UK team hopes to create a human embryo from three donors

Susan Mayor *London*

The Human Fertilisation and Embryology Authority (HFEA), the body that regulates human embryo research in the United Kingdom, has granted a licence to a group at the University of Newcastle to conduct research involving the development of human embryos with genetic material originating from three donors.

The research is designed to prevent the transmission of mitochondrial DNA diseases—hereditary disorders that can seriously impair the brain and other organs and muscles. It will make use of the fact that mitochondria have their own DNA which is inherited only from the maternal line. Animal studies have shown that it is possible to prevent the transmission of mitochondrial diseases by transferring pronu-

clei—the genetic material that goes on to form nuclei—from a fertilised egg that contains mitochondria with DNA coding for these diseases into another fertilised egg that contains mitochondria with normal DNA.

The licence allows the research group at Newcastle University Medical School and the Newcastle Fertility Centre at the International Centre for Life to develop a technique for replacing defective mitochondria with normal mitochondria in the one cell zygote. This will involve transferring genetic material created from the fusion of sperm and an egg from one woman into an egg from a second woman.

The research, funded by the Muscular Dystrophy Campaign, will check that transplanting the

pronuclei is achievable and safe. It will use fertilised eggs that have some kind of chromosomal abnormality, making them unsuitable for implantation back in the mother's uterus. The donors will have to give their consent. Any resulting egg would not be allowed to develop into a baby.

The application was initially rejected by the HFEA's research licence committee, which ruled that the proposed research was not permitted by the Human Fertilisation and Embryology Act 1990, as it prohibits "altering the genetic structure of any cell while it forms part of an embryo."

However, the authority's appeal committee granted a licence after hearing further evidence. Several experts present-

ed their views on the meaning of the phrase "genetic structure" in relation to the proposed research and argued that it had no precise scientific meaning. The committee was satisfied that the research would be permissible under the act.

Members ruled that a licence should be granted after finding that the proposed research was "necessary and desirable" against the criteria in the act and that the use of embryos was necessary for the research.

Matthew O'Gorman, from the charity LIFE, opposed the granting of the licence. He said: "This decision is utterly unethical, abhorrent, and contrary to public opinion. The HFEA are relentlessly imposing their libertarian agenda on the people of this country against their wishes." □

Lancet criticises its owner for hosting international arms fair

Owen Dyer *London*

The *Lancet* has criticised its owner and publisher, Reed Elsevier, for involvement in the global arms trade. Reed Elsevier owns the company Spearhead Exhibitions, which this week hosted the defence systems and equipment international (DSEi) exhibition, one of the largest military exhibitions in the world, in London.

In an editorial published last week the *Lancet* said that it "has a long record of drawing attention to the adverse health consequences of war and violence" and that the editors "reject completely any perceived connection between the journal and the arms trade, no matter how tangential it might be" (*Lancet* 2005;366:868).

But the publisher's presence in the arms industry, the editors

argue, "self-evidently damages its reputation as a health-science publisher... we respectfully ask Reed Elsevier to divest itself of all business interests that threaten human, and especially civilian, health and well-being."

The editors only recently learned of their publisher's connections, from a letter sent by a group of doctors and scientists, which also appeared in last week's issue (2005;366:889).

The letter notes that Reed Elsevier subscribes to the United Nations' global compact on ethical business practices, which demands that companies "make sure that they are not complicit in human rights abuses."

Stephen Cowden, company secretary of Reed Elsevier, wrote in a letter defending his

Workers lift a dummy missile into place at this week's DSEi arms fair, which the *Lancet* said damaged Reed Elsevier's reputation

company's involvement, also published in last week's journal (2005;366:889-90), that "the defence industry is necessary for upholding national security for the preservation of democratic values."

When Catherine May, a spokeswoman for Reed Elsevier, was asked by the *BMJ* whether certain countries, such as Libya, Pakistan, Vietnam, and Saudi

Arabia, whose representatives were attending the fair, could be considered interested in "the preservation of democratic values," she said that the company had no say in determining which national delegations could attend—that was decided by the Ministry of Defence.

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