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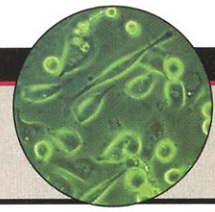
Early history of placental mammals



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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