Quetiapine is a second-generation atypical antipsychotic that is used clinically to treat bipolar disorder, schizophrenia, and depression. Quetiapine inhibits D1/2/3/4 receptors, 5-HT2A/2C/6/7 receptors, histamine H1/2 receptors, M1 muscarinic acetylcholine receptors (mAChRs), and α1A/1B/2C-adrenergic receptors and activates α1/2 receptors and 5-HT1A receptors. Quetiapine’s neuromodulatory, cognition enhancing, antipsychotic, antidepressant, antihistamine, and neuroprotective activities stem from its actions at D2, 5-HT and histamine H1/2 receptors. The major metabolite of quetiapine, norquetiapine, also exhibits similar activities but has a different binding profile. When administered in vivo, quetiapine decreases immobility time in the forced swim test. Quetiapine also increases oligodendrocyte maturation and prevents loss of oligodendrocytes and myelin in animal models of cerebral ischemia/reperfusion. Quetiapine also exhibits benefit in the treatment of Alzheimer’s disease, suppressing memory impairment in the Y-maze test in transgenic animal models and decreasing age-related loss of brain-derived neurotrophic factor (BDNF).

References


Caution: This product is intended for laboratory and research use only. It is not for human or drug use.