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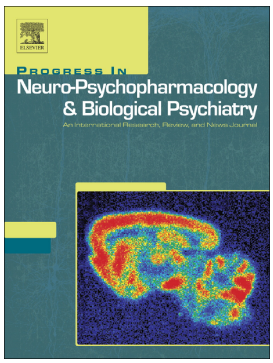

Ketamine-induced hypnosis and neuroplasticity in mice is associated with disrupted p-MEK/p-ERK sequential activation and sustained upregulation of survival p-FADD in brain cortex: Involvement of GABAA receptor

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Abstract

Ketamine (KET) is an antidepressant and hypnotic drug acting as an antagonist at excitatory NMDA glutamate receptors. **The working hypothesis postulated that KET-induced sleep in mice results in dysregulation of mitogen-activated protein kinases (MAPK) MEK-ERK sequential phosphorylation and upregulation of survival p-FADD and other neuroplastic markers in brain.** Low (5-15 mg/kg) and high (150 mg/kg) doses of KET on target proteins were assessed by Western immunoblot in mouse brain cortex. During the time course of KET (150 mg/kg)-induced sleep (up to 50 min) p-MEK was increased (up to +79%)