

## 2<sup>nd</sup> International Conference and Exhibition on **Traditional & Alternative Medicine** August 25-26, 2014 DoubleTree by Hilton Beijing, China

### **Pundi rasayana improves memory in animal models relevant to alzheimer's disease**

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Cure of cognitive disorders such as amnesia, attention deficit and Alzheimer's disease is still a nightmare in the field of medicine. Nootropic agents such as piracetam, aniracetam and choline esterase inhibitors like Donepezil are being used to improve memory, mood and behavior, but the resulting side effects associated with these agents have made their use limited. The present study was undertaken to assess the potential of Pundi rasayana (PR) as a memory enhancer. The roots of the herb included in the formulation are used by the gondas tribal of Karnataka for various mental ailments. PR (2, 4 and 6 mg/kg p.o.) was administered for eight successive days to both young and aged mice.  $\beta$ -amyloid, scopolamine, ibotenic acid, CO<sub>2</sub> and aging induced amnesia were the experimental models. Basal forebrain lesion induced decrease in cerebral Ach and ChAT activity were assessed, Concentrations of Norepinephrine, Epinephrine, Dopamine, 5-HT in cerebral cortex, cerebellum, hypothalamus, hippocampus, and corpus striatum of rats and mice were measured by HPLC analysis. PR significantly improved learning and memory in young mice and reversed the amnesia induced by scopolamine,  $\beta$ -amyloid, ibotenic acid, CO<sub>2</sub> and natural aging. PR inhibited KCN and Carotid artery ligation induced hypoxia, reversed amnesia, neurodegeneration and produced normalizing action on discrete regions of brain and controlled alterations in neurotransmitter levels due to neurodegeneration. PR might prove to be a useful memory restorative agent in the treatment of dementia seen in elderly.

#### **Biography**

Karichedu Joshi Hanumanthachar born on 5th march 1975 at Bellary, completed his doctorate from GJUST, Hisar, Haryana. His research interests are neuroscience, behavioral psychopharmacology, herbal psychotropics, standardization of phytopharmaceuticals, Alzheimer's and Parkinson's disease. Published more than 131 research papers in scientific journals and presented in various national and international conferences. He is Editorial board member for international and national journals. Recognized as the most valuable reviewer by Lancet, BJPR, neuroscience journal. Reviewer for 38 international and national journals, scientific boards, Viz. Alzheimer's disease international, UK, Alzheimer's Association, USA, USA-ISRAEL Bi-national Science Foundation, Israel, etc. Received Sanshodhana deekshit award, young scientist award, young investigator scholarship award, travel grant/ fellowship awards from National institute of health, National institute of aging, Alzheimer's association, USA, Alzheimer's drug discovery foundation, UK, International brain research organization, Geneva, etc. He received 6 best research paper awards at international/national conferences. He has authored three books on management and treatment of behavior disorders, MCQs for pharmacy students, microbiology and biotechnology. He is currently working as Professor and Principal, Sarada Vilas College of Pharmacy, Mysore.

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