

# **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 D<sub>1</sub> 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<sub>s</sub>

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)NH<sub>2</sub> 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. Giovannini<sup>2</sup>, 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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