From The Times

April 2, 2008

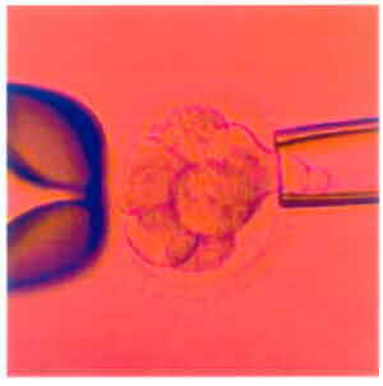
We have created human-animal embryos already, say British team

Mark Henderson, Science Editor

Embryos containing human and animal material have been created in Britain for the first time, a month before the House of Commons votes on new laws to regulate the research.

A team at Newcastle University announced yesterday that it had **successfully generated "admixed embryos"** by adding human DNA to empty cow eggs in the first experiment of its kind in Britain.

The Commons is to debate the Human Fertilisation and Embryology Bill next month. MPs have been promised a free vote on clauses in the legislation that would permit admixed embryos. But their creation is already allowed, subject to the granting of a licence from the Human Fertilisation and Embryology Authority (HFEA).



The Newcastle cybrids lived for three days and the largest grew to contain 32 cells

The Newcastle group, led by Lyle Armstrong, was awarded one of the first two licences in January. The other went to a team at King's College London, led by Professor Stephen Minger. The new Bill will formalise their legal status if it is passed by Parliament.

Admixed embryos are widely supported by scientists and patient groups as they provide an opportunity to produce powerful stem-cell models for investigating diseases such as Parkinson's and diabetes, and for developing new drugs.

Their creation, however, has been opposed by some religious groups, particularly the Roman Catholic Church. Cardinal Keith O'Brien, the head of the Catholic Church in Scotland, described the work last month as "experiments of Frankenstein proportion".

The admixed embryos created by the Newcastle group are of a kind known as **cytoplasmic hybrids, or cybrids**, which are made by placing the nucleus from a human cell into an animal egg that has had its nucleus removed. The genetic material in the resulting embryos is 99.9 per cent human.

The BBC reported that the Newcastle cybrids lived for three days, and that the largest grew to contain 32 cells. The ultimate aim is to grow these for six days, and then to extract embryonic stem cells for use in research.

Once the technique has been tested, scientists hope to create cybrids from the DNA of patients with genetic diseases. The resulting stem cells could then be used as models of those diseases to provide insights into their progress and to test new treatments.

It is already illegal to culture human-animal embryos for more than 14 days, or to implant them in the womb of a woman or animal, and these prohibitions will remain in the new legislation.

Using cow eggs reflects a short supply of human eggs. There are also ethical difficulties involved in collecting human eggs for research, as the donation process carries a small risk to women.

Professor John Burn, a member of the Newcastle team, told the BBC: "This is licensed work which has been carefully evaluated. This is a process in a dish, and we are dealing with a clump of cells which would never go on to develop. It's a laboratory process and these embryos would never be implanted into anyone.

"We now have preliminary data which looks promising but this is very much work in progress and the next step is to get the embryos to survive to around six days, when we can hope-fully derive stem cells from them."

The Newcastle team's decision to announce its success on television, before its results have been published in a peer-reviewed journal, will also trigger criticism from scientists.

Medical researchers said last night that the experiments were important, but that they wanted to see published details before passing judgment on their merits.