

Key dates in embryonic research

February 3 2015

Britain's House of Commons [votes Tuesday on allowing](#) the use of donated DNA to create so-called "three-parent" babies to overcome mitochondrial diseases—disorders handed down along the maternal line.

The technology, still at laboratory level, has sparked fierce debate, pitting experts who say it will lead to healthier children against opponents of the potential for "designer" babies.

Here are landmarks in embryonic research for tackling infertility and [hereditary disease](#):

- 1978: The first human, Louise Brown, is born from in-vitro fertilisation (IVF). IVF entails fertilising an egg with sperm in a lab dish, and implanting the early-stage embryo in the uterus.
- 1989: First pre-implantation genetic diagnosis (PGD), screening embryos for cystic fibrosis.
- 1990s: Sickle-cell anaemia, Tay-Sachs disease and Duchenne's muscular dystrophy join the list of severe inherited disorders detectable by PGD. The technology is now used to screen for over 250 genetic conditions, according to Britain's Human Fertilisation and Embryology Authority (HFEA).
- 2000: First "saviour sibling," a child born to donate healthy cells to a sibling with a fatal disease. The first case is a child who tested negative for Fanconi anaemia, the disease its sibling was born with.

- 2010: British scientists create a lab-dish embryo whose mitochondrial DNA comes from a donor. The rest of its DNA comes from its biological mother and father. Mitochondria are tiny components, comprising some three dozen genes, that provide a cell with energy. Flaws can lead to deafness, heart failure, blindness and other problems.
- 2013: Birth of Connor, the first baby to be born after all its chromosomes were screened for abnormalities, the goal being to select the healthiest embryo for implantation.
- 2015: Vote in British parliament on whether to approve embryos that include donated mitochondrial DNA.

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Citation: Key dates in embryonic research (2015, February 3) retrieved 23 April 2024 from <https://medicalxpress.com/news/2015-02-key-dates-embryonic.html>

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