

# ION CHANNEL DYSFUNCTION IN ME/CFS

## PROJECT OVERVIEW

Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) is a poorly understood, debilitating and multisystemic disorder affecting approximately 200,000 Australians. The pathological mechanism of ME/CFS remains unknown and there is currently no diagnostic test nor nationally recognised treatment. 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), such as Long COVID. 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 Long COVID patients as potential diagnostic and therapeutic targets.

We are recruiting the following participants:

- ME/CFS group: participants who have received a diagnosis of ME/CFS (where diagnosis was made using the CCC 2003 or ICC 2011 definitions).
- PVS group: participants reporting chronic symptoms following a known viral infection but have not received a diagnosis of ME/CFS nor other medical explanation for the symptoms.
- Long COVID group: participants meeting the World Health Organization definition.
- Control group: participants who report no health concerns.

The inclusion criteria are as follows:

- Australian residents aged 18 to 65 years old
- Non-smoker
- No current diagnosis of serious chronic illness, e.g. autoimmune, cancer, cardiovascular, diabetes or primary psychiatric diseases
- Not pregnant or breastfeeding

This study involves:

- Donations of 84ml of blood
- Completion of an online questionnaire

Participants will receive a \$25 Coles e-voucher and enter the draw to win \$75, \$100 and \$150 Coles e-voucher drawn half-yearly.

If you are interested in participating, please contact [ncned@griffith.edu.au](mailto:ncned@griffith.edu.au) or call on (07) 5678 9283.

We would like to thank everyone for their support.



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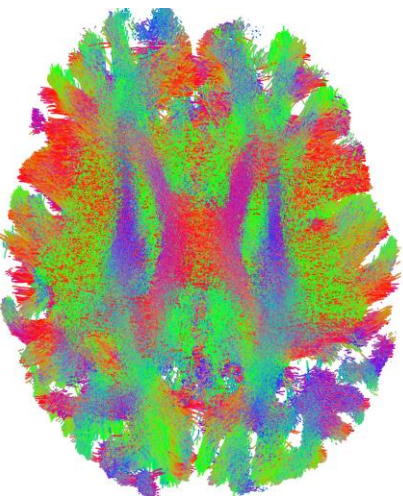


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# Neuroimaging investigations in ME/CFS



## PROJECT OVERVIEW

Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) is a poorly understood, debilitating and multisystemic disorder affecting approximately 200,000 Australians. The pathological mechanism of ME/CFS remains unknown and there is currently no diagnostic test nor nationally recognised treatment. Cognitive disturbances and neurological dysfunction is a consistent feature of ME/CFS and many patients. Further, there is significant overlap with chronic fatigue (CF) and post-viral syndromes (PVS), including Long COVID. Both functional and structural changes have been reported in the brain of ME/CFS and Long COVID patients when compared with healthy controls. This project aims to collect brain magnetic resonance imaging (MRI) data to investigate changes in ME/CFS and Long COVID patients.

We are recruiting the following participants:

- ME/CFS group: participants who have received a diagnosis of ME/CFS (where diagnosis was made using the CCC 2003 or ICC 2011 definitions).
- PVS group: participants reporting chronic symptoms following a known viral infection but have not received a diagnosis of ME/CFS nor other medical explanation for the symptoms.
- Long COVID group: participants meeting the World Health Organization definition.
- Control group: participants who report no health concerns.

The inclusion criteria are as follows:

- Australian residents aged 18 to 65 years old
- Non-smoker
- No current diagnosis of serious chronic illness, e.g. autoimmune, cancer, cardiovascular, diabetes or primary psychiatric diseases
- Not pregnant or breastfeeding

This study involves:

- Attending a brain MRI imaging appointment
- Completion of an online questionnaire

Participants will enter the draw to win \$75, \$100 and \$150 Coles e-voucher drawn half-yearly. To cover the cost of travel, participants will receive a voucher valued at \$50.

If you are interested in participating, please contact [ncned@griffith.edu.au](mailto:ncned@griffith.edu.au) or call on (07) 5678 9283. We would like to thank everyone for their support.



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# Genotyping analysis in ME/CFS

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Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) is a poorly understood, debilitating and multisystemic disorder affecting approximately 200,000 Australians. The pathological mechanism of ME/CFS remains unknown and there is currently no diagnostic test or nationally recognised treatment. Immunological dysfunction is a consistent feature of ME/CFS and many patients report onset following an infection. Transient receptor potential (TRP) ion channels have been implicated in the pathomechanism of ME/CFS and recent data suggests this channel provides a potential diagnostic target. More recently, the clinical and pathological overlap between ME/CFS and Long COVID has been reported, with TRP ion channel dysfunction now being reported in both cohorts. This project aims to investigate the role of ion channel dysfunction in immune cells of ME/CFS and Long COVID patients through genotyping analysis.

We are recruiting the following participants:

- ME/CFS group: participants who have received a diagnosis of ME/CFS (where diagnosis was made using the CCC 2003 or ICC 2011 definitions).
- PVS group: participants reporting chronic symptoms following a known viral infection but have not received a diagnosis of ME/CFS nor other medical explanation for the symptoms.
- Long COVID group: participants meeting the World Health Organization definition.
- Control group: participants who report no health concerns.

The inclusion criteria are as follows:

- Aged 18 to 65 years old
- Non-smoker
- No current diagnosis of serious chronic illness, e.g. autoimmune, cancer, cardiovascular, diabetes or primary psychiatric diseases
- Not pregnant or breastfeeding

This study involves:

- Donation of 14ml of blood
- Completion of an online questionnaire (in English)

Participants will receive a \$25 Coles e-voucher and enter the draw to win \$75, \$100 and \$150 Coles e-voucher drawn half-yearly.

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# Impact of Illness on Quality of Life



## PROJECT OVERVIEW

Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) is a poorly understood, debilitating and multisystemic disorder affecting approximately 200,000 Australians. People with ME/CFS have a lower quality of life (QoL) when compared with healthy individuals and other chronic illnesses. However, illness presentation and QoL are yet to be investigated over time. Further, there is a significant overlap between ME/CFS and Post Viral Fatigue Syndromes (PVS), like Long COVID. Therefore, this project aims to follow people with ME/CFS and Long COVID over time to observe changes in symptom presentation and QoL. Further, we aim to make comparisons with other multi-systemic illnesses, such as Fibromyalgia (FM), Multiple Sclerosis (MS), and Rheumatoid Arthritis (RA).

We are recruiting the following participants:

- ME/CFS group: participants who have received a diagnosis of ME/CFS (where diagnosis was made using the CCC 2003 or ICC 2011 definitions).
- PVS group: participants reporting chronic symptoms following a known viral infection but have not received a diagnosis of ME/CFS nor other medical explanation for the symptoms.
- Long COVID or Post COVID-19 Condition: meeting the World Health Organization case definition.
- People with FM, MS, and RA.
- Control group: participants who report no health concerns.

The inclusion criteria are as follows:

- Aged 18 to 65 years old.
- Non-smoker.
- History of malignancy within the past 5 years.
- If you are a person with ME/CFS or Long COVID, you will not be able to participate in this research if you have received a diagnosis of an autoimmune disease.
- Not pregnant or breastfeeding.

This study involves:

- Completion of three online questionnaires (in English) every six months.

Participants will receive a \$25 Coles e-voucher and enter the draw to win \$75, \$100 and \$150 Coles e-voucher drawn half-yearly.

If you are interested in participating, please contact [ncned@griffith.edu.au](mailto:ncned@griffith.edu.au) or call on (07) 5678 9283.

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