

P18

Pharmacological Effects of the Extract of *Bombycis corpus* on Central Nervous System

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Bombycis corpus, a Korean traditional drug, was estimated for its anticonvulsant action, hypnotic effect, analgesic activity, anxiolytic effect, memory enhancement in mice, and inhibitory activity on monoamine oxidase in vitro and determined the contents of serotonin and 5-hydroxyindoleacetic acid in brain by HPLC method. The action mechanism of its sedative effect was tentatively explained. The extract increased anticonvulsant effect at 1g/kg by 53.7% extension of onset time against control group and diminished lethality induced by pentylenetetrazole, however, did not decrease the convulsion induced by picrotoxin or strychnine, which may mean that the extracts activate the chloride channel in central nervous system. The extract showed significantly analgesic effects with 68.0% and 79.8% at 1.0g/kg in the phenylquinone- and acetic acid-induced writhing test, respectively, however, exhibited practically no inhibition in the hot-plate test, which may suggest that this drug is useful for pain by chemicals, but not by physical factors. The extract lengthened the pentobarbital-induced sleeping time by ca. twofold against control group. Furthermore, the extract exhibited dose-dependently the anxiolytic effect with 63.4% decrease of the immobility duration against control group at a dose of 1.0g/kg in the tail-suspension test.

The extract showed weak enhancement of memory recovery on scopolamine-induced impairment of passive avoidance performance. The extract inhibited monoamine oxidase activity by 23.1% at 5.0mg/ml *in vitro*. Finally, the extract did not increase the brain levels of serotonin and 5-hydroxyindoleacetic acid, which may explain that its analgesic effect is not resulted from the increase of serotonin.