

Ensaculin (KA-672 · HCl): A Multitransmitter Approach to Dementia Treatment

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ABSTRACT

Ensaculin, a novel benzopyranone substituted with a piperazine moiety, showed memory-enhancing effects in paradigms of passive and conditioned avoidance in both normal and artificially amnesic rodents. It exhibited neuroprotective activities in an NMDA toxicity model and neurotrophic effects in primary cultured rat brain cells. The compound could be characterized as a weak NMDA receptor-operated channel blocker. In receptor-binding studies, ensaculin was found to have high affinities to serotonergic 5-HT_{1A} and 5-HT₇ receptors, adrenergic α_1 , and dopaminergic D₂ and D₃ receptors. Due to its unique pharmacodynamic profile, ensaculin may have potential as an antedementia agent acting on various transmitter systems.