# National Centre for Neuroimmunology and Emerging Diseases

## July 2022

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# **Our Mission**

The National Centre for Neuroimmunology and Emerging Diseases (NCNED) is a research team located at Griffith University on the Gold Coast. Led by Professor Sonya Marshall-Gradisnik, the team has a focus on Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS).

Our mission is to translate research findings into preventative medicine, social and clinical care, and public health outcomes. By collaborating with local, national and international research institutes, we aim to create sustained improvements in health and health care for not only those affected by ME/CFS but also other immune disorders.

## **INTERNATIONAL ME/CFS AWARENESS DAY 2022**

In recognition of International ME/CFS Awareness Day on 12 May, NCNED, Menzies Health Institute Queensland, again lit up a number of buildings and sites in blue at our Gold Coast campus. The NCNED Team also created a "Blue Ribbon" image, despite the wind and rain, in honour of all people who suffer from ME/CFS and those who have passed away. This day of acknowledgement also serves as an impetus to concentrate our efforts on ensuring the best quality research which will lead to understanding the pathophysiology of the illness, developing a diagnostic test and discovering effective treatments.

At NCNED, Menzies Health Institute Queensland, Griffith University, our first priority is, and will always be, ME/CFS patients. This belief and attitude is reflected by the past 11 years NCNED has illuminated our research centre with blue lights. We were the first, and continue to be the only, Australian Medical Research and Clinical Centre to participate in this important and significant international initiative.



## PUBLICATIONS

Thapaliya K, Marshall-Gradisnik S, Staines D, Su J, Barnden L: Alteration of Cortical Volume and Thickness in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome: *Frontiers in Neuroscience*, April 2022: <u>https://doi.org/10.3389/fnins.2022.848730</u>

Thapaliya K, Staines D, Marshall-Gradisnik S, Su J, Barnden L: Volumetric differences in hippocampal subfields and associations with clinical measures in myalgic encephalomyelitis/chronic fatigue syndrome: *Journal of Neuroscience Research*, March 2022: <u>https://doi.org/10.1002/inr.25048</u>



#### APPRECIATION AND ACKNOWLEDGEMENT OF GRANTING ORGANISATIONS, AGENCIES, BENEFACTORS AND FUNDRAISERS

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#### **ME/CFS MEDIA COVERAGE**

Professor Sonya Marshall-Gradisnik was interviewed by Channel 7 in relation to ME/CFS and Long COVID. The news report can be viewed via this link: https://www.youtube.com/watch?v=SprLbuSagEE

An in-person radio interview with ABC's Nightlife featured Professor Sonya Marshall-Gradisnik who addressed the links between Long COVID and Chronic Fatigue Syndrome. Please see the link below: https://www.abc.net.au/radio/programs/nightlife/nightlife-living-with-long-covid-effects/13842584

### CONGRATULATIONS



Congratulations to Dr Natalie Eaton-Fitch who recently attended her PhD graduation ceremony at Griffith University. Natalie has been a NCNED team member since 2018 and has been working as a Research Fellow since January 2022.

Congratulations to Mrs Chandi Magawa who has been accepted for a PhD position with scholarship at NCNED. Chandi's project will investigate TRP ion channels, calcium signaling and energy production in Natural Killer cells. Chandi will commence her PhD in October.



#### **VISIT TO WESTERN AUSTRALIA**



Dr Natalie Eaton-Fitch and Ms Etianne Martini-Sasso visited the University of Western Australia in June to train researchers in the specialised use of the patch clamp technique. This collaboration contributes to the outcomes of a National Health and Medical Research Grant obtained in 2021.

NCNED researchers also provided a presentation on up to date research to ME/CFS patients and the ME/CFS and Lyme Association of Western Australia which was well attended.



## **CALLING FOR NATIONAL PARTICIPATION**

#### Brisbane, Queensland

NCNED is inviting patients formally diagnosed with ME/CFS and healthy controls (aged between 18 to 65 years old) to participate in continuing research using magnetic resonance imaging (MRI) of the brain. Interested participants will be asked to undergo MRI scanning with an advanced ultra-high field MRI scanner for 45 minutes (7 Tesla) followed by an additional 30 minutes (3 Tesla). The MRI Scanner is located at the University of Queensland, St Lucia so participants need to be able to travel to Brisbane to complete the scan. In addition to this, participants will complete 7 questionnaires for evaluation of fatigue symptoms, life quality, etc; wear a blood pressure cuff on their arm for 24 hours; and wear an activity monitor on their wrist for 3-4 days to record physical activity, heart rate and sleep/wake information. Please see inclusion criteria on our Facebook page.

#### SE Queensland, Northern New South Wales

NCNED is inviting patients formally diagnosed with ME/CFS and healthy volunteers (aged between 18 and 65) to participate in an upcoming investigation to continue NCNED research in the area of calcium channels, signalling and pharmaceutical intervention. Immunological dysfunction is a consistent feature of ME/CFS and many patients report onset following an infection. Further, there is significant overlap with chronic fatigue (CF) and post-viral syndromes (PVS). Transient receptor potential (TRP) ion channels have been implicated in the pathomechanism of ME/CFS and recent data suggests this channel provides a potential therapeutic target and may benefit ME/CFS patients. This project aims to investigate the role of ion channel dysfunction in ME/CFS and PVS patients and potential diagnostic and therapeutic drugs. The study involves a donation of 84ml of blood and completion of an online questionnaire. Please see inclusion criteria on our Facebook page.

#### **Australia Wide**

While TRP ion channel dysfunction has been reported in ME/CFS patients, researchers continue to learn more about the structure and genes encoding for TRP proteins. NCNED is recruiting participants around Australia who have been formally diagnosed with ME/CFS and healthy controls (reporting no health concerns). Eligible participants must be able to travel to pathology collection centres including Queensland pathology, Sullivan Nicolaides Pathology, QML Pathology, Australian Clinical Laboratories, Melbourne Pathology and Clinipath Pathology to donate 14ml of blood. The inclusion criteria are as follows: (i) aged 18 to 65 years; (ii) non-smoker; (iii) no current diagnosis of other chronic illness (e.g., autoimmune, cancer, cardiovascular disease, or diabetes); and (iv) not pregnant or breastfeeding. Sample donation appointments is ongoing and will be arranged in stages according to location.

If you are interested in being part of these studies or would like more information, please contact NCNED on 07 56789283 or email ncned@griffith.edu.au.