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[White matter cells linked to depression](#)

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Changes in a type of white matter brain cell called astrocytes play a role in depression, suggest a study published online this week in *Neuropsychopharmacology*. The work is the first to show a link between cellular changes in white matter and mood disorders.

Mood disorders affect over 20 million adults per year in the U.S. and can have devastating results. To investigate the biological factors behind depression, Naguib Mechawar and colleagues analyzed postmortem brain cells from depressed suicides and sudden-death individuals without a history of depression. The cell samples came from a section of the brain involved in emotion regulation and decision-making. They found that, while the gray matter

astrocytes were the same across subjects, the white matter astrocytes were significantly larger and more branched in the depressed suicides than in the controls. Since astrocytes are normally involved in inflammatory responses, this study provides further evidence that chronic white matter inflammation may play a role in depression.

The authors caution that due to the small sample size of this study, further work will be needed to verify these findings.

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