 Methods: Forty-eight healthy volunteers (24 men and 24 women) participated in the study. Treatments were administered double blind on Day 1, 2, 3 and Day 4, 3 h before the start of the tests. Laboratory tests comprised a word learning test (immediate & delayed recall, recognition), a tracking test (easy & hard condition), Sternberg memory scanning test (reaction time, % errors), and a divided attention test (tracking and memory scanning (reaction time and errors)). Statistical analyses were done separately for the Day 1 and 4 using analyses of variance for repeated measures.

 Results: On Day 1, DIPHEN significantly impaired tracking performance (easy: p<0.0001, hard: p<0.0001), and divided attention (DAST/TR: p<0.0001, DAST/RT: p<0.0001). Memory (Word learning and Sternberg memory scanning) was not significantly impaired after DIPHEN. Unlike performance in the Sternberg memory scanning test, correctness of subjects’ responses (errors) in the divided attention test was significantly reduced after DIPHEN (p<0.0002). In contrast, LEVO did not significantly impair performance on any parameter. On Day 4, both treatments did not significantly differ from PLAC on any test parameter.

 Conclusion: The results suggest that memory and psychomotor performance are unaffected while using Levocetirizine in a dose of 5 mg once daily.

**P.E.052 COGNITION IMPROVING EFFECT OF DVD-111 (NOOPEPT)**

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DVD-111, Noopept, (N-phenylacetylprolylglycine ethyl ester) was designed as dipetide analogue of the standard cognition enhancer, Piracetam (Gudasheva et al.,1996; Seredenin et al. US Patent 5,439,930,1995). Noopept (N) facilitates the memory in various experimental tests, alleviates the memory deficit caused by ECS, scopolamine, lobectomy, cortical thrombosis (Ostrovskaya et al.,1994,1999). In contrast to longer peptides N preserves its effects in case of peroral administration. The advantage of N over Piracetam consists in the higher activity and wider spectrum of effects. The aim of this study was to analyze the effect N in the healthy volunteers. Materials and methods: This placebo controlled double blind investigation was performed in the framework of 1-stage of clinical study in 20 healthy males: 10 treated perorally by N 20 mg (2 tablets, 10 mg in each) for 13 days and 10 treated by placebo. Battery of standard psychological and psychophysiological methods, modeling the operatory performance in the rest and in stress conditions, was used. Results: N exerts positive influence on the spatial and logic thinking, the attention, augments the speed of counting and logistic tasks performance, affects positively the concentration of the attention, increases the accuracy of fine motor acts, diminishes the latency of the reaction to the light, improves the long-term and short-term memory. N was more effective in stress- nonresistant, than the stress-resistant individuals. The mild activating and anxiolytic component was shown to present in the profile of N activity. Conclusion: N exerts positive effect on wide spectrum of cognitive functions. Taking together with good endurance, lack of side effects data obtained are testifying that it is reasonable to study N in patients with cognition deficits.

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**P.E.053 DEPLETION OF SEROTONIN VERSUS DOPAMINE PRODUCES DOUBLE DISASSOCIATION ON TESTS OF MNEMONIC FUNCTION IN HEALTHY VOLUNTEERS**


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Monoamine neurotransmitters are involved in the facilitation of various cognitive processes, although many of their specific functions remain unclear. In the present investigation, we used an amino acid depletion paradigm to explore the consequences of lowered serotonin (5-HT) and dopamine (DA) synthesis on aspects of mnemonic function in human volunteers. All participants completed three experimental sessions; acute tryptophan depletion (ATD to lower 5-HT); acute tyrosine/phenylalanine depletion (ATPD to lower DA); and a balanced-control condition (B). The study was conducted in a double blind, placebo-controlled, three-way crossover design. Cognitive and mood assessments were performed at baseline and approximately five hours post-depletion. ATD significantly impaired delayed-recall, but not immediate, memory performance. In contrast, ATPD resulted in a marked reduction of spatial, but not numeric, working memory (SWM) function. Overall no secondary effects were observed on additional tests of sensorimotor, attentional and perceptual abilities, or subjective-eatings of mood. These findings indicate that lowering 5-HT and DA synthesis produces neurochemical 'double-dissociation' on tests on mnemonic function in human volunteers.

**P.E.054 EFFECTS OF NOOTROPIC MEDICINE SEMAX ON THE HEMOSTATIC SYSTEM IN CHRONIC ISCHEMIC BRAIN DISEASE PATIENTS**


On the purpose to study the efficiency of action of the nootropic medicine Semax on the parameters of hemostatic system – 14 patient both male and female in the age from 58 to 79 to L, II and II phase of chronic ischemic brain disease was examined. Semax was intranasal administrated to all patients over a 10 days period, in a dependent manner of 600mg, daily. The parameters of the hemostasis were determined by the well established methods, before and after therapy by Semax. The platelet aggregation in blood plasma enriched with platelets was measured by analyser 230LA NPF- Biola, using inducers: ADP, collagen. We have shown that Semax administration lead to enhanced fibrinolytic activity of patients blood plasma by influencing various indices of the system. Semax increased general fibrinolytic activity 4 times as much, enhanced activity of plasmin and tissue plasmin activator. 4.7 and 3.2 times, respectively, did not change influence antiplasmins concentration. Semax administration has increased antithrombin III and protein C system activity which were decreased in chronic ischemic brain disease patients, 1.3-1.4 times, respectively. Anticoagulation activity of blood plasma determined by PTT-Test, showed no difference from such in control during preparation influence. The concentration of fibrinogen stood permanent during the observation and did not differ from such in healthy dones. The content of factor XIIIa did not change in dynamics of Semax application. Due to perform therapy patients shown spontaneous ADF-dependent platelet aggregation decreased and trustful 1.5 times reduced of collagen-dependent aggregation. Thus, the application of nootropic medicine Semax can be expanded as the proof-reader of hemostatic system to chronic ischemic brain disease patients.

**P.E.055 MODULATION OF P50m SUPPRESSION BY EMOTIONAL VISUAL STIMULI**

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Objective: Sensory gating system is the preattentive nervous system, which modulate its sensitivity to incoming stimuli and play an important role for stress adaptation. The P50 wave of the auditory evoked response to the second of paired stimuli (P50 suppression) is known to one of indicators of sensory gating system. The present aim was to study if visual emotional information affects the sensory gating system as measured with the P50 suppression.

Methods: Fifteen healthy subjects were participated in this study. P50 suppression was evaluated by magnetoencephalography (MEG) while they viewed emotionally slides varying in valence and arousal. Three sessions (positive, neutral, and negative slide conditions) were recorded in a randomized order. The standard paired-click paradigm, with an inter-click interval of 500 ms, with click pairs (0.1 ms square waves 60 dB above the individually determined subjective hearing threshold) separated by 8 s inter-pair was used. Magnitude of brain response which appeared after 50ms from the stimulation presentation was measured and the ratio 2nd/ 1st was calculated as degree of suppression. The examinations were conducted under a protocol that was approved by the Ethics Committee of Hiroshima University School of Medicine. All subjects gave informed written consent for their participation.

Results: The location and latency of P50 were not affected by emotional conditions. The degree of P50 suppression was significantly attenuated during viewing of negatively valenced slides, but not during positive and neutral slide viewing.

Conclusion: The results of this study showed that preattentive, early sensory processing, auditory P50 suppression was affected by negative emotional stimuli.