

MEDIA RELEASE



Getting to the heart of sudden death in epilepsy

Researchers from the Centenary Institute and the University of Sydney have today released the results from the world's largest genetic study into sudden unexpected death in epilepsy (SUDEP), revealing a possible genetic link between the heart and the brain in epilepsy patients.

The leading cause of epilepsy-related premature mortality is sudden unexpected death, and the cause remains unknown.

State-of-the-art technology was utilised in this new research to examine all 22,000 genes of participants. Following an analysis of rare variants, it was found that a sizeable proportion of SUDEP cases have clinically relevant mutations in cardiac arrhythmia (irregular heart beat) and epilepsy genes.

Leading this study, the Centenary Institute's Dr Richard Bagnall, said this is a crucial first step in building our understanding of why SUDEP occurs and how we can prevent it.

"This study has identified the first possible link between the heart and the brain in epilepsy patients", Dr Bagnall said.

"Understanding the genetic basis of SUDEP may inform the future diagnosis of at-risk family members, as well as provide opportunities for prevention."

University of Sydney Cardiologist Professor Chris Semsarian said this is an exciting development that could help to save lives into the future.

"If we can understand why SUDEP occurs, we can work towards preventing it. These new findings provide a platform to initiate available treatment options, such as antiarrhythmic drugs or implantable defibrillators, with the ultimate goal to prevent SUDEP in the community."

Dr Richard Bagnall is a genetic heart researcher in the Centenary Institute's Molecular Cardiology Program.

Further information about the Centenary Institute's genetic heart research is available at www.centenary.org.au

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