



National Centre for Neuroimmunology and Emerging Diseases



December 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.

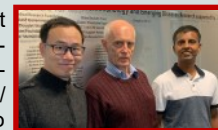


FROM NCNED

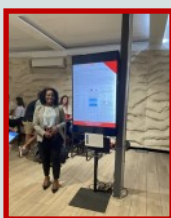


PUBLICATIONS

Associate Professor Leighton Barnden and NCNED Researchers have published an important neuroimaging paper on the Connectivity between Salience and Default Mode Networks and subcortical nodes distinguishes between two classes of ME/CFS. Su J, Thapaliya K, Eaton-Fitch N, Marshall-Gradisnik S, Barnden L. This paper reports abnormal non-overlapping patterns of connectivity in ME/CFS patients meeting Fukuda and ICC criteria. For the first time, we also demonstrated that the two classes of ME/CFS had distinct neurological origins.



<https://www.liebertpub.com/doi/10.1089/brain.2022.0049>



Ms Chandi Magawa and NCNED researchers published a paper in Frontiers in Physiology entitled "Identification of transient receptor potential melastatin 3 proteotypic peptides employing an efficient membrane protein extraction method for natural killer cells". This recent research paper initially compared two membrane protein methods with the aim of detecting membrane proteins. Ms Magawa and NCNED researchers then went on to adapt the preferred method from the two tested to successfully detect TRPM3 ion channels. This achievement is a significant advancement for detecting potential TRPM3 isotypes and their potential as a signature in ME/CFS patients.

<https://doi.org/10.3389/fphys.2022.947723>

Authors Professor Sonya Marshall-Gradisnik and Dr Natalie Eaton-Fitch were invited to contribute a perspectives article reflecting on decades of research on ME/CFS. Given the many parallels between ME/CFS and Long COVID, this article reviewed numerous hypotheses for ME/CFS including neurocognitive, immunological, gastrointestinal and mitochondrial features of ME/CFS and how these findings may provide a platform to expedite Long COVID research.



ME/CFS MEDIA COVERAGE/ENGAGEMENT

Dr Kiran Thapaliya and Dr Natalie Eaton-Fitch were recently interviewed by Phoenix Rising on their key findings for ME/CFS using Magnetic Resonance Imaging (MRI) and the repurposing of LDN in the treatment of patients suffering from ME. You can read their interviews here:

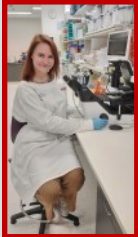
<https://forums.phoenixrising.me/threads/scientific-findings-distinguish-between-myalgic-encephalomyelitis-and-chronic-fatigue-syndrome.88428/>

<https://phoenixrising.me/myalgic-encephalomyelitis-chronic-fatigue-syndrome/natalie-eaton-fitch-ldn-naltrexone/>

Researchers Prof Marshall-Gradisnik, Dr Thapaliya and Dr Eaton-Fitch were invited to present at QLD Primary Care Public Health Network Webinar on 18 October. You can watch the webinar here:

<https://mailchi.mp/db9159d041aa/covid-19-webinar-221020?e=8a76223be9>

WELCOME



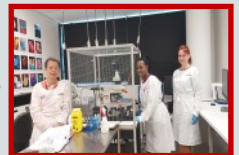
Welcome to Ms Viktoria Tolgyesi. Viktoria joins us as an international student after successfully securing a PhD scholarship and will be undertaking investigations into potential pharmacotherapeutic options in the treatment of ME/CFS.

Welcome to Ms Maira Inderyas. Maira is also an international student with a PhD scholarship. Maira will be investigating Regulatory Dysfunction in ME/CFS using Ultra-high field (7T) MRI.



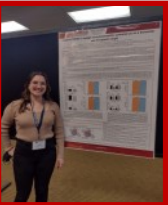
VISITING RESEARCHERS

Renowned ion channel physiologist and NCNED collaborator, Professor Katsuhiko Muraki, recently visited NCNED laboratories to convey patch clamp and TRP ion channel knowledge to commencing PhD Candidates Chandi Magawa and Viktoria Tolgyesi. Professor Muraki has aided ion channel research that has ultimately resulted in ground-breaking research elucidating the pathomechanism of ME/CFS and identified potential treatments.



Professor James Baraniuk from the Department of Medicine at Georgetown University, Washington DC has been visiting NCNED, Griffith University for the past 8 weeks. Professor Baraniuk is investigating the neural mechanisms in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS), Gulf War Illness (GWI) and Long COVID. He has made significant discoveries in brain activation at rest and during cognitive testing in ME/CFS and Gulf War Illness.

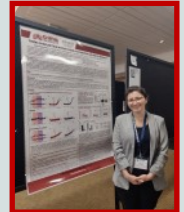
PRESENTATIONS



NCNED researchers Dr Natalie Eaton-Fitch and Ms Etienne Martini Sasso presented on world first research at the prestigious FASEB Ion Channel Regulation Conference in Nova Scotia, Canada.

The data presented by Natalie outlined ground-breaking research on the potential benefit of low dose naltrexone and the restoration of TRPM3 ion channel activity and calcium influx.

Etienne presented the first scientific-based evidence of TRPM3 ion channel dysfunction in Long COVID and the overlap with ME/CFS.



Breanna Weigel, a second-year PhD student at the NCNED, presented recent research findings at the Queensland Women's Health Forum in Toowoomba. This presentation marked the beginning of further research investigating sex-based differences in illness presentation, health-related quality of life and healthcare service access among Australians with ME/CFS. This research aims to further the current understanding of the patient experience for Australians living with ME/CFS.

AWARDS

Breanna Weigel has recently been awarded a Health Policy Research Scholarship with the Deeble Institute for Health Policy Research and Australian Healthcare and Hospitals Association. Breanna's research will focus on the importance of patient experience measures to guide the provision of care to people with Post COVID-19 Condition.

The MHIQ Reconnection Conference presented the following awards to NCNED researchers:
Chandi Magawa: Best Early Career Researcher and Best Poster; Breanna Weigel: Best Rapid Fire Presentation

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