

Xth National Congress of Bulgarian Society for Physiological Sciences

Varna, 6-9 October 2011

OFFICIAL PROGRAMME

Friday, 7 October; *BOLERO* Hall

9:30 OPENING ADDRESS

10:00 – 12:00 VISUAL INFORMATION PROCESSING

Chair: **L.Vitanova, D. Mitov**

**10:00 NEURONAL AND GLIAL GLUTAMATE RECEPTORS IN LOWER VERTEBRATE
RETINAS**

Vitanova L., P. Kuppenova

**10:20 EFFECTS OF D₁ RECEPTOR BLOCKADE ON THE INTENSITY-RESPONSE
FUNCTION OF FROG DARK ADAPTED ELECTRORETINOGRAM**

Popova E., P. Kuppenova, I. Ivanov

10:40 EARLY VEP WAVES ARE AFFECTED STRONGER BY GRATING LENGTH THAN WIDTH

Mihaylova M., I. Hristov, K. Racheva, Ts. Totev, D. Mitov

11:00 EFFECT OF AGE ON SENSITIVITY TO THE SHAPE CHARACTERISTICS DEFINED THROUGH TEXTURE AND MOTION

Bocheva N., A. Tchamova, P. Konstantinova

11:20 EVALUATION OF INDIVIDUAL, GENDER AND AGE DIFFERENCES IN VISUAL MOTION PERCEPTION

Stefanova M., N. Bocheva, O. Georgieva

11:40 AGE-RELATED EFFECTS ON THE SENSITIVITY TO GLOBAL MOTION DIRECTION DETERMINED BY THE METHOD OF CLASSIFICATION IMAGES

Stefanov, S., K. Alexiev, N. Bocheva, B. Genova

14:00 - 16:00 SENSORIMOTOR PROCESSING, I

Chair: **B. Dimitrov, V. Grigorova**

14:00 EFFECTS OF ADAPTATION IN VISUAL PERCEPTION OF GLOBAL SPEED

Genova, B., N. Bocheva, M. Stefanova, S. Stefanov

14:20 ADAPTIVE MECHANISMS FOR REACTIVE SACCADIC AND HAND POINTING MOVEMENTS ARE NOT INDEPENDENT

Grigorova V., M. Ilieva, O. Bock

14:40 CONCURRENT SACCADIC AND HAND MOVEMENT ADAPTATION TO THE SAME AND OPPOSITE POLARITY OF TARGET DISPLACEMENTS

Borisova S., V. Grigorova, O. Bock

15:00 VISUAL EVENT-RELATED POTENTIALS BY AN IDENTIFICATION OF GRATING ORIENTATION DIFFERENCE

J. Dushanova, D. Mitov

15:20 VISUAL INFORMATION PROCESSING DURING PRESENTATION OF GRATINGS WITH ORIENTATION DIFFERENCES

Georgiev S., D. Philipova, Chr. Christova, D. Mitov

15:40 EEG MAPPING DURING QUIET STANDING

Dimitrov B., K. Stambolieva, P. Gatev

Friday, 7 October; *BULGARIA* Hall

10:00 - 12:00 CARDIOVASCULAR FUNCTIONING

Chair: **R. Girchev, A. Kurtev**

10:00 ARTERIAL BLOOD PRESSURE VARIABILITY AFTER NONSELECTIVE AS WELL AS SELECTIVE NITRIC OXIDE SYNTHASE INHIBITION IN SPONTANEOUSLY HYPERTENSIVE RATS

Girchev R., P. Markova

10:20 INFLUENCE OF DIFFERENT SELENIUM INTAKE ON ELASTIN TURNOVER AND AORTIC WALL OF YOUNG SPONTANEOUSLY HYPERTENSIVE RATS

Ruseva B., Atanasova M., Ivanova R., Mollova M., Tzachev K., Dimitrova A.

10:40 ROLE OF NICARDIPINE ON SKIN MICROVASCULATURE TONE MODULATION:- REGISTERED BY INTRAVITAL MICROSCOPY IN VIVO AND SIGNAL PROCESSING WAVELET ANALYSIS

Traikov, L., I. Antonov, N. Nikolova, S. Nikolova, J. Petrova, H. Okano, C. Ohkubo

11:00 ESTIMATION OF THE COMPLEX MECHANICAL MODULI OF RAT THORACIC AORTA ON THE BASIS OF STATIC AND DYNAMIC EXPERIMENTAL DATA

Antonova M., S. Stoytchev

11:20 VENOARTERIORAL REFLEX AS ASSESSED BY PHOTOPLETHYSMOGRAPHY

Georgiev M., M. Turner, A. Kurtev

11:40 METALLOPROTEINASES AND ANTIBODIES AGAINST THEIR SUBSTRATES IN CHRONIC ISCHEMIC STROKE

Dimitrova A., M. Atanasova, P. Tsvetanov, A. Russeva, P. Christova

14:00 – 18:00 NEUROENDOCRINE REGULATIONS

Chair: **R. Radomirov R., N. Negrev**

14:00 COLO-RECTO-ANAL MOTOR REFLEXES

Radomirov R.

14:20 ASCENDING AND DESCENDING REFLEX MOTOR ACTIVITY OF COLON (RAT MODEL – PREPARATION)

Nedialkova N., R. Radomirov

14:40 CHOLINERGIC AND NITRERGIC IMPLICATIONS IN MODULAR NERVE NETWORK OF ANAL REGION

Stavreva G., Radomirov R.

15:00 INFLUENCE BETWEEN *NO* AND *CO* IN THE ELECTRICAL EVOKED RESPONSE IN GUINEA PIG STOMACH FUNDUS

Kadinov B., D. Itzev, R. Radomirov, D. Duridanova

15:20 EXPERIMENTAL DATA ABOUT THE INFLUENCE OF SOME THYMIC PEPTIDES ON SCREENING PARAMETERS OF HAEMOSTASIS, PLATELET COUNT AND THROMBOCYTE FUNCTIONAL ACTIVITY

Negrev N., Y. Nyagolov, E. Stancheva E., I. Pashalieva, L. Decheva

15:40 SOMATOTROPIN, SOMATOSTATIN AND PROLACTIN EFFECTS ON VITAMIN K-DEPENDENT PLASMA CLOTTING FACTOR (FII, FVII, FIX, FX) ANTIGEN CONCENTRATIONS IN RATS

Nyagolov Y., I. Pashaliewa, N. Doncheva, N. Negrev

16:00 COFFEE BREAK

Chair: M. Vlaskovska, A. Bocheva

16:15 EFFECT OF CHRONIC TREATMENT WITH MELATONIN AFTER STATUS EPILEPTICUS ON WORKING AND REFERENCE HIPPOCAMPUS-DEPENDENT SPATIAL MEMORY IN WISTAR AND SPONTANEOUSLY HYPERTENSIVE RATS IN KAINATE MODEL OF TEMPORAL LOBE EPILEPSY

Petkova Zl., D. Pechlivanova, Tchekalarova J.

16:35 SEX-DEPENDENT EFFECT OF A NEW PEPTIDOMIMETIC ON COGNITIVE FUNCTION OF ISOLATED RATS AFTER MATERNAL DEPRIVATION

Encheva E., M. Novoselski, L.Tancheva, V. Petkov, R. Klisurov

16:55 CHRONIC MELATONIN TREATMENT ON KAINIC ACID INDUCED CHANGES IN ARTERIAL BLOOD PRESSURE, BODY WEIGHT AND DIURNAL VARIATIONS OF LOCOMOTOR AND EXPLORATORY ACTIVITY IN WISTAR RATS AND SHR_s

Popov D., J. Tchekalarova, D. Pechlivanova, P. Markova, A. Stoynev

17:15 IMPLICATES IN NEUROPATHIC PAIN AND MICROGLIAL ACTIVATION

S. Surcheva, L. Surchev, M. Vlaskovska

17:35 ASTROCYTES AND CHRONIC PAIN MECHANISMS

Lipnik-Štangelj, M., S. Surcheva, M.Vlaskovska

17:55 INVOLVEMENT OF L-NAME IN ANALGESIC EFFECTS OF NOVEL N/OFQ(1-13)NH₂ ANALOGUES

Bocheva A., E. Dzhambazova, P. Todorov, N. Pavlov, E. Naydenova

POSTER SESSION I

Friday, 7 October; 16:00 – 18:00; *BOLERO* Hall

1 ROLE OF GLOBAL VERSUS LOCAL ATTENTION FOR SACCADE ADAPTATION IN YOUNG AND ELDERLY PERSONS

Borisova S., O. Bock, V. Grigorova

2 EEG MAPPING DURING SENSORY CONFLICTED QUIET STANCE

Stambolieva K., B. Dimitrov, P. Gatev

3 SEX DIFFERENCES OF FUNCTIONAL ORGANIZATION OF BIMANUAL SHOT-LIKE ISOMETRIC HANDGRIP

Kolev N., L. Halacheva

4 IDENTIFICATION OF TACHISTOSCOPICALLY PRESENTED VOLUMETRIC FIGURES BY CHILDREN IN ELEMENTARY SCHOOL

Lalova Y., A. Kalonkina

5 RELEVANT STIMULI IN MOTIVATING PERFORMANCES OF TEST PERSONS ACTIVATE THEIR AUTONOMOUS FUNCTIONS IN A DIFFERENT MANNER

Vezenkov S.R. and D. Bojilov

6 FINGER LENGTH RATIO (2D:4D) AND NEUROTICISM

Stoyanov Z., P. Nikolova, L. Decheva

7 SEX DIFFERENCES IN FINGER LENGTH RATIOS: PRELIMINARY DATA

Stoyanov Z., L. Decheva, P. Nikolova, R. Radev

8 SPECIFICITY IN BREATHING REGULATION DURING PHYSICAL EXERCISE IN TAE KWON DO NATIONAL ATHLETES

Tzvetkov St.

9 LEARNING AND MEMORY EFFECTS OF *ARONIA MELANOCARPA* FRUIT JUICE ADMINISTERED SUBCHRONICALLY ORALLY TO RATS

Eftimov M., S. Valcheva-Kuzmanova, L. Yankova, I. Belcheva, R. Tashev, S. Belcheva

10 ANXIOLYTIC EFFECT OF *ARONIA MELANOCARPA* FRUIT JUICE ADMINISTERED SUBCHRONICALLY ORALLY TO RATS

Eftimov M., S. Valcheva-Kuzmanova, I. Belcheva, R. Tashev, S. Belcheva

11 ASYMMETRY IN BEHAVIORAL RESPONSES TO VASOACTIVE INTESTINAL PEPTIDE MICROINJECTED INTO HIPPOCAMPAL CA1 AREA OF RATS WITH A MODEL OF DEPRESSION

Ivanova M, S. Belcheva, I. Belcheva, N. Negrev, R. Tashev

12 INFLUENCE OF CANNABINOID CB1 LIGANDS ON EXPLORATORY BEHAVIOR AND LOCOMOTOR ACTIVITY IN RATS

Marinov M., M. Ivanova, I. Belcheva, S. Belcheva, N. Negrev, R. Tashev

13 LEARNING AND MEMORY EFFECTS OF CANNABINOID CB1 LIGANDS IN RATS

Marinov M., M. Ivanova, I. Belcheva, S. Belcheva, N. Negrev, R. Tashev

14 ROLE OF CANNABINOID CB1 LIGANDS ON NOCICEPTION IN RATS WITH A MODEL OF DEPRESSION

Marinov M., M. Ivanova, I. Belcheva, S. Belcheva, R. Tashev

15 MODULATION OF NEUROTRANSMITTER RELEASE BY NEUROTENSIN IN RAT AMYGDALA: AN IN VIVO MICRODIALYSIS STUDY IN AWAKE FREELY-MOVING RATS

Petkova-Kirova, P., A. Rakovska, A. Colivicchi, M. G. Giovannini², B. Neov, L. Della Corte

16 MELATONIN- AND LUZINDOL-INDUCED EFFECTS ON THE ACTIVITY OF V, XI, XII AND XII PLASMA COAGULATION FACTORS

Stancheva E., L. Decheva, I. Pashalieva, Y. Nyagolov, N. Negrev

17 EFFECTS OF *ARONIA MELANOCARPA* FRUIT JUICE ON EXPLORATORY BEHAVIOR AND LOCOMOTOR ACTIVITY IN RATS

Valcheva-Kuzmanova S., M. Eftimov, L. Yankova, I. Belcheva, R. Tashev, S. Belcheva

18 THE EFFECTS OF PACED BREATHING ON SPECTRAL PARAMETERS OF HEART RATE VARIABILITY IN ATHLETES AND UNTRAINED CONTROLS

Somlev, P.

19 CHARACTERIZATION OF ZEOLITES FROM “BELI PLAST”- EAST RODOPEs BY X-RAY STRUCTURAL ANALYSIS

Baeva M., N. Izmirova, A.I. Beskrovnyi

MEETING of the BULGARIAN SOCIETY for PHYSIOLOGICAL SCIENCES

Friday, 7 October; 18:30 — *BULGARIA* Hall

Saturday, 8 October; *SOFIA* Hall

9:00 – 12:00 CARDIOVASCULAR and PULMONARY FUNCTIONS

Chair: **N. Belova, N. Bojadjiev**

9:00 EVALUATION OF CARDIOVASCULAR AUTONOMIC FUNCTION IN HEALTHY YOUNG ADULTS AT HIGHER CARDIOVASCULAR RISK

Dundova-Pancheva D., N. Belova

9:20 CARDIOVASCULAR STRESS AND MYOCARDIAL PROTECTION

Kolarova R.

9:40 PREHYPERTENSION, METABOLIC SYNDROME AND CARDIO-VASCULAR RISK

Nikolova, J., M. Orbecova, P. Nikolov, P. Atanassova, P. Hrishev, F. Nikolov

10:00 CHANGES IN THE PHYSICAL WORKING CAPACITY, BODY COMPOSITION AND IN THE FAT METABOLISM IN WOMEN PASSED SPECIALIZED TRAINING AND DIETARY PROGRAM FOR THREE MONTHS

Angelova P., N. Boyadjiev, A. Ivanova, S. Muletarov

10:20 COFFEE BREAK

Chair: **S. Kostianev, R. Kolarova**

10:40 CHRONOTROPIC PARAMETERS FROM CARDIOPULMONARY EXERCISE TESTING IN PATIENTS WITH SEVERE OBSTRUCTIVE SLEEP APNEA

Terziyski K., A. Hristova, S. Kostianev

11:00 HEART RATE VARIABILITY AT REST IN ELITE AND FORMER SOCCER PLAYERS

Somlev, P., G. Uzunova, E. Pavlova.

11:20 DYNAMICS OF HEART RATE RECOVERY AFTER CYCLE ERGOMETRIC PWC170 TEST IN SOCCER PLAYERS

Pavlova E., G. Uzunova, P. Somlev

11:40 RESEARCH ON VARIATIONS IN SOME ELECTROPHYSIOLOGICAL CHARACTERISTIC DATA OF ACUPUNCTURE POINTS IN EXPERIMENTAL ANIMALS PUT UNDER DIFFERENT ATMOSPHERE PRESSURE

Hristov K.

Saturday, 8 October; *BULGARIA* Hall

9:00 – 11:00 SENSORIMOTOR PROCESSING, II

Chair: **A. Kossev, P. Gatev**

9:00 THE IMPACT OF INTERMEDIATE SUBGROUP ON THE EVENT-RELATED EEG DIFFERENCES RELATED TO EXTRAVERSION AND NEUROTICISM

Georgiev S., D. Philipova D., Chr. Christova

9:20 PSYCHOPHYSIOLOGICAL EVALUATION OF EMOTIONS DUE TO THE COMMUNICATION IN SOCIAL NETWORKS

Minchev Z., P. Gatev

9:40 REDUCED CORTICAL SILEN PERIOD DURING CO-ACTIVATION OF ANTAGONIST MUSCLES

Mancheva K., V.G. Dimitrov, L. Christova, A. Kossev

10:00 THE STRENGTH-DURATION PROPERTIES IN SIMULATED DEMYELINATING NEUROPATHIES DEPEND ON THE MYELIN SHEATH AQUEOUS LAYERS

Krustev S. M., N. Negrev, D. I. Stephanova

10:20 COMPUTATIONAL NEUROSCIENCE

D. I. Stephanova

10:40 PROTEIN CONFORMATION CHANGES IN FROG SKELETAL MUSCLE CAUSED BY ELECTROMAGNETIC FIELD (2.45 GHz) IRRADIATION

Vukova T.

11:00 COFFEE BREAK

11:15 – 13:00 TEACHING and TUTORING

Chair: **A. Stoynev, E. Lakova**

11:15 TEACHING PATHOPHYSIOLOGY - LESSONS FROM THE HISTORY AND CHALLENGES FOR THE FUTURE

Stoynev, A.G.

11:35 IMPLEMENTATION OF COMPUTER ASSISTED LEARNING IN PHYSIOLOGY EDUCATION

Belova N.

11:55 OBJECTIVE STRUCTURED PRACTICAL EXAMINATION IN PHYSIOLOGY FOR STUDENTS' ASSESSMENT

Radionova Z., I. Himcheva

12:15 COMPLEX EVALUATION OF TUTORING IN PHYSIOLOGY OF STUDENTS OF DENTAL MEDICINE

Decheva L., I. Pashalieva, M Georgieva

12:35 COMPARISON OF FUNCTIONAL AND STRUCTURAL CLASSIFICATION IN PATHOPHYSIOLOGICAL THEORY AND TEACHING

Sarov G

POSTER SESSION II

Saturday, 8 October; 14:00 – 16:00; *BOLERO* Hall

1 ESTIMATION OF THE COMPLEX MECHANICAL MODULI OF RAT THORACIC AORTA ON THE BASIS OF STATIC AND DYNAMIC EXPERIMENTAL DATA

Antonova M., S. Stoytchev

2 EFFECT OF CHRONIC TREATMENT WITH MELATONIN ON DIURNAL VARIATIONS OF SPONTANEOUS MOTOR SEIZURES AND BEHAVIOR OF WISTAR AND SPONTANEOUSLY HYPERTENSIVE RATS IN KAINATE MODEL OF TEMPORAL LOBE EPILEPSY

Tchekalarova J., D. Pechlivanova, M. Atanasova, Al. Stoynev

3 EFFECTS OF KAINIC ACID ON FREE RADICALS IN HYPOTHALAMUS

N. Boyadjieva N., P. Gateva

4 EFFECTS OF NEWLY SYNTHESIZED TYR-MIF-1'S ANALOGUES ON TYROSINE HYDROXYLASE

A. Bozhilova-Pastirova, R. Hadjiolova, E. Vodenicharov, A. Bocheva, E. Dzhambazova, W. Ovtcharoff

5 EFFECTS OF NEWLY TYR-MIF-1'S ANALOGUES ON NITRIC OXIDE SYNTHASE AND TYROSINE HYDROXYLASE EXPRESSION IN RAT'S PERIAQUEDUCTAL GRAY AFTER COLD AND HOT MODELS OF STRESS

W. Ovtcharoff, R. Hadjiolova, E. Dzhambazova, A. BochevaMD, A. Bozhilova-Pastirova

6 EFFECTS OF L-CANAVANINE ON ANALGESIC EFFECTS OF AMINO ACIDS L-ARGININE, L-ORNITHINE AND L-CITRULLINE IN RATS

Cvetkova M, E. Dzhambazova, T. Pajpanova

7 LOW GRADE INFLAMMATION IN DIABETIC HYPERTENSIVE INDIVIDUALS

Danovska M., M. Alexandrova

8 MELATONIN AND PLASMA FIBRINOLYTIC ACTIVITY IN RATS

Decheva L., I. Pashalieva, E. Stancheva, Y. Nyagolov, N. Negrev

9 ANALGESIA PRODUCED BY NOVEL HEXAPEPTIDE ANALOGUES IS MODULATED BY L-ARGININE

Dzhambazova E., A. Bocheva, P. Todorov, N. Pavlov, E. Naydenova

10 INSULIN AS A CONTRACTION AGONIST OF RAT RESISTANCE ARTERY

Emilova R., H. Gagov, D. Dimitrova, T. Daneva

11 PROTECTIVE ROLE OF MINOCYCLINE ON KAINIC ACID – INDUCED EPILEPSY – POSSIBLY MEDIATED VIA MICROGLIA CYTOKININE SUPPRESSION

Gateva P., N. Boyadjieva

12 CONTRACTILE RESPONSES OF RAT ISOLATED UTERUS TO ANGIOTENSIN II AND VASOPRESSIN

Georgiev Ts., P. Hadzhibozheva, A. Tolekova

13 EFFECTS OF NEWLY SYNTHESIZED TYR-MIF-1 ANALOGUES IN NORMAL CONDITIONS AND AFTER THREE MODELS OF STRESS

R. Hadjiolova, E. Dzhambazova, A. Bocheva

14 INFLUENCE OF PHYSICAL EXERCISE, HYPOKINESIA AND ANTIOXIDANT PROPHYLAXIS ON HEMODYNAMIC STRESS IN EXPERIMENTAL ANIMALS

Kolarova R.

15 ANTIOXIDANT PROPHYLAXIS IN EXPERIMENTAL VASORENAL HYPERTENSION: MYOCARDIAL HISTOMORPHOLOGICAL CHANGES

Kolarova R., Z. Gendjev

16 TESTICULAR ANGIOTENSIN-CONVERTING ENZYME IN SHR AT DIFFERENT AGES

Lakova, E., N. Atanassova, S. Popovska, M. Donchev, G. Krusteva

17 EFFECTS OF RENAL NERVES AND nNOS-DERIVED NITRIC OXIDE ON HEART RATE VARIABILITY IN SPONTANEOUSLY HYPERTENSIVE RATS

Markova P., B. Iliev, R. Girchev

18 EXPERIMENTAL DATA ABOUT THE EFFECT OF MELATONIN ON THE COUNT AND FUNCTIONAL ACTIVITY OF THROMBOCYTES

Pashalieva I., E. Stancheva, L. Decheva, Y. Nyagolov, N. Negrev

19 MECHANISM OF POSITIVE INOTROPIC EFFECT OF DMSO IN THE FROG HEART

Sazdova I., B. Ilieva, M. Shkodrova, H. Gagov

20 BRAIN-IMMUNE AXIS IN OPIOID TOLERANCE/DEPENDENCE: NITROXIDERGIC MODULATION

Vlaskovska, M., S. Surcheva, I. Altankova, Ts. Marinova, L. Kasakov

21 MULTIPLE MECHANISMS IN NOCICEPTION/ANALGESIA: OPIOID PEPTIDES, GLUTAMATE AND PURINERGIC TRANSMISSION AS TARGETS FOR PHARMACOLOGICAL MODULATION

Vlaskovska M., S. Surcheva, A. Tsakova, L. Kasakov

22 SPINAL GLIAL ACTIVATION IN STREPTOZOTOCIN - INDUCED NEUROPATHIC PAIN

Surcheva S., M. Lipnik-Štangelj, L. Surchev, M. Vlaskovska

23 EFFECTS OF NALOXONE ON SOME NEWLY SYNTHESIZED NOCICEPTIN DURING ACUTE PAIN IN RATS

Nocheva Hr., E. Dzambazova, A. Bocheva

24 INFLAMMATORY RESPONSE AND OXIDATIVE STRESS IN DEVELOPMENT OF NONALCOHOLIC FATTY LIVER DISEASE

Bratoeva K., G. Bekyarova, M. Tsaneva, M. Radanova

Saturday, 8 October; 16:30 CLOSURE

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