FOI Request 2021/22-010 - Successful applications for NHMRC funding from 2016–2020 that include search terms relating to 'migraine research'

Number	Application ID	Application Year	Funding Type	Funding Subtype	Title	CIA Name	Administering Institution	State	Sector	Grant Budget	Broad Research Area	Field of Research	Keywords	Media Summary
1	APP1122387	2016	Project Grants	Standard Project Grant	Identifying novel gene mutations for molecular diagnosis of Familial Hemiplegic Migraine	Prof Lyn Griffiths	Queensland University of Technology	QLD	University	$640,966.25	Clinical Medicine and Science	Neurogenetics	migraine | population genetics | pedigree analysis | molecular genetics | sequencing	This proposal aims to identify novel FHM genes by undertaking an NGS screen of the whole exome of 209 FHM patient samples. We will test the pathological relevance of detected novel mutations by functional analysis in human cell models and using patient-specific stem cell techniques. Using whole genome NGS technology to identify novel mutations will assist in the design and development of a comprehensive NGS approach to diagnose and differentiate this severe neurological disorder.
2	APP1124011	2016	Project Grants	Standard Project Grant	Coupling the mechanical, signalling and transcriptional mechanisms that initiate pathogenesis of Cerebral Cavernous Malformation	Prof Benjamin Hogan	University of Queensland	QLD	University	$1,272,784.91	Basic Science	Developmental Genetics (incl. Sex Determination)	developmental genetics | cell signalling | vascular development | vascular pathologies | zebrafish	Cerebral cavernous malformations (CCMs) are thin walled, vascular malformations in the brain found in 1/200-250 individuals. They can cause migraine, neurological deficits or stroke. This disease can be inherited due to damaging mutations in any of three CCM genes. The project will investigate the molecular control of CCM pathogenesis in animal models. We aim to uncover the molecular cause of these vascular malformations and in doing so identify new therapeutic strategies.
3	APP1126976	2016	Project Grants	Standard Project Grant	Ictal Characteristics of Common Vestibular Diseases	A/Pr Miriam Welgampola	University of Sydney	NSW	University	$288,787.66	Clinical Medicine and Science	Sensory Systems	vertigo | eye movements | migraine | meniere's disease | vestibular neuritis	vertigo is a disabling symptom affecting 1 million Australians at any given time. Acute vertigo is associated with abnormal eye movements or nystagmus, the pattern of which points to its origin. In this project, we extract the unique characteristics of distinct vertigo syndromes to enable their separation
4	APP1143547	2017	Project Grants	Standard Project Grant	Brainstem and hypothalamic function and anatomy in Migraine	Prof Luke Henderson	University of Sydney	NSW	University	$674,937.74	Basic Science	Central Nervous System	migraine | brain imaging | functional magnetic resonance imaging (fmri) | brainstem | hypothalamus	Migraine is a disabling condition characterized by mostly unilateral throbbing head pain and a range of associated neurological symptoms. The underlying mechanisms responsible for the initiation of migraine remains unknown. We aim to determine brain anatomy and activity patterns in migraineurs throughout the migraine cycle. An understanding of the mechanisms responsible for migraine will aid in better treatment development.
5	APP1159006	2018	Project Grants	Standard Project Grant	A structural understanding of calcitonin gene-related peptide and adrenomedullin function	Dr Yi-Lynn Liang	Monash University	VIC	University	$1,202,523.80	Basic Science	Structural Biology (incl. Macromolecular Modelling)	electron microscopy | signalling pathways | g protein-coupled receptors | structure-function | calcitonin receptor	The calcitonin-family receptor are physiologically important receptors that have been implicated in treatment of osteoporosis, migraine and cardiovascular diseases. Therapeutic development targeting at these receptors remains challenging due to lack of mechanistic understanding in how these GPCRs are activated. This proposal will explore the structure and function of the calcitonin-family receptors at a molecular level, enabling improved discovery and development of novel therapeutics.
6	APP1161467	2018	Career Development Fellowships	Clinical CDF	Revolutionising health service delivery for musculoskeletal disorders through discovery, simplifying prognosis and implementing novel clinical pathways.	A/Pr Trudy Rebbeck	University of Sydney	NSW	University	$270,837.10	Health Services Research	Primary Health Care	health services research | musculoskeletal disorders | headache | primary care | implementation	In this Career Development Fellowship, I am to discover new mechanisms that underlie why many people with musculoskeletal pain progress to have long term pain and disability. With my team, we will investigate recovery pathways and know early on who is at risk of non-recovery. This will enable us to direct health care services to those who need them, referring at-risk individuals to expert musculoskeletal physiotherapists early after injury, thereby reducing the burden on the medical system.

7	APP1164494	2018	Project Grants	Standard Project Grant	The spilt personality of glutamate transporters: the structural basis and physiological role of a dual function transporter/channel	Prof Renae Ryan	University of Sydney	NSW	University	$996,180.28	Basic Science	Structural Biology (incl. Macromolecular Modelling)	membrane transport | glutamate | chloride channel | structural biology | drosophila melanogaster	Membrane proteins are pumps that control the movement of nutrients, waste products and chemical messengers in and out of cells. These pumps break down in a wide range of diseases including neurological disorders and cancer. This project is focused on a unique type of transporter/channel hybrid protein that uses a 'twisting elevator' mechanism. We will uncover how they work and what goes wrong in disease. This information can then be used to develop new drugs to improve transporter function.
8	APP1181643	2019	Ideas Grants	Ideas Grants	The contribution of cortical TRPA1 to sensory perception and behaviour of mammals	Dr Ehsan Kheradpezhouh	Australian National University	ACT	University	$445,902.66	Basic Science	Central Nervous System	sensory cortex | ion channels | calcium signalling | sensory function | sensory neurons	Our recent discovery that transient receptor potential Ankyrin 1 (TRPA1) is highly expressed in rodent cortical neurons has shed light on its role in the mammalian cortex. Recent studies have proposed a role for cortical TRPA1 in Alzheimer's disease and migraine and further suggested that its activation can lead to neuronal damage. We will further investigate the physiological role of TRPA1, focusing on its potential involvement in multisensory detection and processing.