‘Dual mother’ experiment in Britain gets go-ahead

Bid to prevent genetic diseases in unborn babies if natural mum has unhealthy DNA

LONDON

Scientists in Britain have been given the go-ahead for a controversial procedure that would produce an embryo from not one but two mothers, and a father.

The goal is to safeguard an unborn baby from possible genetic diseases passed on by its natural mother.

Despite protests from several quarters, British scientists will attempt to do this by putting an early human embryo — called a pro-nuclei — into an unfertilized egg from another woman.

The green light for the experiment to try controlling this came from the Human Fertilisation and Embryology Authority (HFEA), a government-appointed genetics and reproductive technology watchdog for Britain. It regulates such science in Britain tightly.

The human trial will not see any eggs allowed to develop into babies.

Professor John Burn from Newcastle University told Agence-France Presse that the new tests would not lead to “designer babies”.

“I would use the analogy of simply replacing the battery in a pocket radio to explain what we are doing. You are not altering the radio at all — just giving it a new power source,” he said.

However, campaigners expressed concern about the project.

Ms Josephine Quintavalle, from the Comment on Reproductive Ethics group, told the BBC: “This shows once again that the HFEA does not have any regard for public consultation and the views of the public.”

But two leading members in Singapore’s Bioethics Advisory Committee — which helps guide the future of genetic testing and research in the Republic — told The Straits Times that the British research was a growing front in genetics.

Children can develop diseases affecting cells in the brain, heart, liver, kidney or skeletal muscles — for which there is currently no known cure — if the DNA of their natural mothers is not healthy.

Professor Lim Pin, the chairman of the BAC, said the British experiment is “a simple idea” to prevent such defective DNA material from being passed on to children.

“In this case, the embryo is not a clone in the sense that it is a genetically identical copy of any person.”

Associate Professor Terry Koa, who lectures law at the National University of Singapore, said: “The genetic material in its nucleus is a unique combination of the father’s and mother’s genes from fertilisation of an egg with sperm, and then that nucleus inserted into an unfertilised egg.

He said there is no issue of destroying a fertilised human embryo, which many religious and ethics group object to. The proposed research in England is very preliminary, and there will be no transplantation of the embryo into a womb.

But both Singapore professors said that if the experiment is successful, public debate would be necessary before the research is taken to the next step.

“You now have a situation where a child has three parents,” said Prof Lim. “The moral and philosophical basis of this needs to be debated. Should there be some kind of subsidiary parentage allowed?”

One of the consequences: If the fertilised embryo turns out to be a boy, there will be no problem as the donor DNA dies with him. But should the child be female, then she will pass DNA from the donor to future generations.

“Would we want to start delineating ethics on the lines of sex of the baby?” said Prof Koa. “This new technology deserves debate and resolution by an informed society.”

Additional reporting by Natalie Soh and Shefali Srinivas in Singapore