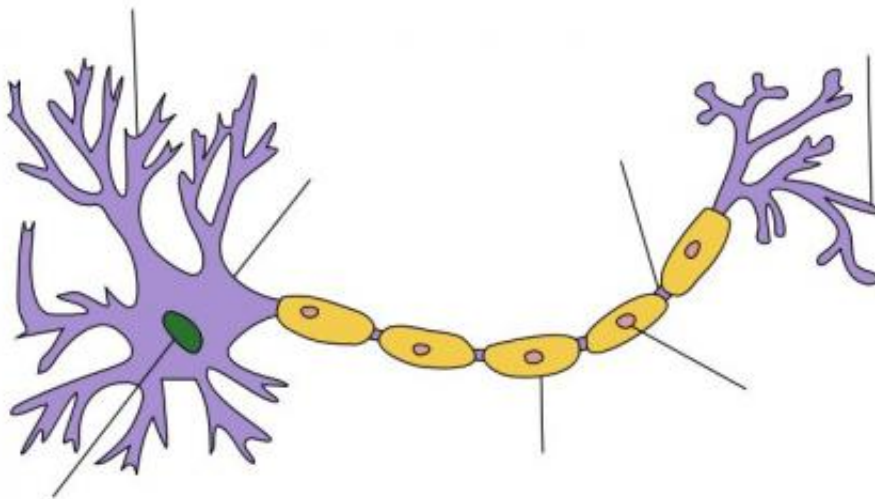


MS researchers find new ways to regenerate the brain's insulation

August 27 2018, by Kathryn Powley



Myelin sheath. Credit: Wikipedia.

University of Melbourne researchers have found a way to rebuild damaged nerve coverings that cause Multiple Sclerosis.

Finding ways to restore the myelin sheath is recognised as important to preventing the progression of disability in MS patients.

Researcher Jessica Fletcher led the team who made the discovery and their findings are published in the *Journal of Neuroscience*.

"Your [brain](#) runs on electricity. And, like electrical wires, your nervous system needs insulation. These nerves are covered by an insulating sheath called myelin that is vital to the normal functioning of our nervous system," Dr Fletcher said.

"But for those people affected by diseases like MS, this insulating [myelin](#) is destroyed by the immune system – leading to significant nerve dysfunction as well as slowed or blocked nerve conduction between the brain and the rest of the body."

Dr Fletcher said the team successfully used a synthetic compound to stimulate a receptor pathway to promote remyelination in the brain.

"There's nothing currently available to help with [myelin sheath](#) repair. The beauty of what our team has done is taken what naturally occurs in healthy cells and used that to manipulate a similar response in damaged cells," she said.

"It's very basic foundation research to show that this idea can work."

Dr Fletcher said this was early-stage research and any medical application to the discovery would be a long way off.

More information: Jessica L. Fletcher et al. Targeting TrkB with a Brain-Derived Neurotrophic Factor Mimetic Promotes Myelin Repair in the Brain, *The Journal of Neuroscience* (2018). [DOI: 10.1523/JNEUROSCI.0487-18.2018](#)

Provided by University of Melbourne

Citation: MS researchers find new ways to regenerate the brain's insulation (2018, August 27)

retrieved 16 May 2023 from <https://medicalxpress.com/news/2018-08-ms-ways-regenerate-brain-insulation.html>

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