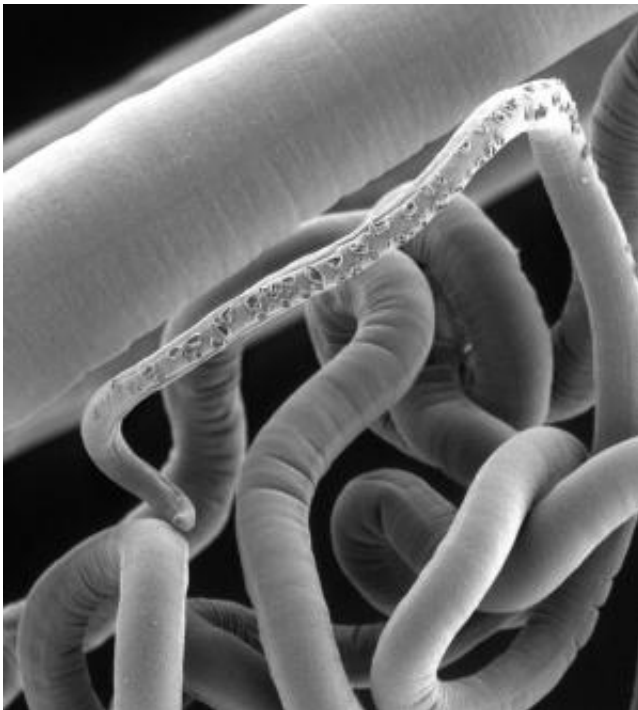


# Study makes important step-forward in mission to tackle parasitic worm infections

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This picture shows an electron microscopy image of *Trichuris muris* (a species of parasitic worm) present in the large intestine. Credit: Toby Starborg, Uta Rössler, Allison Bancroft, Richard Grencis

Researchers from The Manchester Collaborative Centre for Inflammation Research (MCCIR), University of Manchester have made an important step forward in finding a potential treatment for an infection that affects over a billion people worldwide.

Gastrointestinal [parasitic infections](#), which are worm infections in the intestine, affect nearly one quarter of the world population and have been heavily linked with poverty in poorer regions.

They normally result in a chronic, long-lived infection associated with poor quality of life and health problems. A team led by Dr Mark Travis, MCCIR and the Wellcome Trust Centre for Cell-Matrix Research, has identified a pathway which seems to be important in driving the chronic infection and that could now potentially be targeted for therapy.

Dr Travis, from The University of Manchester's Faculty of Life Sciences, said: "Current treatments involve the use of drugs that expel parasitic worms from the body by killing them. But this does not prevent rapid re-infection with worms and sufferers often encounter problems with drug resistance.

"As these infections are usually chronic they are likely to influence the way the body's immune system behaves. We wanted to look in more detail at the pathways via cells and molecules in the body that regulate the immune response during infections.

"We believe this is crucial for identify new ways to treat these poorly managed infections." Researchers examined the behaviour of a key molecule which plays a multi-functional role in controlling the body's immune response, known as TGF $\beta$ .



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The study, published in the latest edition of the Open Access journal *PLOS Pathogens*, found when this key molecule was blocked early during an infection it significantly protected from infection in mouse models.

Dr Travis said: "We have therefore identified a new pathway that regulates immune responses in the gut and can protect against [infection](#). There now needs to be further research to see whether this could be used to create a protective [immune response](#) during a parasite infestation."

**More information:** [dx.plos.org/10.1371/journal.ppat.1003675](https://doi.org/10.1371/journal.ppat.1003675)

Provided by University of Manchester

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