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Trifluoromethyl Ketone-based Inhibitors of Apoptosis in Cerebellar Granule Neurons

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A variety of aromatic trifluoromethyl ketone derivatives has been studied as inhibitors of apoptosis in cerebellar granule neurons (CGNs). Among them, alpha-trifluoromethyldiketone (**2**) and benzyl trifluoromethyl ketone (**11**) were found to be apoptosis inhibitors which can prevent a neurodegenerative disease. Compounds **2** and **11** showed neuroprotection effect on low K⁺-induced apoptosis in CGNs. Furthermore, these compounds effectively suppressed DNA fragmentation accompanied with apoptosis. The neuroprotection mode of **2** and **11** was not related to inhibition of caspase-3.

