the cell samples to try to create whole embryos or for any therapeutic or diagnostic purposes. And in a change of policy, WiCell is forgoing "reach-through" rights—that is, it won't claim patent rights to any new discoveries, such as a useful new molecule, that researchers make using its cell lines in basic research. Freire says if researchers come up with a discovery with commercial potential, the developer might have to negotiate a new agreement with WiCell. At that point the developer could potentially run up against claims by Geron, the California company that is licensed to develop six types of human tissue from WiCell lines. (Geron's attempt to expand its stem cell territory last month elicited a lawsuit, yet to be decided, by the Wisconsin Alumni Research Foundation, or WARF; see *Science*, 17 August, p. 1237).

CREDIT: JEFF MILLER FOR THE UNIVERSITY OF WISCONSIN, MADISON

$2.2 Million for Cells to Fight Parkinson's

While the government has declined to fund the derivation of new stem cell lines, private foundations have been busy. On 7 September, the Michael J. Fox Foundation for Parkinson's Research announced a $2.2 million research initiative to establish a line of dopamine-producing neurons from stem cells; Parkinson's researchers everywhere would have access to this line.

Foundation spokesperson Michael Claeys says the initiative grew out of a 6 August scientific conference to assess cell-based therapies for Parkinson's. "This initiative has been driven by scientific opportunities, not by any public policy," he insists. Applications will be accepted from people deriving or already working with adult, fetal, or embryonic stem cells. "The skill required to do this pretty much eliminates people who aren't in the game already," notes Claeys. Speed is also required: The deadline for letters of intent is 5 October, and the application deadline is 16 November.

–C.H.

Theoretically, WARF, which owns the WiCell patents, could try to prevent people from buying similar cells from, say, Sweden or India, because the Wisconsin patents cover both the substance of the cells and the method for deriving them. But WiCell says it will not object to the use of other embryonic stem cell lines as long as the other providers' conditions are generous, too.

Thompson has promised that by next week, NIH will post on the Web a detailed registry describing the 64 stem cell lines that qualify for federally supported research.

–CONSTANCE HOLDEN

NATIONAL CANCER INSTITUTE

Klausner Quits NCI to Head New Institute

Richard Klausner, director of the National Cancer Institute (NCI), announced this week that he has resigned, effective at the end of the month. He will become the first director of a new philanthropic outfit in Washington, D.C., the Case Institute of Health Science and Technology, established with $100 million in support from America Online founder Steve Case and his wife, Jean Case. "One of the great things" about the new job, Klausner said, is that he will remain close to NCI and continue to run an intramural lab there. The Case Institute, according to Klausner, will invest in a spectrum of health projects ranging from developing tools for molecular biology to bioinformatics and even methods of improving water quality in the developing world.

Klausner's departure had been rumored for months, although he denied as recently as 3 weeks ago that he was leaving (*Science*, 31 August, p. 1569). In an interview the day before he announced his departure at a meeting of the National Cancer Advisory Board (NCAB), Klausner denied any connection between his move and a clampdown on NCI management by the Department of Health and Human Services, including revocation of large salary increases he had approved for NCI's top administrative officer and others. Reports suggesting he is leaving as a result, Klausner said, are "absolutely false" and "made up of whole cloth." Far from welcoming his departure, Klausner said, the administration recently urged him to stay and head the National Institutes of Health (NIH).

New foundation. After 22 years at NIH, Klausner is moving on.

CREDITS: (TOP TO BOTTOM) ROGER RESSMEYER/CORBIS; SAM KITTNER

Klausner, who has been at NIH for 22 years, took charge of NCI in 1995. He made policy changes designed to make the administration more flexible and promote a molecular understanding of cancer.

Biologist Phillip Sharp of the Massachusetts Institute of Technology, a member of NCAB, said Klausner made NCI into "an open and forward-looking organization." At the NCAB meeting, Sharp praised Klausner for his leadership and "putting cancer research at the cutting edge of science and technology." The administration has not yet named an acting NCI director.

–ELIOT MARSHALL

With reporting by Jocelyn Kaiser.

ASTRONOMY

Report Finds Fault With NSF Oversight

A mixture of relief, praise, and criticism greeted the publication last week of a much-anticipated report* on support for astronomy in the United States. As *Science* reported 2 weeks ago (31 August, p. 1566), a panel of the National Academy of Sciences argued strongly against merging the astronomy programs of NASA and the National Science Foundation (NSF)—a possibility the White House had asked the academy to consider. But the panel has stirred up debate with recommendations to improve coordination of federal astronomy programs, while highlighting flaws in NSF support for the ground-based portion of the discipline.

The relief came from the panel's rejection of the idea of wholesale restructuring, on the grounds that multiple funding sources strengthen the field. But the panel noted that the growing influence of NASA, the interdependence between space- and ground-based telescopes, and the increasing role of state and private funds and facilities require "systematic, comprehensive, and coordinated planning." According to the panel, chaired by former aerospace executive Norm Augustine, the planning should be carried out by a board representing several federal agencies and led by someone of the White House's choosing. The report also urges NSF to set up its own astronomy advisory panel and to build closer ties to nonfederal players.

No one disputes the need for greater coordination of the field. But another advisory body at NSF isn't practical, says Robert Eisenstein, chief of NSF's math and physical sciences directorate. And, he adds, "if we do it for astronomy, there are 40 other directorates that will say, 'What about us?' " Joseph Miller, director of the University of California Observatories/Lick Observatory in Santa Cruz, likes the idea of more community input at NSF. But he's troubled by the prospect of an interagency body setting priorities for the bulk of the country's astronomy portfolio. "We fear this could turn into some top-down monolithic program" that leaves little room for independent voices, says Miller, whose facility is funded by the state and by private foundations.

Clearer vision. Report says that greater cooperation will help private facilities such as the UC Observatories/Lick Observatory.

Apart from better coordination, most of the recommendations focus on the need to improve NSF's management of U.S. astronomy. The agency has lagged in supporting new instruments and allocating research grants as ground-based optical and infrared astronomy facilities have proliferated, the report notes. The Augustine panel suggests that NSF come up with its own strategic plan, including timelines and objectives, an open bidding process for all new facilities, and a more comprehensive accounting system for each project. It also suggests that NSF could learn from media-savvy NASA about how to publicize its scientific discoveries.

* nap.edu/catalog/10190.html?onpi_topnews090501