

UK health regulators apply brakes to 'three-parent' IVF procedure

April 20 2011, by Bob Yirka

(PhysOrg.com) -- In what is rapidly turning into a political debate in the United Kingdom, members of the Human Fertilization and Embryology Authority (HFEA) have, after careful review, declined to allow legislation to be introduced that would allow what has become known as three-parent in vitro fertilization, to become legal.

While technically it's two different kinds of techniques, the result is the same, faulty mitochondrial DNA material from the mother is replaced with donor material from another woman, resulting in a very tiny amount of the third person's DNA becoming a part of the embryo, and eventual human being.

Parent's rights groups, medical researchers and others have pushed for the procedures (which have been pioneered in Britain) to become legal as soon as possible citing the devastating effects of mitochondrial maladies on newborn babies; with ailments ranging from muscular and learning disorders to diabetes, blindness or organ failure.

The HFEA, the agency responsible for regulating fertility treatment in the UK, in its findings, suggested that more research is needed before allowing the procedure to be used by the general public. The fear of course, is that the procedure could cause some as yet unknown side effects such as different types of genetic disorders. Thus far, the procedure has been shown to produce viable embryos in humans, but nothing beyond that has been tested due to it being illegal to implant such an embryo into a human uterus.

The first type of procedure is called maternal spindle transfer, and involves removing the nucleus from a donor egg, then swapping in the nucleic material from the would-be mother's egg and then fertilizing it.

The second type of procedure, called pro-nuclear transfer, involves fertilizing both a mother and donor egg, then removing the major DNA material from the donor egg and replacing it with DNA material from the mother-to-be's egg; followed by implantation in a uterus.

The second technique irks right-to-life advocates because it involves the destruction of a fertilized embryo.

As the debate grows, it appears more and more groups become involved, with some complaining that IVF itself is immoral because all it does is add more children to an already overpopulated planet; others worry about parental rights issues if a child were to be born with DNA from three people, while others yet worry about immigration issues if the three people involved are not from the same country. Others still claim that this is just another step towards cloning human beings due to the process involved being almost identical to actual cloning procedures.

In any event, it appears that unless some surprising new development occurs that shows the procedures to be unsafe as further research is conducted, they will likely at some point be made legal, at least in Britain.

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Citation: UK health regulators apply brakes to 'three-parent' IVF procedure (2011, April 20) retrieved 13 May 2024 from <https://medicalxpress.com/news/2011-04-uk-health-three-parent-ivf-procedure.html>

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