Study: Life can alter one's memory storage

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The everyday experiences of a human being can have a direct effect on the brain's physiology and how memory storage operates, a U.S. study found.

Baltimore's Johns Hopkins Medical Institutions said several researchers had learned that one's life experiences can dramatically affect the strength of the brain's neural impulses in relation to memory.

Neuroscience professor David Linden said by electrifying slices of a rat's brain, he and his fellow researchers were able to discover a biochemical mechanism linked to memory storage in the brain.

The particular brain receptor targeted by the study is called mGluR1 and has been tied to both epilepsy and addiction.

Linden said by measuring the strength of the signals being sent in the brain slices, the researchers learned how repeated stimulation can wear down the brain's abilities.

"So in addition to furthering our basic understanding of memory storage," Linden said, "our work suggests that drugs designed to alter mGluR1 are promising candidates for the treatment of addiction, epilepsy, and diseases of memory."