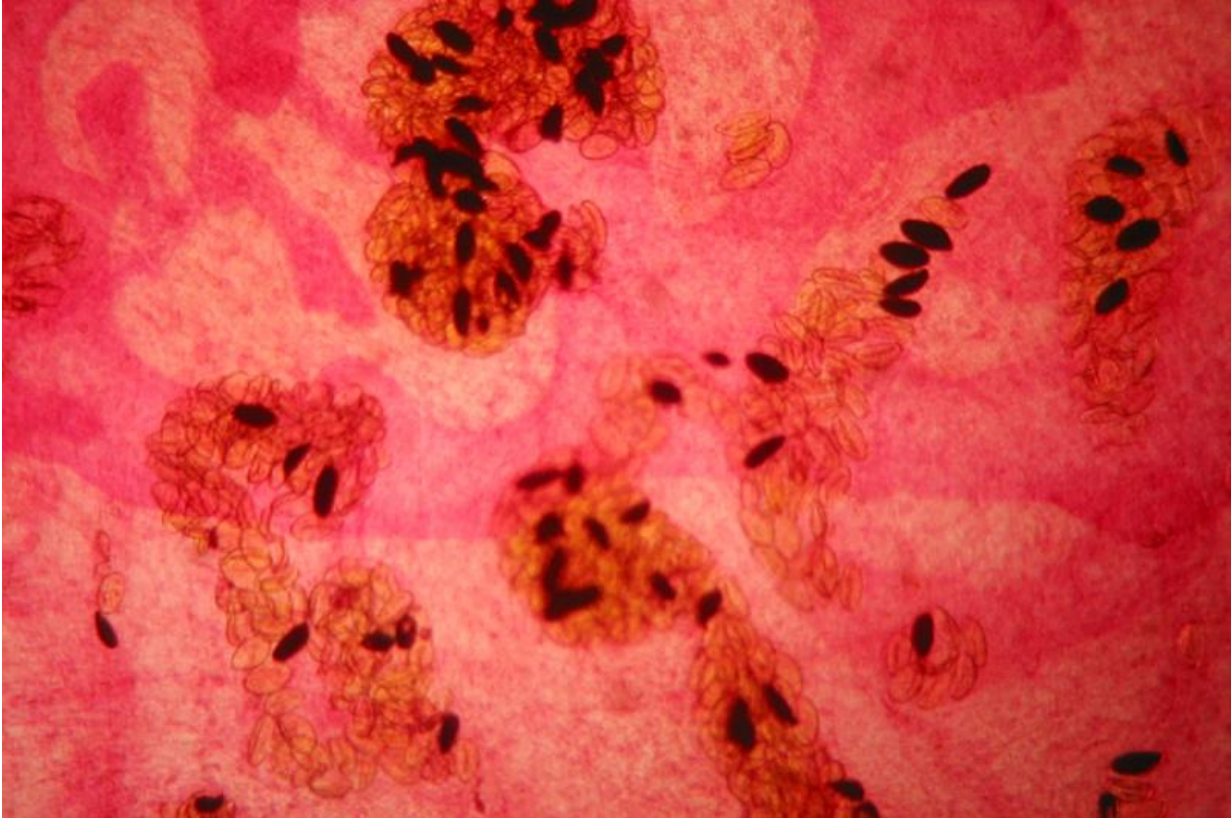


Parasites could hold the key to halting MS

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A microscope slide of *Fasciola hepatica* (liver fluke), the parasite being used in the study. Credit: Peter Halasz, Wikimedia Commons

Parasitic worms are typically something we're keen to avoid, but new research from UTS's *itthree* institute shows that controlled infection of parasites could be harnessed to prevent the progression of multiple sclerosis (MS).

"This important project is working towards a better treatment option for the 23,000 people living with MS in Australia and over 2.3 million around the world," says Dr Matthew Miles, CEO MS Research Australia.

Lead researcher, Dr Sheila Donnelly explains, "We are trying to stop the progression of the disease. Our goal is to develop a treatment, which if delivered at diagnosis would stop or slow down the clinical progression to severe disability that occurs in people with MS."

Anecdotal reports over the last 15 years have indicated that countries with greater exposure to parasitic worms have lower rates of autoimmune diseases – including MS – in their populations. This has prompted a growing number of experimental studies which have produced significant evidence to support these claims.

Donnelly and co-investigator Associate Professor Judith Greer from the University of Queensland used this evidence as the basis for their research.

"People who are actively infected with these [worms](#) don't seem to suffer as much from the autoimmune diseases that are so prominent in the western world," says Donnelly.

"To prevent tissue damage as they migrate through their human hosts, [parasitic worms](#) secrete molecules which dampen excessive inflammation" says Donnelly. "We are using those same molecules to switch off the inflammatory response that mediates diseases like MS."

The project has recently been awarded a \$100,000 grant from MS Research Australia to fund the crucial pre-clinical trial stage of the research, which ensures the safety and effectiveness of the treatment method before entering into human studies.

The research has the potential to develop new therapeutic drugs to treat not only MS, but also other [autoimmune diseases](#) such as type 1 diabetes, arthritis and even allergies.

Provided by University of Technology, Sydney

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