

## Baby born from embryo frozen almost 20 years ago

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(PhysOrg.com) -- A healthy baby has been born from an embryo that was kept frozen for nearly 20 years, smashing the previous record of 13 years. The new baby is a biological sibling of a child born to the embryo donor couple about 20 years ago.

The baby's unnamed mother, 42, is from the US and had been undergoing IVF for 10 years without success. Then last year an embryo that had been kept frozen for almost 20 years was thawed out and implanted into her uterus. The baby boy was born in May and weighed 6 lb 15 oz (about 3 kg). The embryo, along with four others, was created as a result of IVF treatment that resulted in one of the embryos being successfully implanted in the mother and brought to full term. The



remaining embryos were then donated anonymously for "adoption" by other couples, and frozen.

The four pronuclear stage embryos were offered to the woman and thawed out but only two survived the process. Two embryos were implanted into the recipient, but of these only one survived to full term. (Pronuclear stage embryos are just-fertilized eggs in which the chromosomes derived from the father and mother have not yet fused and the cell has not yet divided.)

The woman's doctor, Director of the Jones Institute for Reproductive Medicine at the Eastern Virginia medical school, Dr. Sergio Oehninger, said the patient had been receiving fertility treatment unsuccessfully for many years, but her persistence had now paid off.

Dr. Oehninger's research showed that keeping the embryos frozen for a long time does not affect their viability, and it may be possible for them to remain viable 40 years or more, although Oehninger said it would be unlikely such an old embryo would be used as this would mean a new generation using embryos of a previous generation. This issue has already been raised with a mother in 2007 freezing some of her own eggs for the use of her daughter (then 7), who has a medical problem that will probably leave her infertile. If she uses the eggs, her child would also be her own half-sister or brother.

The previous record for a <u>frozen embryo</u> being implanted and brought to full term was set in 2005 by San Francisco mother Debbie Beasley, who was then aged 45. The embryo, which resulted in the birth of Laina, had been frozen for 13 years. In 2009 a baby girl was born after IVF using sperm that had been frozen and stored for 22 years.

Freezing embryos by suspending them in liquid nitrogen is a common procedure in fertility clinics, but the length of time frozen embryos can



be stored varies from country to country. As well as embryos, eggs, sperm, and ovarian tissue can also be frozen to allow for multiple attempts at becoming pregnant without repeatedly having to give samples or create embryos.

The case was reported in the journal <u>Fertility</u> and <u>Sterility</u>.

**More information:** Live birth from a frozen–thawed pronuclear stage embryo almost 20 years after its cryopreservation, Donna Dowling-Lacey, M.S, et al., *Fertility and Sterility*, doi:10.1016/j.fertnstert.2010.08.056

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