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New Zealand explores genomic sequencing to improve newborns' well-being

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The research project is to begin in 2023

Researchers from the University of Auckland’s Liggins Institute in New Zealand are about to harness the technology of rapid genome sequencing in the hope of improving the well-being of critically ill newborn babies.

Liggins Institute deputy director Professor Justin O’Sullivan is heading efforts to launch rapid genomic sequencing for newborns in New?Zealand, in a research project that will begin in 2023 and ultimately lead to the technique becoming common clinical practice. It’s already increasingly used in leading hospitals in Australia, the United States, Germany and Great Britain.

The Liggins Institute has ordered two state-of-the-art PromethION machines to sequence about 500 genomes from around 170 babies and their parents for the research project, which will cost $6-7 million over the next five years. The research team is in the process of applying for ethics committee approval for the study.

Given the extent of the information the tests will provide on risk for other diseases, ethical considerations and the support of genetic counselling will be vital.

The sequencing could reveal genetic variants linked to a number of cancers, as well as the heightened risk of a raft of conditions, some of which are untreatable.