Ernst, A., Klingberg, F., Klingberg, H.
Wheel-running of rats in combination with a simple self-stimulation procedure


Erban, L., Richtrova, E.
Correlation of DNA content in leukocytes with their cytochemical DNA index

Res. Inst. Psychiatry, CS 181 03 Praha 8 Bohnice, Czechoslovakia

Janicki, P., Libich, J., Szreniawski, Z.
Effects of new benzodiazepine estazolam on ECOG pattern and maximal electroshock (MES) in the rat

Dep. Pharmacol., Inst. Physiol. Sci., Med. Acad., 00 927 Warsaw, Poland

Abstract
As described previously benzodiazepines produced a concomitant increase of slow and fast waves, as well as of spindle activity different from those observed by barbiturates. In our experiments, occurrence of slow waves after estazolam preceded the induction of fast waves. The mode of action of estazolam seems to be strongly dose-dependent. In lower doses estazolam produced synchronization of the ECoG (lowering the frequency and increasing both the voltage level and spindle activity). On the contrary, in higher doses estazolam (except the first 15-20 min. after administration) produced fast activity in the ECoG (decreasing both the voltage level and spindle activity). It might be concluded that at the higher doses the mode of action of estazolam is similar to the action of diazepam, and at lower doses to flunitrazepam and clonazepam.
Chaichenko, G.M.
Electrical activity in the rat amygdala in some behavioral situations
Dep. Hum. Anim. Physiol., Kiev State Univ., 252 0001 Kiev 17, Russia

Allikmets, L.H., Rago, L.K., Otter, M.J.
Effect of piracetam on central serotoninergic processes
Dep. Pharmacol., Tartu Univ., Tartu, Estonian SSR, Russia

Malatova, Z., Pomfy, M., Marsala, J.
Cholinergic enzyme activity during partial brain ischemia in the dog

Mager, P.P.
Indirect discrimination of type 1μ and 1δ opioid receptor properties using quantitative
structure-activity relationships
Res. Group Pharmacochem., Med. Unit, Karl Marx Univ. DDR-7010, Leipzig, Germany
Vladimirova, G.
Polygraphic characteristics of daytime sleep during social adaptation of normal children less than three years of age

Czarnecka, E., Gralewicz, S., Mazur, M.
Effects of ethanol on after-discharges evoked by electrical stimulation of hippocampus in rabbits
Dep. Pharmacol., Med. Acad., 90145 Lodz, Poland

Mares, P., Fischer, J., Stach, R.
Influence of clonazepam on thalamocortical phenomena in rats
Inst. Physiol., Czech. Acad. Sci., Prague, Czechoslovakia

Rybakowski, J., Potok, E., Strzyzewski, W.
Decreased activity of ouabain-dependent sodium and potassium fluxes in erythrocytes during depression and mania
Dep. Psychiatry, Acad. Med., 60-572 Poznan, Poland
Irmis, F.


Inst. Psychiatry, Prague, Czechoslovakia

Taggart, P.


Middlesex Hosp., London, United Kingdom

Czigler, I., Tolgyesi, M.


Gille, H.G., Ullsperger, P., Pietschmann, M.


Podivinsky, F., Jergelova, M.

Effect of vestibular caloric stimulation on the H-reflex in hemiparetic patients with focal
ischemia of the brain


Erban, L., Richtrova, E.
Correlation between osmotic resistance of leukocytes to the oxygen pyknotic index Q(p)

Res. Inst. Psychiatry, CS 181 03 Praha 8-Boh TTice, Czechoslovakia

Myslivecek, J., Stipek, S., Crkovska, J.
Effect of visual deprivation on protein and nucleic-acid content in cerebral cortex of rats after the eye-opening term

Inst. Hyg. Epidemiol., CS-100 42 Prague, Czechoslovakia

Abstract
Between postnatal days 10 and 16 the cerebral cortex of rats displayed a rise in protein content and a tendency towards RNA increase, whereas changes in DNA content (cell density) were absent. Young rats whose eyelids had been sutured and covered with black collodion at the age of 7 or 8 days exhibited some development retardation already by day 16. At an age of 5 weeks the brains of control, eyelid-sutured and dark-reared rats did not differ in their weight. However, dark-reared rats had a highly significantly increased RNA concentration in the occipital cortex (not differing significantly from controls) than eyelid-sutured animals (p<0.005). In the remainder of cortex, eyelid-sutured animals displayed an increase (p<0.10) of RNA concentration as compared with controls. The most pronounced intergroup differences were found on comparing RNA, DNA and protein concentrations between occipital and residual cortices within the individual animal groups. The difference was practically nil in control animals; all components were highly significantly raised (RNA: p<0.001; DNA: p<0.01; protein: p<0.001) in the residual cortex in eyelid-sutured animals; dark-reared
animals displayed a similar tendency as eyelid-sutured animals that, nevertheless, did not reach statistical significance.

Simon, J., Kruzej, E., Svarc, V., Krizek, M.
Correlation of A/B behaviour pattern, alcohol intake, HDL-cholesterol and serum magnesium levels in middle-aged men

Podivinsky, F., Jergelova, M.
Effect of vestibular electrical stimulation on the H-reflex


Faber, J., Vladyka, V.
Antiepileptic effect of electric stimulation of the locus coeruleus in man.
Sulc, J., Benesova, O., Kubik, V.
Disturbances of learning and hippocampal deviation in adult rats administered neonatally dexamethazone

Heidler, I., Mares, J., Mares, P., Urbanova, M.
The influence of clonazepam on transfer during initial phases of kindling

Krýsa, I.
The effect of noise on learning and retention.
Abstract
Thirty one healthy adults (18 women and 13 men, aged 24 to 52 years) were studied in three experimental series. For testing the effect of noise on learning and retention--fixation of the learned--the partly modified method of the laboratory language was used. The experiments were performed in a quiet room at LAeq background noise to 40 dB. Basic microclimatic conditions were also observed. The subjects were tentatively and audiometrically examined. The noise load was a randomly variable noise of LAeq = 81-82 dB. The results of the study (a total of 64 individual tests) showed that the noise load had a negative effect on learning the laboratory language and retention--fixation of the learned.

Erban, L., Richtrová, E.
The effect of cyanide and oxygen on the pyknosis of leucocytes in psychically altered persons.
Temporal analysis of simple electrodermal responses.

Abstract
The experiment was designed to determine a stable basis on which the GSR curve is formed. A theoretical model of a simple GSR has been proposed, with a description of its basic properties. Two dimensions of this model within which the GSR curve is plotted, are differentiated: time and value dimension A stable temporal scheme of GSR development was determined, where a ratio division of selected time sectors (active measurement points) has its base in the logarithm of the natural number “e”. Certain practical consequences for its application in psychophysiological experiments have been deduced from the theoretical GSR curve. The discussion also bears on the need of an elucidation of the significance of GSR within the frame of reference of man’s psychophysiological unit.

Operant behavior in rats and catecholamine - propranolol interaction

Dept. of Pharmacology, Med. Fac. of Hygiene, Praha, Czechoslovakia

Psychological characteristics and heart rate response to exercise and emotional challenges.

Abstract
The correlation was studied between heart rate responses to exercise and various emotional challenges and personality characteristics (MMPI) in healthy subjects, neurocirculatory asthenia and angina pectoris Higher scores in MMPI scales coincided with lower amplitude of HR oscillations, lower HR responses and longer HR recovery times, i.e. with symptoms of a worse functional state and adaptability of the cardiovascular system.
**Petrek, J., Kulikov, G.A.**

Interaction of short latency cortical responses to somatosensory and acoustic stimuli in anterior part of middle suprasylvian gyrus of cat’s brain.  

**Abstract**

The work sums up the results of experiments in which interaction was studied between cortical short latency nonprimary responses (SNPR) produced by paired stimuli in the anterior part of the middle suprasylvian gyrus of cat’s brain. In paired stimuli (somatosensory + acoustic or acoustic + somatosensory) the second stimulus (test stimulus) followed after the first stimulus (conditioning stimulus) in intervals of 20 to 400 ms. An analysis of the results demonstrates that in an animal anaesthetized with Nembutal (35 mg/kg) an interaction takes place between central systems taking part in the origin of acoustic and somatosensory SNPR in the anterior part of middle suprasylvian gyrus. On the basis of these data the authors conclude that acoustic and somatosensory SNPR in the anterior part of middle suprasylvian gyrus result from the activity of two different and independent systems.

**Hrbek, J., Macakova, J., Komenda, S.**

Effect of physostigmine (0.1 mg, 0.3 mg, 0.6 mg) on the higher nervous activity in man  


**Dostalova, K., Hrbek, J.**

Effect of various doses of ethanol on the tissue of CNS in an experiment in vitro  

Dr. S. Allende 3, 755 15 Olomouc, Czechoslovakia
Hlavicka, P., Indra, M., Radil, T.
The influence of atropine on hippocampal theta activity generation

Gantchev, G.N., Dimitrov, B.
Brain potentials related to additional isometric contraction.

Roldán, E., Dostálek, C.
Description of an EEG pattern evoked in central-parietal areas by the Hathayogic exercise Agnisara.

Abstract
Agnisara is a Hathayogic exercise consisting essentially in alternate, forceful retractions and protrusions of the abdominal wall, performed along a 20-30 s period of apnoea. In the course of series of Agnisars spindle bursts of a "wicket" EEG wave pattern developed over the para-Rolandic areas of the cerebral cortex, at frequencies around 12-13 Hz, with waxing and waning amplitudes in the range of 50 to 100 microV. These spindle-bursts, which occurred preferably during the phase of retraction of the abdominal wall, were named "Xi" rhythm (after the Greek letter X). It is the same as the one that regularly accompanies the performance on various other Hathayogic exercises. Xi spindles were recorded in linked earlobe reference derivations from areas located bilaterally midway between F-C, C-P, and P-O standard electrode positions of the 10-20 system. This EEG pattern would be considered as the expression of the central excitation, produced by the exercise's long-lasting and repeated stimulation of visceral, and somatic receptors. Thus, this activation affects mainly cortical structures with somato-visceral representation.
Mares, P., Velisek, L.


Abstract
Effects of metrazol (pentamethylenetetrazol) and ethosuximide were studied in male albino rats aged 7, 2, 18 and 90 days. The 18-day-old rats exhibited the highest sensitivity to metrazol. CD50s in the remaining three age groups were nearly the same. Ethosuximide was reliably effective against metrazol only in adult rats; in young animals it did not significantly change CD50s. Metrazol induced in ethosuximide-pretreated young rats either modified (long-lasting minimal seizures in 18-day-old animals) or new seizure patterns (minimal seizures in 7- and 12-day-old rats).

Jergelová, M.


Abstract
The cortical potential changes associated with unilateral voluntary self-paced hand movements were detected over the surface of the scalp by the summation method of EEG activity in 20 young subjects. A typical complex wave form of average movement potential (AMP): N1, P1, N2, P2, were discerned in all subjects in our records. This paper presents the results of the topographical distribution of the second potential of the AMP (Premotion Positivity, P1) and the last potential of the AMP (Positive Postmovement onset Potential, P2). Our results indicate a bilateral symmetrical presence of both positive components precentrally and parietally. They also indicate that both these potentials are bilaterally large posterior to the rolandic fissure, and laterality effects in amplitudes occurred only in the second positive wave parietally during right-hand responses in right handers.

Tikal, K., Plevova, J.

Suva, J., Janousek, I.
A study of lithium levels in rat serum, blood cells and brain


Suter, T.W., Buzzi, R., Woodson, P.P., Bättig, K.
Psychophysiological correlates of conflict solving and cigarette smoking.

Abstract
Twenty-eight subjects participated in three sessions which involved three successive rows of STROOP stimuli presented in a spaced trial technique. The first session was a training session, and in the second and third sessions the subjects had to smoke in balanced sequence a 0.2 mg and a 1.2 mg nicotine cigarette between the second and third rows of STROOP stimuli. For these two smoking sessions these experimental subjects were compared with a yoked-control group which attended the task passively without responding to the stimuli but also had to smoke a 1.2 mg nicotine cigarette. Continuous psychophysiological recording showed: (a) Before smoking the heart rates were lower in the yoked than in the experimental subjects. (b) A gradual but modest habituation of intrasession heart rate and EEG measures developed in all experimental groups. (c) Pronounced skin conductance and vasoconstrictive responses to the STROOP stimuli persisted in the experimental groups without any tendency to habituate and without modification by smoking. (d) Significant smoking-induced tachycardia and cutaneous vasoconstriction were seen in the yoked subjects only. Behaviorally, puffing style of smoking was intensified in the experimental group as opposed to the yoked group, and smoking neither impaired nor improved STROOP performance.