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Antifungal activity of essential oil from *Artemisia campestris L* on Fungal Species Development

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This work studies the antifungal capacity of the essential oil of spontaneous aromatic plant with vocation medicinal used in the traditional treatments in the South-West of Algeria: Artemisia campestris L. The local plant tested gives a good essential oil yield (0.37%). The physico-chemical analysis of the essential oil of this plant specie has enables to us to even characterize to identify our oil. Antifungal activity of the essential oil was studied witch respect to seven fungal strains with various concentrations. The results of direct contact method show that the oil of Artemisia campestris L. is proven very effective on the mycelial growth of the moulds. All strains were inhibited at concentration as weak as 1/70 (v/v), Fusarium oxysporum f.sp. albedinis and Penicilluim expansum were most sensitive, being inhibited as from 1/800 (v/v) and 1/500 (v/v) respectively. This essential oil has a fungistatic effect. In addition to the growth of the mycelium, the essential oil of plant showed, *in vitro*, a antifungal activity at least important on the two other developmental stages, germination and the sporulation, of all fungi . All strains were inhibited at concentration as weak as 1/100 (v/v). Fusarium oxysporum f.sp. albedinis was most sensitive, being inhibited as from 1/1500 (v/v).

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Riluzole ameliorates learning and memory deficits in Ab25-35- induced rat model of Alzheimer's disease and is independent of cholinoceptor activation

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Statement of the Problem: Alzheimer's disease (AD) is a major global public health concern and social care problem that is associated with learning, memory, and cognitive deficits. Riluzole is a glutamate modulator which has shown to improve memory performance in aged rats and may be of benefit in Alzheimer's disease. Methodology & Theoretical Orientation: In the present study, its beneficial effect on attenuation of learning and memory deficits in Ab25-35-induced rat model of AD was assessed. . Finding: Riluzole administration at a dose of 10 mg/kg/day p.o. improved spatial memory in Morris water maze and retention and recall in passive avoidance task and its protective effect was not neutralized following intracerebroventricular microinjection of muscarinic or nicotinic receptor antagonists. Further biochemical analysis showed that riluzole pretreatment of intrahippocampal microinjected rats is able to attenuate hippocampal AChE activity and lower some oxidative stress markers, i.e. MDA and nitrite, with no significant change of the defensive enzyme catalase. Furthermore, riluzole prevented hippocampal CA1 neuronal loss and reduced 3-nitrotyrosine immunoreactivity. Conclusion & Significance: It is concluded that riluzole could exert a protective effect against memory decline induced by intrahippocampal Ab25-35 through anti-oxidative, anti-cholinesterase, and neuroprotective potential and its beneficial effect is possibly independent of cholinoceptor activation.

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