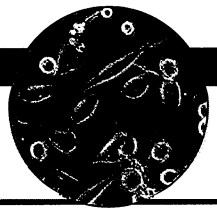
PAGE 2266
Early history of placental mammals



2269
Ulcer bacterium and cancer

BIOETHICS

Germany Dithers Over Stem Cells, While Sweden Gives Green Light

BERLIN—In Europe, as in the United States, scientists, politicians, and ethicists are deeply divided over what research, if any, should be permitted on human embryonic stem (ES) cells. Nowhere is this division more stark than in Germany, where two high-level commissions have offered conflicting advice in the past couple of weeks and a decision on whether researchers can import ES cells has been put off for the third time. In Sweden, by contrast, the national research council last week concluded that current laws permit researchers to both derive and work with ES cells.

Still waiting. Winnacker (*above right*) postponed for a third time a decision on funding Brüstle's human embryonic stem cell work.

On 7 December, Germany's research funding agency, the DFG, delayed a decision on whether to fund work by Oliver Brüstle, a neuroscientist at the University of Bonn. Brüstle's application to import human ES cells for a study of neuron repair has become a test case. The decision, originally scheduled for May, was pushed back first to July, then to December, and now to the end of January to allow more time for public discussion of the ethical issues surrounding the use of human ES cells. Brüstle reported several years ago that mouse ES cells could repair damaged neurons in a mouse with defective myelin (*Science*, 30 July 1999, p. 650). He has applied for DFG funding to extend the experiments by transplanting into animals human ES cells imported from Israel.

Germany's Embryo Protection Law forbids all human embryo research, but the DFG has argued that the law does not prevent work with imported stem cell lines derived in other countries. Public opinion is divided, and two German national ethics commissions have reached different conclusions. A commission appointed by the Bundestag, which includes politicians, ethicists, theologians, and scientists, last month voted 17–7 against allowing human ES cells to be imported. But 2 weeks later, a national bioethics commission appointed by Chancellor Gerhard Schröder voted narrowly in favor of allowing importation of the cells. Fifteen members supported importing cells under strict conditions, but 10 voted to impose a 3-year moratorium on any imports until the legal situation is clarified.

Bioethicist Eve-Marie Engels of the University of Tübingen was one of those voting in favor of a moratorium. "It is the deep conviction of many people in our country that the human embryo should be protected from the very beginning," she says. Deriving the cells abroad does not alter the fact that "embryonic stem cells come from embryos which have to be destroyed," she says.

In this divided climate, political leaders from several parties asked DFG president Ernst-Ludwig Winnacker in November to delay a decision once again, until the Bundestag had a chance to debate the issue. (A debate planned for this fall was delayed by events after 11 September.) Winnacker agreed only after Bundestag leaders scheduled a debate on the issue for 30 January. The DFG's next grant review meeting is scheduled for 31 January.

Brüstle, who has now waited more than a year for his proposal to be considered and who has been such a lightning rod that the government recommended that he be given special protection, says he fears this delay will not be the last: "The topic is not getting colder. It is getting hotter the closer we get to the national elections" scheduled for next September.

In Sweden, the situation is less politically charged. A 1991 law allows embryo research for the purposes of studying early development, and the national government has funded at least two labs that are deriving human ES cell lines. Last week, as expected, the Swedish Research Council said that the country's laws governing embryo research allow ongoing work on human ES cells to continue.

The council also considered the issue of therapeutic cloning, the cloning of an adult cell from a patient to produce an embryo from which researchers could harvest stem cells to treat the patient. The council, in a unanimous report, saw no overriding ethical blocks to such research, but it said the parliament would need to enact new laws to regulate it. Those new laws should also close a loophole, the council said: Sweden has no laws preventing human reproductive cloning, and the report "is pointing to the very urgent need to revise that," says the council's deputy director-general Madeleine Leijonhufvud. **–GRETCHEN VOGEL**

ASTRONOMY

Britain Joins the ESO Bandwagon

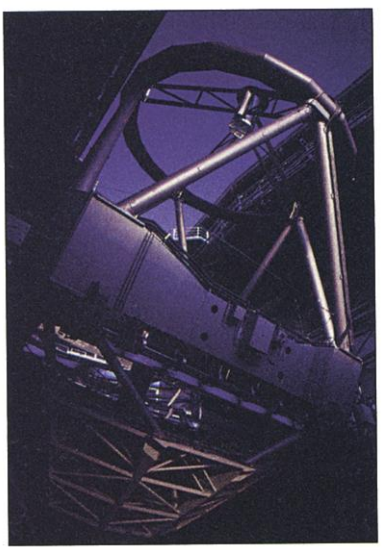
After nearly 4 decades of plowing its own furrow in astronomy, the United Kingdom is finally joining other nations as a member of the European Southern Observatory (ESO). The deal, announced last week and due to take effect on 1 July 2002, "[will] give us access to the world's best ground-based instruments and also allow us to participate in the next generation of projects," says Martin Rees, Britain's Astronomer Royal. These include ESO's Very Large Telescope (VLT)—a clutch of four 8.2-meter instruments atop Cerro Paranal in Chile's Atacama desert—and a giant millimeter-wave radio observatory ESO is planning to build in Chile with the United States and Japan. But the pact comes at a price: a huge reduction in U.K. funding to the Anglo-Australian Observatory in Siding Spring, Australia.

Cynics might say that the U.K.'s timing was perfect: It is joining just as the expensive work of building the VLT is completed.

CREDITS: (LEFT TO RIGHT) UNIVERSITY OF BONN; DFG

But Britain isn't getting a free ride. In addition to its regular ESO subscription, which is linked to national income, Britain is paying what ESO director-general Catherine Cesarsky calls an "entrance fee" of $110 million, "equivalent to what they would have paid if they had been building the VLT with us," she says. Britain had little choice. According to Ian Halliday, chief executive of the Particle Physics and Astronomy Research Council (PPARC), studies showed that without more access to 8-meter telescopes, Britain would rapidly slide down the astronomy league table, from around second place to perhaps 15th.

In the 1950s, the U.K. was involved in early discussions with its European neighbors about building a Southern Hemisphere observatory. But Britain pulled out and joined Australia in building the highly successful Anglo-Australian Observatory. Five other nations went on to found ESO in 1962. Membership now stands at nine, and the organization has headquarters outside Munich and two observing sites in Chile.



Join the club. Britain wants access to ESO's Very Large Telescope in Chile.

Although British astronomers already have access to the twin 8-meter Gemini Observatory telescopes in Hawaii and Chile, built with the United States and several other countries, they argued for more. The government has pitched in $14 million a year for 10 years toward Britain's ESO membership. But to make up the rest of the entrance fee and subscription, PPARC has to trim existing facilities to find another $7 million annually from the middle of the decade. "That, of course, is the difficult bit," says Halliday.

The aging Jodrell Bank radio observatory near Manchester, U.K., had been an expected casualty, but it was reprieved when three universities and a local development agency offered to upgrade the telescope network based around it. Perhaps the biggest upset will be a two-thirds reduction in funds for the Anglo-Australian Observatory. Cuts will also be made at the James Clerk Maxwell Telescope and the U.K. Infrared Telescope, both in Hawaii, and the Isaac Newton group of telescopes in the Canary Islands. "It's all heartrending for the astronomers ... these are instruments they've been using for 10, 20 years," says Halliday.

In addition to the money these cuts will raise, Britain will pay part of the package in kind by donating a new telescope at Paranal. VISTA, a 4-meter infrared survey telescope, is currently under construction by a consortium of British universities. It will work in tandem with an optical scope now being installed by ESO. "It was something we knew we were interested in having," says Cesarsky.

The injection of British cash comes at just the right time to finance ESO's role in the Atacama Large Millimeter Array (ALMA), says Cesarsky. ALMA is a 64-strong array of 12-meter radio telescopes that will produce millimeter-wavelength images of young galaxies 10 times as crisp as images from the Hubble Space Telescope. Negotiations are under way with the United States and Japan, so ESO will have to come up with some money soon. With Britain conveniently solving that problem, existing members are not likely to complain about Britain's late entry to the VLT show. "This is really done in a spirit of European collaboration," says Cesarsky. **–ANDREW WATSON**

Andrew Watson is a writer in Norwich, U.K.

CREDITS: (TOP TO BOTTOM) ESO; SUSAN WALSH/AP

NIH APPOINTMENT

Texas Oncologist Gets Cancer Institute Post

President George W. Bush last week named a prostate cancer researcher from his home state of Texas to head the $4 billion National Cancer Institute (NCI), the largest institute of the National Institutes of Health (NIH). The appointment of Andrew C. von Eschenbach, a urologic surgeon at the University of Texas M. D. Anderson Cancer Center in Houston, helps fill a leadership void at NIH, which currently lacks a permanent director and chiefs for six of its institutes.

Von Eschenbach, 60, directs M. D. Anderson's genitourinary cancer center and its prostate cancer research. He has also been heavily involved with cancer advocacy groups such as the American Cancer Society, from which he just stepped down as president-elect. And he has twice battled cancer himself: melanoma in 1989 and prostate cancer 2 years ago. "My passion has been to further the basic science agenda" at M. D. Anderson, von Eschenbach told *Science*. He also wants to speed the transfer of new findings into clinical practice: "I believe strongly that it's a continuum." Von Eschenbach says he thinks his wide-ranging background, from researcher to survivor, made him attractive. "They were looking for people who could communicate and put their shoulder to the wheel, and I was one of those people," he says.

Von Eschenbach's appointment had been rumored for several weeks (*Science*, 2 November, p. 973). One of his strongest backers is M. D. Anderson president John Mendelsohn, who was at one point approached about the NIH directorship but declined. The Bush family knows both researchers through their devoted support for the cancer center.

Von Eschenbach succeeds Richard Klausner, who left to head the new private Case Institute of Health, Science, and Technology in October. Klausner is credited with revamping NCI's administration and promoting a molecular approach to cancer during an aggressive and high-profile 6-year stint. "I'm sure [von Eschenbach] swallowed once or twice" when he was offered the post, says cancer re-

President's pick. Fellow Texan Andrew von Eschenbach heads to NCI.