

New hope for migraine sufferers: Female gene link identified

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New hope has arrived for migraine sufferers following a Griffith University study with the people of Norfolk Island.

Led by Professor Lyn Griffiths from the University's Griffith Health Institute, the team has identified a new region on the X chromosome as playing a role in migraine.

The research provides compelling evidence for a new migraine [susceptibility gene](#) involved in migraine. The study also indicated that there may be more than one X chromosomal gene involved and implicated a gene involved in iron regulation in the brain.

All females have two X chromosomes whilst males have an X and a [Y chromosome](#).

"These results provide more support for the role of the [X chromosome](#) in migraine and may explain why so many more females suffer from the disorder," said Professor Griffiths.

Tracking down and identifying the various genes that cause migraine is very important as it provides insights to allow us to develop better means of diagnosis and more targeted treatments.

"Currently, 12 per cent of the population suffers from migraine. Even though we have some very good treatments for this very debilitating disease, they certainly don't work for everyone and can have some

adverse side effects. Hence there is a real need to develop new migraine treatments."

This National Health and Medical Research Council funded work involved a unique population study of the remote Norfolk Island where 80 per cent of inhabitants are able to trace their ancestry back to the famous historical event, The Mutiny on the Bounty.

"This population was used due to its unusual pedigree structure in which [genetic relationships](#) can be traced through genealogical data to the island's original founders, and also the high incidence of [migraine sufferers](#) in this population. It's very useful for [gene mapping](#) purposes because of the reduced genetic and environmental diversity," said Professor Griffiths.

A comprehensive chromosome analysis of around 300 Norfolk participants from a large multigenerational Norfolk family, including many who are affected by migraine, was conducted using DNA samples obtained from the islanders.

Provided by Griffith University

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