ABSTRACT

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Boswellic acids as promising agents for the management of brain diseases.

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Boswellic acid (BA)s are pentacyclic triterpenic acids present in gum resin of Boswellia species (such as B. serrata and B. carterii). They possess a variety of pharmacological effects such as anti-inflammatory, anti-oxidant, and anti-excitotoxic effects. These properties may have potential therapeutic implication in neurological disorders. Notably, the BAs-induced neuroprotection is proposed to be associated with the ability to reduce neurotoxic aggregates, decrease oxidative stress, and improve cognitive dysfunction. Recently, BAs have been suggested as potential agents for the treatment of brain tumors due to their potential to attenuate cell proliferation, migration, metastasis, angiogenesis, and promote apoptosis during both in vitro and in vivo studies. The present review aims to address these studies and highlights the possible underlying mechanisms of the observed effects. Besides, novel formulations and improving pharmacokinetic properties may enhance the therapeutic efficacy of BAs.

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