

Monash University in Australia leads \$15M mitochondrial donation clinical trial

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Around 50 Australian children are born every year with devastating mitochondrial disease, with an expected lifespan of only five years. The Medical Research Future Fund has announced \$15 million in funding to an Australian first – and only the second in the world – clinical trial of mitochondrial donation.

Mitochondrial DNA is inherited via the mother's egg and is responsible for helping mitochondria to generate energy in all the body's cells. If mitochondrial DNA carries variants that lead to faulty energy production, this can cause mitochondrial disease.

Mitochondrial donation aims to correct this genetic timebomb through a form of assisted reproductive technology in which the future baby's mitochondrial DNA comes from a donor egg, to avoid passing on inherited mitochondrial diseases.

The mitoHOPE (Healthy Outcomes Pilot and Evaluation) Programme, includes mitochondrial and clinical geneticists at Murdoch Children's Research Institute and around the country, fertility specialists and clinical embryologists from Monash IVF (in vitro fertilisation) working together with reproductive scientists from Monash University and the University of Adelaide.

This trial, based in Melbourne in collaboration with Monash IVF, will be available to eligible women from all over the country.

The success of the MitoHope programme will depend on the willingness of Australian women to donate eggs for reproductive purposes and for use in research to improve the technical procedures.