NEUROPROTECTIVE AND ANTI-AMNESIC ACTIONS OF PHYTOCHEMICAL BASED FORMULATION BRAINACT-17 IN THE ANIMAL MODELS OF LEARNING AND MEMORY

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Introduction: Alzheimer's disease is the most common form of dementia characterized by irreversible loss of memory and behavioral disturbances. Newer drugs are continually introduced into the market with little efficacy. Hence it is worthwhile to explore the utility of traditional medicines in treatment of cognitive disorders.

Aim: To investigate the neuro-protective and memory improving potentials of phytochemical based formulation BRAINACT-17.

Methods: β-amyloid and aging induced amnesia, were the interocpetive behavioral models. Passive avoidance paradigm, elevated plus maze and radial arm maze were the exteroceptive behavioral models. Concentrations of Norepinephrine, Epinephrine, Dopamine, 5-HT in brain were measured by HPLC analysis. Contents of MDA, NO, activities of SOA and CAT were also measured.

Results: BRAINACT-17 improved acquisition and retention in both exteroceptive and interoceptive behavioral models. It significantly ameliorated memory impairments induced in mice by scopolamine (1.0 mg/kg body weight s. c.), normal aging, as measured in the passive avoidance and the Morris water maze tests. Produced normalizing in brain and controlled alterations in neurotransmitter levels due to neurodegeneration. It also decreased ChAT activity and inhibited decrease in Ach levels in brains of amnesic rats.

Conclusion: BRAINACT-17 protected the animals from stress, amnesia and neuro degeneration. Hence BRAINACT-17 can be beneficial in the treatment of dementia of Alzheimer's type and other neurodegenerative disorders.