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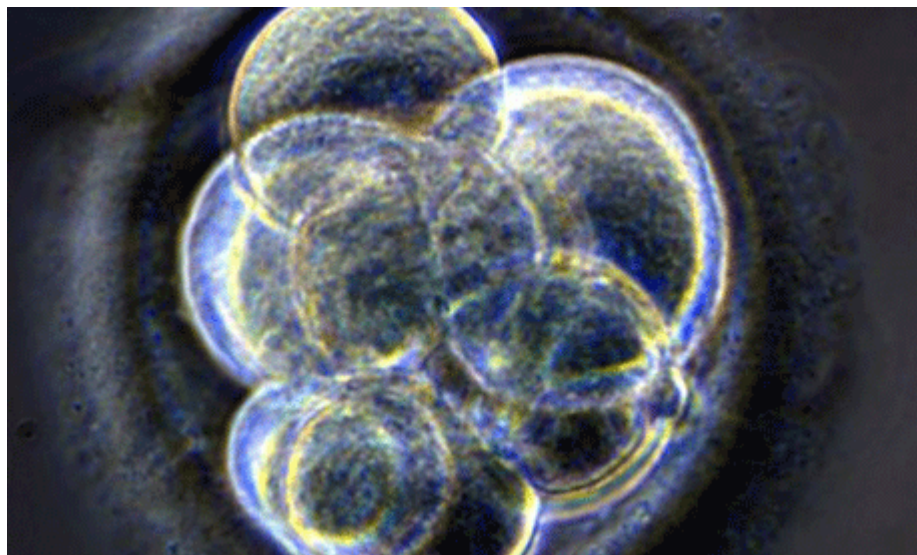
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Scientists' plea to use new hybrid embryos

- Animal-human link to aid research
- Pro-life groups voice opposition

Jo Revall, Whitehall editor**The Observer Sunday August 26 2007****More on...****Science**
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Cloned embryo

Britain's leading scientists have made a final plea for the right to create the first animal-human embryos for medical research using eggs taken from dead cows.

The Human Fertilisation and Embryology Authority will announce its decision next week on whether to give permission to UK laboratories to create the hybrid embryos to advance the understanding of genetic diseases.

The issue is controversial because it involves scientists taking an animal egg, removing its genetic material and putting DNA from a human cell into it. This can be used to create lines of stem cells which can then be made part of studies into incurable genetic diseases such as motor neurone disease.

However, it has caused controversy as some campaigners and religious groups argue that it is unethical to mix human and animal cells in this way.

Dr Stephen Minger has applied for a licence to do work using hybrids, in

order to understand more about a range of neurological diseases, including Alzheimer's disease and motor neurone disease.

He said: 'I'm cautiously optimistic that the authority will allow us a licence. I hope we have made the case that by doing this research, we can study a number of genetic diseases far more clearly. The cell discoveries we make could then be used to develop therapies for diseases such as Alzheimer's which affect so many people, but for which we now have almost no therapy to offer.'

Minger, senior lecturer in stem cell biology at King's College London, believes it makes far more sense to use a hybrid than taking a human embryo, created using a human egg and sperm, because scientists could use eggs taken from ovaries of thousands of cows that are slaughtered every day.

To do this work they would need a large number of embryos to make stem cells, far more than could be achieved by asking women to donate their eggs for research. Stem cells are immature cells that can be engineered to develop into many different kinds of tissue, which is important for medical research.

'When I start talking to people about it, sometime there is a "yuck factor" and they think it's weird,' said Minger. 'But once you've explained how it works, and why we are doing it, they do see the point of it, and actually think it's a good idea.'

'To me, it seems just very practical to use the cows' eggs, as a by-product of a process [the animals' slaughter] that is already happening.' Another scientist, Professor Robin Lovell-Badge, head of genetics at the National Institute of Medical Research in London, said: 'I can see absolutely no reason why these sorts of experiments shouldn't proceed. I think the scientists wishing to carry them out have made a very clear case for them.'

The government recently shifted its position on animal-human hybrid embryos: having been initially against the concept, it is now proposing to allow partial hybrids, where a complete set of human genes is inserted into an animal's egg cell, for research purposes only, through a new Human Tissue and Embryo Bill aimed at overhauling the laws surrounding fertility treatment.

The move has prompted strong protests from some religious and anti-abortion groups that oppose any such research. Anti-embryo campaigners had said earlier this year it was appalling that the government had, in their view, bowed to pressure from 'a random collection of self-interested scientists'.

The Catholic Church has made clear its opposition. Bishops told the parliamentary committee scrutinising a draft bill to allow the research to go ahead, that they opposed the creation of any embryo solely for research - they believe that all life begins at conception. They said they were also anxious to limit the destruction of such life once it had been brought into existence.

In a submission to the committee, they said: 'At the very least, embryos with a preponderance of human genes should be assumed to be embryonic human beings, and be treated accordingly.'