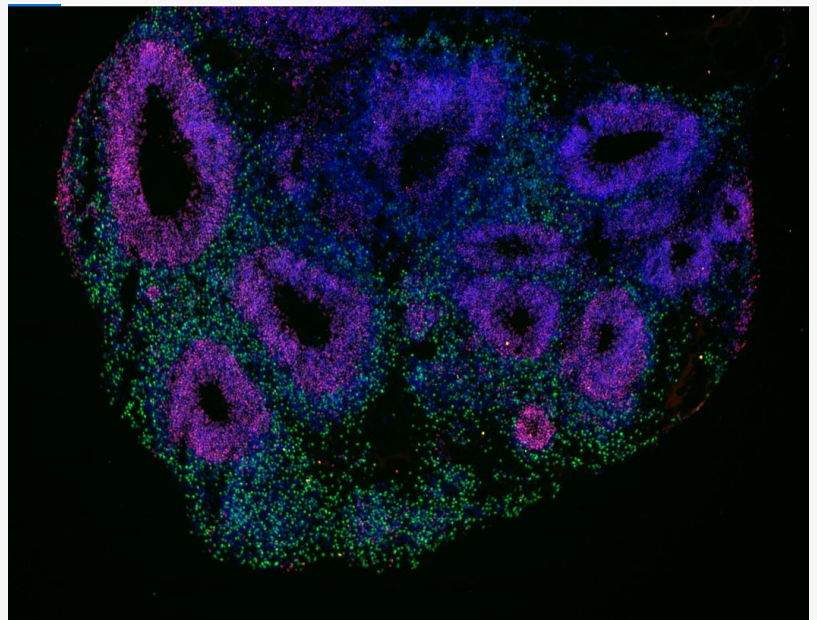


New Study Identifies Key Protein Behind Myelin Repair Failure in Multiple Sclerosis

NEW YORK, NY, UNITED STATES, March 24, 2026 /EINPresswire.com/ --

Scientists at the [Tisch Multiple Sclerosis Research Center of New York \(MSRCNY\)](#) have identified a protein that may explain why the nervous system fails to repair itself in patients who have primary progressive multiple sclerosis (PPMS).

The [study](#), which was just published in the journal *Frontiers in Neuroscience*, offers important new insight into why myelin, the protective coating that surrounds nerve fibers, fails to regenerate in PPMS leading to unrelenting disease progression.



Cerebral Organoid

Using state-of-the-art technology, researchers reprogrammed blood cells to become “embryonic” and created patient-specific miniature, lab-grown models of the brain and spinal cord. These 3-D

“live” laboratory models referred to as cerebral and spinal cord organoids are used to investigate the biological mechanisms behind MS. Cerebral organoids derived from individuals with PPMS showed decreased levels of a protein called p21. This is a key protein that is necessary for the formation of new myelin, and diminished p21 in PPMS patients thus results in failure to repair the loss of myelin seen in MS.

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Our research marks a significant step forward in understanding the reasons for disease progression in Primary Progressive Multiple Sclerosis (PPMS).”

Dr. Saud A. Sadiq, Director and Chief Research Scientist, Tisch MSRCNY

“Our research marks a significant step forward in understanding the reasons for disease progression in PPMS,” said Dr. Saud A. Sadiq, Director and Chief Research

Scientist of the Tisch MS Research Center of New York. “By identifying how p21 dysregulation affects myelin repair, we open new possibilities for therapeutic interventions that could

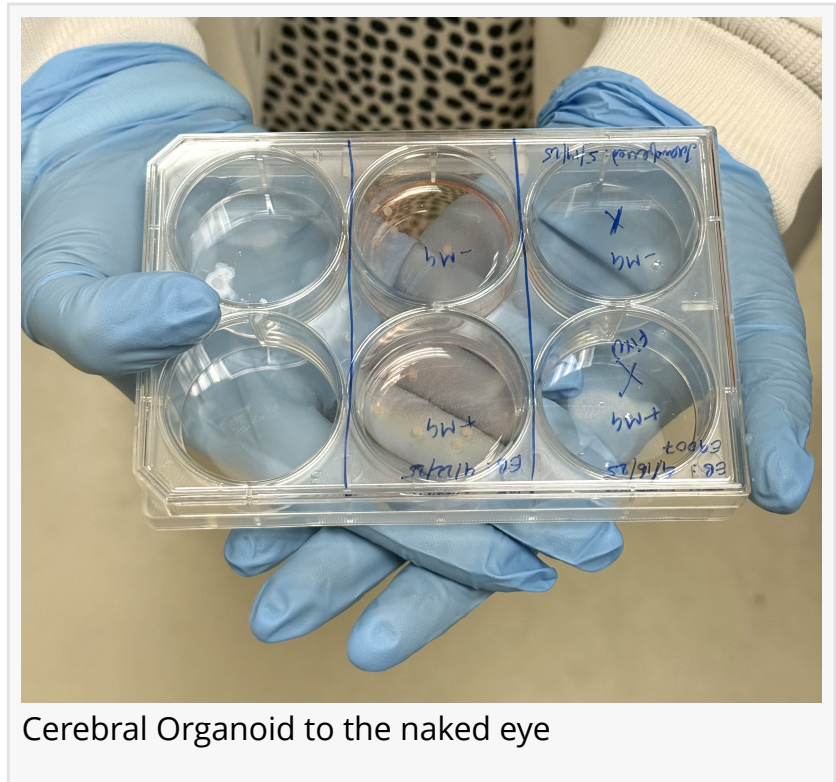
potentially improve patient outcomes.”

The full study can be accessed [here](#). It has been selected to be part of the journal’s research topic: Cellular and Molecular Crosstalk Between Neural and Immune Pathologies: Unraveling Novel Common Mechanisms and Therapeutic Targets.

About Tisch MS Research Center of New York:

The Tisch MS Research Center of New York is an independent, 501c3 nonprofit research institution dedicated to finding the cause of and cure for multiple sclerosis. Led by award-winning neurologist Dr. Saud Sadiq, the Tisch MSRCNY team conducts industry-leading medical research that rapidly translates from lab bench to bedside. The research center is co-located with the International Multiple Sclerosis Management Practice, a highly rated clinic offering MS patients access to full-service MS management and treatment. Dr. Sadiq's work is featured in over 150 scientific publications, and he has been named one of America's Top Doctors by Castle Connolly since 1996.

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Cerebral Organoid to the naked eye

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