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Anxiolytic-like Effects of Sanjoinine A Isolated from *Zizyphi Spinosi Semen* in Mice

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This experiment was performed to investigate the anxiolytic-like effects of sanjoinine A, one of major alkaloid compounds of *Zizyphi Spinosi Semen* (ZSS) by using the experiment paradigms of anxiety and compared with that of a well-known anxiolytic, diazepam. In elevated plus-maze test, sanjoinine A (1.0 and 2.0 mg/kg, p.o.) increased the percentage of time spent on the open arms and the number of open arms entries. Sanjoinine A (2.0 mg/kg, p.o.) also increased the number of head dips compared with that of control group in the hole board test. From the results of both experiments, it is suggested that sanjoinine A has anxiolytic-like effects. However, sanjoinine A has no effect on locomotor activity while diazepam (2 mg/kg, p.o.) decreased locomotor activity. In addition sanjoinine A did not decrease the strength force by using the traction meter. Therefore, anxiolytic-like effects of sanjoinine A shows differences from those of diazepam. Biochemical and molecular studies demonstrate that sanjoinine A increases chloride influx in cultured cerebellar graule cells and the expression GABA receptors subtypes are modulated. We conclude that the anxiolytic-like effects of sajoinine A might be mediated by the modulation of GABAergic transmission.