

ABOUT MYOSITIS AT THE CENTRE FOR PERSONALISED IMMUNOLOGY

Inflammatory muscle diseases include polymyositis, and dermatomyositis. Although the cause of myositis is unknown, most are considered to be autoimmune disorders.

Autoimmunity happens when the body's immune system attacks its own muscle fibres, blood vessels, connective tissue, organs, or joints. Autoimmune disease is the outcome of a complex interplay between the environment and genetic predisposition.

GENES AND GENETICS

Genes are the instructions for building the body, and they encode proteins that tell the body how to work.

There are around 20,000 genes in our body. Each gene is made up of DNA, which is a four-letter chemical code (A, T, C and G). Each gene has thousands of these letters. The entire genetic code is 3 billion letters. The genome consists of our complete set of genes.

Most genes come in two copies with one inherited from each parent. We share 99.9% of your genetic information with other people.

Sometimes, just one change in the single letter DNA code is enough to cause a serious illness. Often, however, problems only arise as a result of the combined actions of many variants.

THE CENTRE FOR PERSONALISED IMMUNOLOGY (CPI)

The Centre for Personalised Immunology (CPI) was established in April 2014 to help people with immune diseases by discovering causative genetic variations.

At the CPI our energetic, collaborative inter-disciplinary research team study novel genes using cutting edge technology.

We believe the greatest potential for translating genomic research into clinical care is through studying complex disease pathways.

Find out more at cpi.org.au.



CENTRE FOR
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Understanding genes and genetic differences is one of our most promising approaches to improving diagnosis and treatment of disease.

Better characterisation of the genetic basis of diseases is the CPI's research priority. Over the last five years we have established many sophisticated approaches to this problem. In this project, we will obtain comprehensive gene sequences from patients enrolled in the study in order to identify genetic variations that might contribute to autoimmune muscle disease.

It is also necessary to understand how any genetic variations cause changes in the function of the immune system. We want to try to understand how genes deliver the wrong instructions to cause myositis.

We cannot know in advance how quickly our research findings will translate into improved treatments, but we do know it will get faster with more resources to build the process across diseases. Analysis of genomes from patients with myositis, or other immune diseases, provides the first step in the discovery pathway.

ENROLMENT INFORMATION

If you would like to participate in research at the CPI, please contact cpi.info@anu.edu.au. After this, several things will happen:

1. We will obtain your written consent.
2. We will ask you to attend a clinic with one of our investigators in order to record your clinical and laboratory history that led to your diagnosis.
3. You will be asked to provide a sample of either blood or saliva. We will provide sample collection instructions.
4. We will isolate your DNA (genetic material) from your blood or spit sample, this will then be stored for future analysis.
5. We will then analyse your genetic information, but we will only look at genes that we know are related to immune function. To ensure your anonymity, this will only proceed after removing any data that could identify you. All data will be stored de-identified.
6. We may ask you to contact your immediate family to ask if they would be willing to participate in the study. We will not contact your family about the study without your consent.

For more information and to participate in the research, please contact cpi.info@anu.edu.au.



PATIENT SUPPORT AT THE MYOSITIS ASSOCIATION AUSTRALIA

The Myositis Association-Australia Incorporated (Myositis Association Australia) is an organisation dedicated to providing a network of support for myositis patients and their families as well as supporting research to help find a cure for myositis or improve the quality of life of myositis patients.

Find out more at myositis.org.au.

RESEARCH IN MEMORY OF JENNY AND BRUCE PRYOR

Inflammatory myopathies are rare diseases. The exact number of people diagnosed every year is not known with certainty, but some reports show that there are 3 to 7 new cases per 100,000 people yearly. Given the rarity of myositis, funding for research can be difficult to come by.

However, in 2019 the Centre for Personalised Immunology was bequeathed a significant sum of money by Jenny and Bruce Pryor. The purpose of this gift is to conduct research into Dermatomyositis and associated autoimmune conditions.

The Pryor's gift is inspirational, given the opportunities it provides to expanding our understanding of autoimmune conditions. We are immensely grateful for Jenny and Bruce Pryor's extensive generosity.

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For more information, news and updates visit our
website:

cpi.org.au



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