Oxcarbazepine (OX) is an antiepileptic/anticonvulsant commonly used to treat epilepsy, but also exhibits activity as a treatment for mood disorders and neuropathic pain as well. Administration of oxcarbazepine leads to a reversible reduction in current amplitude from voltage-gated Na+ channels and may suppress current amplitude of delayed rectifying K+ channels; this reduces the amplitude of action potentials and prolongs their duration. This compound also inhibits Na+ channel-dependent Glu release and produces a moderate open channel block on nicotinic acetylcholine receptors (nAChRs), preventing deactivation. Interestingly, oxcarbazepine may have potential as a treatment for substance abuse disorders, as it is moderately effective as a relapse prevention treatment in a clinical trial of recently abstinent alcohol-dependent subjects.

References


