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Poster Sessions

Search for prophylactic or therapeutic agents for dementia (Alzheimer's type)

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The main objective of our study is to prevent dementia (Alzheimer's type). We examined the effects of pretreatment with the ether extract of natural plants on pathological changes due to domoic acid (DA) (Tsunekawa *et al.*, 2013). The natural plant that was effective in this preliminary experiment was *Graptopetalum paraguayense* (GP). The 50% effective dose was 0.15 mg/kg. A stronger positive response was observed in the hippocampal , parasubiculum (PaS), presubiculum (PrS) , and entorhinal cortex (Ent) after 5 days. After 50 days, strong staining appeared in the hippocampus, the apoptosis was induced. After 50 days, we recognized the deposition of amyloid β in the extracellular matrix between cells. We did not observe amyloid β deposition when the brain had been pretreated with GP extract. The GP-extract-pretreated group was tunel negative after 1 and 5 days, negative in the hippocampal area after 50 days, and positive in the PaS, PrS, and Ent. These results indicate that GP suppressed apoptosis in most cells, except for PaS, PrS, and Ent, in the hippocampal area. In addition, amyloid β deposition was also suppressed. These results suggest that GP suppresses the pathological changes that are commonly seen in the dementia.