'This is simply mind-blowing': Monkeys implanted with synthetic embryos made from stem cells

Embryos made from stem cells—instead of a sperm and egg—have been created from monkey cells for the first time. When researchers put these "synthetic embryos" into the uteruses of adult monkeys, some showed the initial signs of pregnancy. It's the furthest scientists have ever been able to take lab-grown embryos in primates—and the work hints that it may one day be possible to generate fetuses this way.

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But within 20 days of transfer, the monkey blastoids stopped developing and seemed to come apart, say [researcher Zhen] Liu and colleagues, who published their results in the journal Cell Stem Cell. This suggests the blastoids still aren't perfect replicas of normal embryos, says Alfonso Martinez Arias, a developmental biologist at Pompeu Fabra University in Barcelona, Spain. For the time being, "it clearly doesn't work," he says.

That might be because a typical embryo is generated from an egg, which is then fertilized by sperm. A blastoid made from stem cells might express genes in the same way as a normal embryo, but it may be missing something crucial that normally comes from an egg, says Martinez Arias.

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