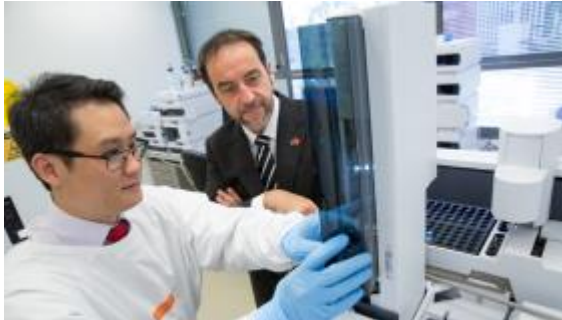


## A blood test to distinguish between MS subtypes

6th March, 2017



Dr Edwin Lim and Professor Gilles Guillemin Macquarie University (Image source: Carmen Lee)

**MS Research Australia is proud to have supported the work of Professor Gilles Guillemin and Dr Edwin Lim. Their latest work has hit the media headlines with 1 million views on the ABC News website for a potential blood test distinguishing between the different types of multiple sclerosis (MS).**

Professor Guillemin and Dr Lim from Macquarie University, NSW, published evidence for the first-ever blood biomarker – a chemical identifier in the blood – for distinguishing the different types of MS.

MS has three commonly recognised forms, relapsing-remitting MS, secondary progressive MS and primary progressive MS. The various forms of MS have very different outcomes and treatment implications. Traditionally, distinguishing between MS subtypes has been a challenging process requiring both time and an array of tests. But this looks set to change, thanks to this research.

Professor Guillemin explains ‘This is a significant discovery because it will facilitate the ability to quickly and simply differentiate between the three types of MS and will allow clinicians to adapt their treatment for MS patients more accurately and rapidly.’

This research was funded in its infancy through the MS Research Australia incubator grant program which provides seed funding to get innovative new MS research ideas off the ground. This initial success was followed by an MS Research Australia Fellowship for Dr Lim, as well as further highly competitive NHMRC funding. Our analysis has shown that, on average, MS researchers have been able to leverage our incubator grants by 27 times more than the initial funding.

While the blood test holds promise to assist in the management of MS in the clinic, the research also sheds important light on how the biology of progressive MS differs from that of relapsing MS. It is thought that progressive disease involves a shift from an inflammatory condition in which immune cells come into the brain from the blood, to a situation where immune and support cells that reside in the brain contribute to ongoing damage to neurons. These resident cells are known to produce and process the chemicals that form the basis of this blood test. A detailed knowledge of these processes will allow us to develop targeted treatments for both progression and symptom management.

The blood test may also play a key role in the clinical trials for new treatments that aim to stop and reverse progressive disease. One of the key factors currently hindering the development of treatments is accurate and rapid tests, or biomarkers, such as this blood test, that can measure within the short time-frame of a clinical trial, whether medications are working.

Dr Matthew Miles CEO of MS Research Australia said ‘We are excited to see the translation of this, initially fundamental research, into a clinical test. It has the potential to be the first blood biomarker to diagnose the type of MS patients have, meeting one of the unmet needs in the clinical management of MS’.