# National Centre for Neuroimmunology and Emerging Diseases

# **July 2023**

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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 2023**



In recognition of International ME/CFS Awareness Day on 12 May, NCNED, Menzies Health Institute Queensland, illuminated Gold Coast campus buildings and sites in blue. The NCNED research centre building is now permanently adorned with a ME/CFS Team banner to let all patients know that we are working towards improving their lives in all ways. We pride ourselves in being the first, and continue to be the only, Australian Medical Research and Clinical Centre to participate in this important and significant international initiative.





# REVISED DATE AND VENUE RESEARCH, INNOVATION & DISCOVERY (RID) ME/CFS AND LONG COVID INTERNATIONAL CONFERENCE

The 3rd ME/CFS and Long COVID International Conference will be held at Mantra on Salt, Kingscliffe, NSW, on 9 and 10 November. Due to financial constraints, we can only provide in-person attendance. Safe health practices will be in place to ensure the health and well-being of all attendees. Please check our Facebook page for details.

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

Thank you to the Stafford Fox Medical Research Foundation, McCusker Charitable Foundation, Mr Douglas Stutt, the Mason Foundation, Mr and Mrs Ian and Talei Stewart, the Alison Hunter Memorial Foundation, the Blake Beckett Foundation, Mr Adrian Flack, the Buxton Foundation, the Henty Community, Change for ME Charity, ME/CFS/FM Support Association QLD Inc., the ACT ME/CFS Society, ME/CFS and Lyme Association of WA Inc., MERUK, and the National Health and Medical Research Council.





#### **PUBLICATIONS**

Barnden L, Thapaliya K, Barth M, Eaton-Fitch N, Marshall-Gradisnik S. Altered Brain Connectivity in Long COVID during Cognitive Exertion: a pilot study. *Frontiers in Neuroscience* 17, 2023 https://www.frontiersin.org/articles/10.3389/fnins.2023.1182607/full

Taccori A, Maksoud R, Eaton-Fitch N, Patel M, Marshall-Gradisnik S. A systematic review and metaanalysis of urinary biomarkers in myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS). *Journal of Translational Medicine* (2023) 21:440 https://doi.org/10.1186/s12967-023-04295-0





Maksoud R, Magawa C, Eaton-Fitch N, Thapaliya K, Marshall-Gradisnik S. Biomarkers for Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS): a systematic review. *BMC Medicine* (2023) 21:189 <a href="https://doi.org/10.1186/s12916-023-02893-9">https://doi.org/10.1186/s12916-023-02893-9</a>

Du Preez S, Eaton-Fitch N, Smith P K, Marshall-Gradisnik, S. Altered TRPM7-dependent calcium influx in natural killer cells of myalgic encephalomyelitis/chronic fatigue syndrome patients. *Biomolecules* 2023, 13(7) <a href="https://doi.org/10.3390/biom13071039">https://doi.org/10.3390/biom13071039</a>



#### STAFFORD FOX MEDICAL RESEARCH FOUNDATION GRANT



NCNED researchers Professor Sonya Marshall-Gradisnik (CIA), Dr Kiran Thapaliya (CIB), Dr Natalie Eaton-Fitch (CIC) and colleagues received Griffith University's largest ever biomedical science grant for \$6.4 million. The grant will further our novel scientific discoveries of the pathology of ME/CFS and to explore the potential similarities with Long COVID. The funding also provides for a clinical trial using identified pharmacotherapeutic targets and the registered drug low dose naltrexone (LDN).





NCNED researchers were invited to attend the June 'Parliamentary Friends of ME/CFS' in Canberra. Participants engaged in discussions aimed at improving outcomes for ME/CFS patients across Australia, and importantly, renewing outdated clinical guidelines. The session was well attended by Members of Parliament, patient advocates and stakeholders, both in person and online. Thank you to Senator Jordon Steele-John and Federal MP Maria Vamvakinou for co-chairing this important session.



#### CONFERENCES



NCNED team's research findings were presented by NCNED researcher Dr. Kiran Thapaliya at the 12th International Biomedical Research into ME Colloquium, 2023, United Kingdom. The NCNED research presented at the conference highlighted that ion channels using the NK cell model are dysfunctional as well as significant changes in brain regions in ME/CFS and Long COVID patients. NCNED research presented at this conference also reported restoration of ion channel function using the NK cells from ME/CFS patients who were taking Low Dose Naltrexone (LDN) compared to ME/CFS patients and healthy controls who were not taking this intervention. This conference presentation also highlighted the significant overlap of the brain symptom presentation of ME/CFS and Long COVID.

### **CONFERENCES** (Continued)



NCNED researchers Dr Natalie Eaton-Fitch and PhD candidate Etianne Martini Sasso recently attended the prestigious FASEB Calcium and Cell Function Conference in Malahide, Ireland. Etianne presented recent data on ground-breaking research in the pathology of ME/CFS and Long COVID, namely TRPM3 ion channel dysfunction and potential treatment applications to improve quality of life of sufferers.



NCNED PhD students Breanna Weigel and Maira Inderyas recently travelled to Rome, Italy to attend the 17th World Congress on Public Health. At this conference Breanna was accepted to give an oral presentation sharing results from one of her PhD studies. In her presentation, Breanna highlighted that ME/CFS and Post COVID-19 Condition have significant overlap in their symptom presentation and have a severe impact on patient quality of life.



#### ME/CFS MEDIA COVERAGE

**13 June – Friends of Parliament, Canberra visit resulted in media mentions reaching 599,789 readers** including multiple ABC radio stations, online, and Twitter.

ABC News online - Qld Scientists push for new national treatment guidelines for chronic fatigue syndrome -13 June <a href="https://www.abc.net.au/news/2023-06-13/griffith-university-scientists-researching-chronic-fatigue-mecfs/102471386">https://www.abc.net.au/news/2023-06-13/griffith-university-scientists-researching-chronic-fatigue-mecfs/102471386</a>

The Stafford Fox Medical Research Foundation Grant to Griffith University, NCNED

https://news.griffith.edu.au/2023/04/19/largest-medical-research-grant-to-help-me-cfs-and-long-covid-research/

AAMRI e-News May 2023 <a href="https://mailchi.mp/aamri/may2023?e=49e64d9061">https://mailchi.mp/aamri/may2023?e=49e64d9061</a>

14-15 March – Large scale TV, Radio and Internet coverage of MRI Study (Dr Kiran Thapaliya)

ABC <a href="https://protect-au.mimecast.com/s/-o4pC0YZv2S26qBNJTwYhoNW?domain=asn.us2.list-manage.com">https://protect-au.mimecast.com/s/-o4pC0YZv2S26qBNJTwYhoNW?domain=asn.us2.list-manage.com</a>