

Phosphodiesterase signaling system is disrupted in the cerebella of subjects with schizophrenia, bipolar disorder, and major depression

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Abstract:

Phosphodiesterases (PDEs) are a superfamily of enzymes that degrade cAMP and cGMP and influence multiple physiological processes including learning, differentiation and apoptosis. Genetic and postmortem studies have identified a number of phosphodiesterases (PDEs) associated with bipolar disorder (Fatemi et al., 2008a), schizophrenia (Fatemi et al., 2008b; Iwamoto et al., 2008; Millar et al., 2005), and major depression (Numata et al., 2008; Wong et al., 2006), suggesting impairment of PDEs and cAMP and cGMP signaling in subjects with these disorders.