Research helps unlock gene secrets of autosomal dominant nocturnal frontal lobe epilepsy

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In a national research partnership, Dr Sarah Heron from the University of South Australia's Sansom Research Institute, epilepsy research group, has been working to map the genes responsible for a rare form of epilepsy - autosomal dominant nocturnal frontal lobe epilepsy (ADNFLE).

Dr Heron and her team's latest research to identify a new gene for this form of epilepsy has been published in Nature Genetics this month.

She says while ADNFLE affects a relatively rare group of people, the symptoms and impact of the condition can be devastating.

"ADNFLE usually develops in childhood and characterised by clusters of seizures during sleep," Dr Heron says.

"It can have an association with cognitive deficits and or psychiatric comorbidity.

"Our research has identified that mutations in the sodium-gated potassium channel gene KCNT1 cause severe autosomal dominant nocturnal frontal lobe epilepsy and associated intellectual and or psychiatric disability."

UniSA's epilepsy research group is led by Associate Professor Leanne Dibbens. The gener-discovery research has been undertaken with support from the National Health and Medical Research Council of Australia and in collaboration with researchers at The University of Melbourne's Clinical College's Epilepsy Research Centre.

Dr Heron says the identification of the gene has important implications for genetic counselling and also for understanding more about the full spectrum of epilepsy disorders.

Provided by University of South Australia