

National Centre for Neuroimmunology and Emerging Diseases

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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 Professors Sonya Marshall-Gradisnik and Donald Staines, 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.

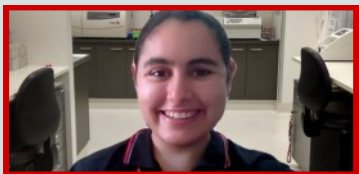
ME/CFS INTERNATIONAL AWARENESS DAY 12 MAY 2020



Landmarks in Brisbane, Gold Coast and Toowoomba were illuminated for the 12th of May International Awareness Day for ME/CFS and Fibromyalgia. NCNED/MHIQ arranged for the Ian O'Connor building (also known as the Griffith Health Centre) and the 'Bridge of Knowledge' over the Smith Street Motorway to be lit up in blue as there have been many biomedical science research advancements during the past year.



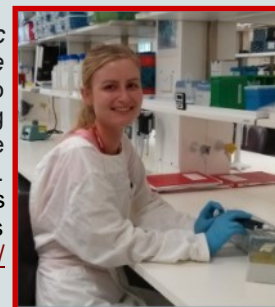
PUBLICATIONS



Ms Rebekah Maksoud and the NCNED team have recently published *A systematic review of neurological impairments in myalgic encephalomyelitis/chronic fatigue syndrome using neuroimaging techniques*.

In this new systematic review NCNED reviewed all research reporting neurological changes in ME/CFS patients compared to healthy controls using neuroimaging techniques. 55 papers in total were included in the review. This systematic review assessed the data from research reporting using neuroimaging techniques, for example magnetic resonance imaging (MRI), positron emission tomography (PET) and electroencephalography (EEG). Outcomes including changes in grey and white matter volumes, cerebral blood flow, sleep, EEG activity, functional connectivity and cognitive function were all reported. Although widespread disruption of the autonomic system is evident, the overall findings were not consistent across the studies. Our assessment of these research findings was based on that these studies had to meet rigorous scientific standards for analysis. Quality assessment was undertaken on study design, methodology and level of evidence. The studies also had low reproducibility making it difficult to derive appropriate conclusions. Future studies using standardised protocols are required to confirm the neurological contribution to the pathology of ME/CFS. Link to article: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0232475>

Dr Teilah Huth and the NCNED team have recently published *A systematic review of metabolomic dysregulation in Chronic Fatigue Syndrome/Myalgic Encephalomyelitis/Systemic Exertion Intolerance Disease*. Dr Huth is currently completing her medical degree, however, she returned to NCNED to undertake further research. In this new systematic review NCNED reviewed all research reporting metabolomic changes in ME/CFS patients compared to healthy controls. Our assessment of these research findings was based on that these studies had to meet rigorous scientific standards for analysis. Quality assessment was undertaken on study design, methodology and level of evidence. The results showed that metabolomics do not exhibit a conclusive role in CFS/ME/SEID and thus do not serve as reliable biomarkers for ME/CFS. Link to article: <https://translational-medicine.biomedcentral.com/articles/10.1186/s12967-020-02356-2>



NCNED has previously reported in a number of systematic reviews there is currently no conclusive evidence that suggests cytokines and microbiome serve as unique biomarkers for development of ME/CFS. Additionally, our reviews also reported that supplements do not sufficiently assist in the management of ME/CFS.

WELCOME AND WELCOME BACK!



Welcome to Ms Breanna Weigel, a new research student to NCNED. Breanna is completing her Biomedical Science Accelerated Honours Degree with NCNED. Currently, Breanna is writing a paper reporting findings for a gastrointestinal and dietary paper, as well as conducting data analysis for a second study examining the role of nutritional intake and supplement use in ME/CFS.

Following an easing of COVID-19 restrictions, NCNED researchers will be returning to the laboratory in July to complete three studies. We are still seeking volunteers. If you would like to participate please contact (07) 5678 9283 or email ncned@griffith.edu.au



RESEARCH VOLUNTEERS

NCNED is currently seeking formally diagnosed ME/CFS patients to participate in a new Health Update Survey. This project aims to investigate the Socioeconomic Impact, Quality of Life and Burden of Illness caused by national or individual large-scale life stressors. The Health Update Survey will ask 10 questions every two weeks on physician satisfaction, diagnosis difficulties, quality of life and burden of illness till August 2020. Participants will receive a \$5 Coles e-voucher and enter the draw to win \$50, \$75 and \$100 Coles e-vouchers drawn half-yearly.

We are also looking for more participants for our Quality of Life and Burden of Illness associated with illness study. It is open to Australian residents aged 18-60 years old and will involve the completion of two online surveys. Participants will receive a \$5 Coles e-voucher and enter the draw to win \$50, \$75 and \$100 Coles e-vouchers drawn half-yearly.

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