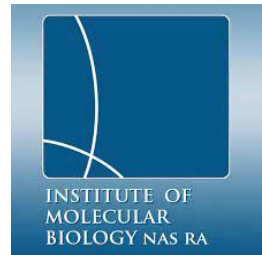
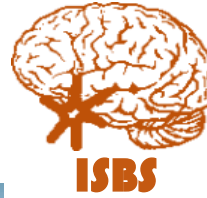




**COBRAIN**<sup>®</sup>  
Scientific-Educational Center  
for Fundamental Brain Research



*COBRAIN Center for Fundamental Brain Research  
Yerevan State Medical University named after M. Heratsi  
The International Stress and Behavior Society (ISBS)  
L.A. Orbeli Institute of Physiology NAS RA  
Institute of Molecular Biology NAS RA  
Armenian IBRO Association and Armenian Neuroscience Society  
School of Science, Xi'an Jiaotong-Liverpool University (XJTLU)*

**NEUROSCIENCE WEEK 2024  
MAY 16-19, 2024**

# **Joint Conference Final Program and Abstract Book**



**May 16-19, 2024, Yerevan, Armenia**



*COBRAIN Center for Fundamental Brain Research  
Yerevan State Medical University named after M. Heratsi  
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# **Joint Conference**

**NEUROSCIENCE WEEK 2024  
MAY 16-19, 2024**

Joint conference of COBRAIN Armenia and 30<sup>th</sup> International Jubilee ISBS “Stress and Behavior” Conference - in partnership with, and support from, Orbeli Institute of Physiology, Institute of Molecular Biology NAS RA (Armenia) and the School of Science of Xi'an Jiaotong-Liverpool University (XJTLU, China)



# Conference Program

## VENUES:

May 16-18, 2024 – COBRAIN Center, Heratsi Yerevan State Medical University  
1 Heratsi Str., Yerevan 0025, Armenia

May 19, 2024 - Orbeli Institute of Physiology of the National Academy of Sciences  
22 Orbeli Brothers Str., Yerevan 0028, Armenia

## Day 1, May 16, 2024

*Venue – Yerevan State Medical University*

09.00-17.00

**REGISTRATION**

09.30-10.00

**OPENING AND WELCOMING ADDRESSES**

AA Muradyan, YSMU Rector

AV Kalueff, ISBS President and Conference Chair

KB Yenkovyan, YSMU Vice-Rector for Science, COBRAIN Center Director  
and Conference Co-Chair

**10.00-10.30 OPENING PLENARY LECTURE – MIKHAIL AGHAJANOV MEMORIAL LECTURE: THE INVOLVEMENT OF BONE MARROW IN MECHANISMS OF NEURONAL SURVIVAL IN ALZHEIMER'S TYPE NEURODEGENERATION.** KB Yenkovyan, MI Aghajanov, Neuroscience Laboratory, COBRAIN Center, Department of Biochemistry, Mkhitar Heratsi Yerevan State Medical University, Yerevan, Armenia.

**10.30-10.55 ISBS PLENARY LECTURE: INTERSECTING PATHWAYS OF RESILIENCE AND VULNERABILITY: A BIOMARKER APPROACH TO PREDICTING MENTAL HEALTH OUTCOMES.** DC Anthony, Department of Pharmacology, University of Oxford, Oxford, UK.

**10.55-11.20 COBRAIN PLENARY TALK: GENES UNDERLYING THE MORPHOLOGY OF MATURE NEURONS AND THEIR RELATIONSHIP TO STRESS AND DEPRESSION.** J Jaworski, J Zeng, R Pagano, I Majewski, D Komorowski, P Boguszewski, M Urbanska, International Institute of Molecular and Cell Biology, Nencki Institute, Warsaw, Poland; COBRAIN Center, M Heratsi Yerevan Medical State University, Yerevan, Armenia.

**11.20-11.50 ISBS PLENARY TALK: DISSOCIATION BETWEEN NEURONAL AND ASTROCYTIC RESPONSE TO LOCOMOTION IN MICE.** AV Semyanov, Neuroscience Center, Jiaying University College of Medicine, Jiaying, China.

11.50-12.10

**Coffee Break**

**12.10-12.35 ISBS PLENARY TALK: UNVEILING THE NEUROBIOLOGICAL BASIS OF ENVIRONMENTAL BURDEN OF DISEASE IN A CONTEXT OF ISOTOPE CONTENT OF DRINKING WATER: INSIGHTS FROM ANIMAL MODELS.** T Strekalova, Maastricht University, Maastricht, Netherlands.



**12.35-12.55 ISBS TALK: STRESS, EPIGENETICS AND SUICIDES IN ADOLESCENTS (AN EVOLUTIONARY APPROACH).** VA Rozanov, St. Petersburg State University, VM Bekhterev National Medical Research Center for Psychiatry and Neurology, St. Petersburg, Russia.

**12.55-13.20 COBRAIN TALK: PAIN PERCEPTION AT ADULT AGE IS DEPENDENT ON NEONATAL CONDITIONING.** BW Kramer, M Daly, Poznan University of Medical Sciences, Poznan, Poland; Irish Neonatal Health Alliance, Wicklow, Ireland.

**13.20-13.30 GENERAL DISCUSSION AND CONFERENCE ANNOUNCEMENTS**

**13.30-14.30 Lunch Break**

**14.30-16.00 COBRAIN SYMPOSIUM – MIKHAIL AGHAJANOV MEMORIAL SYMPOSIUM** (Chairs: KB Yenkovyan, J Jaworski)

**14.30-14.40 INTRODUCTION: IN MEMORIAM: PROFESSOR MIKHAIL I. AGHAJANOV (1939-2024)**

**14.40-14.55 THE INFLUENCE OF ELECTRIC FIELD ON OXIDATIVE STRESS MARKERS IN RATS.** HA Harutyunyan, KB Yenkovyan, Neuroscience Laboratory, COBRAIN Center, Heratsi Yerevan State Medical University, Yerevan, Armenia.



**14.55-15.10 THE PREVALENCE AND PECULIARITIES OF AUTISM SPECTRUM DISORDER IN URBAN CITIES IN ARMENIA.** NZ Khachikyan, SH Mkrtychyan, AA Hayrapetyan, LR Avetisyan, KB Yenkovyan, Department of Hygiene and Ecology, Neuroscience Laboratory, COBRAIN Center, Heratsi Yerevan State Medical University, Yerevan, Armenia.

**15.10-15.25 COMPARATIVE STUDY OF PRE- AND POSTNATAL VALPROIC ACID (VPA) MODELS OF AUTISM SPECTRUM DISORDER: IDENTIFYING BRAIN VULNERABILITY TO VPA-EVOKED DEFICITS ACROSS THE TIMELINE.** KS Fereshetyan, M Danielyan, KB Yenkovyan, Neuroscience Laboratory, COBRAIN Center, Department of Biochemistry, Heratsi Yerevan State Medical University, Laboratory of Histochemistry and Electromicroscopy, LA Orbeli Institute of Physiology NAS RA, Yerevan, Armenia.

**15.25-15.40 INCREASING BIOACTIVE LEPTIN LEVELS TO ENHANCE COGNITIVE FUNCTION IN AMYLOID BETA 1-42-INDUCED NEURODEGENERATION.** H Harutyunyan, R Minasyan, G Vardanyan, KB Yenkovyan, Neuroscience Laboratory, COBRAIN Center, Department of Biochemistry, Heratsi Yerevan State Medical University, Yerevan, Armenia.

**15.40-16.00 IGNITING IDEAS IN NEUROSCIENCE – STUDENTS BLITZ-SESSION**

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**16.00-16.15 EPIGENETIC REGULATION DISTURBANCES IN MULTIPLE SCLEROSIS AND THEIR RELATIONSHIP WITH CHANGES IN FOLATE METABOLISM.** VI Lioudyno, EA Tsymbalova, EA Chernyavskaya, GN Bisaga, IN Abdurasulova, Institute of Experimental Medicine, Almazov National Medical Research Center, St. Petersburg, Russia.

**16.15-16.25 Coffee Break**

**16.25-16.45 PRETERM BIRTH IS STRESS FOR LIFE – BEHAVIORAL PATTERNS IN FORMER PRETERM INFANTS.** M Daly, Irish Neonatal Health Alliance, Wicklow, Ireland.

**16.45-17.05 UNRAVELLING CORTICAL EXCITABILITY DURING SPIKE AND WAVES AND ITS CONSEQUENCES FOR SEIZURE INTERRUPTION IN A GENETIC EPILEPSY MODEL.** G van Luijtelaar, B de Ruitter, Donders Centre for Cognition, Radboud University, Nijmegen, Netherlands.



**17.05-17.25 AGE-RELATED FEATURES OF THE FUNCTION OF NEUROENDOCRINE SYSTEMS UNDER CONSTANT LIGHTING.** ND Goncharova, AM Ermolaeva, OA Chigarova, TE Oganyan, NV Timoshenko, National Research Centre “Kurchatov institute”, Sochi, Russia.

**17.25-17.40 CLUSTERING TECHNIQUE TO STUDY NEURAL ACTIVITY IN GENETIC AND NON-GENETIC PATIENTS WITH PARKINSON’S DISEASE.** EM Belova, PN Pavlovskiy, UN Semenova, NN Semenov Federal Research Center for Chemical Physics RAS, Moscow, Russia.

**17.40-18.00 ISBS ONLINE TALK: PSYCHOSOCIAL RISK ASSESSMENT IN SMALL GROUPS.** Ph. Fauquet-Alekhine, JAK Erskine, Group INTRA robotics, France; SEBE-Lab-Behavioural and Psychological Science, St George’s University of London, London, UK.

**18.00-18.20 ISBS TALK: REGULATED EXOCYTOSIS IN HUMAN GLIOBLASTOMAS.** V Parpura, V Montana, International Translational Neuroscience Research Institute, Zhejiang Chinese Medical University, Hangzhou, China.

**18.20-18.40 VESICULAR GLUTAMATE RELEASE MODULATION BY PRESENILIN FROM ASTROCYTES.** V Montana, V Parpura, International Translational Neuroscience Research Institute, Zhejiang Chinese Medical University, Hangzhou, China.

**18.40-19.30 COBRAIN ARMENIA Welcoming Reception**

**DAY 1 EVENING CITY BUS TOUR (tickets required)**  
**TOUR DEPARTS FROM COBRAIN CENTER MAIN ENTRANCE**

## Day 2, May 17, 2024

**Venue – Yerevan State Medical University**

**09.00-17.00 REGISTRATION**

**09.00-09.20. NEUTRAL SPHINGOMYELINASE DETERMINES THE COMORBIDITY TRIAS OF ALCOHOL ABUSE, MAJOR DEPRESSION AND BONE DEFECTS.** LS Kalinichenko, Department of Psychiatry and Psychotherapy, University Clinic, Friedrich-Alexander-University Erlangen-Nürnberg, Erlangen, Germany.

**09.20-11.20. SYMPOSIUM 2: NEUROMOLECULAR BASIS OF NORMAL AND PATHOLOGICAL BEHAVIOR (Chair: VN Naumenko)**

**09.20-09.40 INTERACTIONS OF SEROTONIN RECEPTORS IN THE REGULATION OF BEHAVIOR AND CENTRAL NERVOUS SYSTEM FUNCTION.** VS Naumenko, EM Kondourova, TV Ilchibaeva, AS Tsybko, AYa Rodnyy, Institute of Cytology and Genetics, SB RAS, Novosibirsk, Russia.

**09.40-09.55 EFFECT OF PHD INHIBITION ON BIOELECTRICAL NEURAL NETWORK ACTIVITY DURING IN VITRO HYPOXIA MODELING.** MV Vedunova, TA Mishchenko, EV Mitroshina, Lobachevsky State University Nizhny Novgorod, Russia.

**09.55-10.10 IMPACT OF 5-HT<sub>4</sub>R ACTIVATION ON CA<sup>2+</sup> NETWORK ACTIVITY AND INTERCELLULAR SIGNALING IN VITRO.** EV Mitroshina, EA Marasanova, MV Vedunova, Lobachevsky State University, Nizhny Novgorod, Russia.

**10.10-10.35 THE 5-HT<sub>1A</sub> RECEPTOR IN BTBR MICE AUTISM.** EM Kondourova, TV Ilchibaeva, AS Tsybko, VS Naumenko, NK Popova, Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia.



**10.35-10.50 BDNF IS IMPLICATED IN THE MECHANISMS OF AUTISTIC-LIKE BEHAVIOR IN BTBR MICE.** AS Tsybko, TV Ilchibaeva, AI Sherbakova, YP Kaminskaya, DV Eremin, VS Naumenko, Institute of Cytology and Genetics SB RAS; Novosibirsk State University, Novosibirsk, Russia.

**10.50-11.05 SEROTONIN 5-HT<sub>4</sub> RECEPTOR AFFECTS AGGREGATION AND PHOSPHORYLATION OF TAU PROTEIN.** TV Ilchibaeva, VS Snisar, NA Shved, VV Kumeiko, VS Naumenko, Institute of Cytology and Genetics SB RAS, Novosibirsk State University, Novosibirsk, Far Eastern Federal University, Vladivostok, Russia.

**11.05-11.20 EFFECT OF THE 5-HT<sub>7</sub> RECEPTOR GENE OVEREXPRESSION IN THE MIDBRAIN ON BEHAVIOR AND NEUROPLASTICITY IN MICE DURING LONG-TERM ETHANOL CONSUMPTION.** DV Bazovkina, AS Oreshko, AY Rodnyy, VS Naumenko, Federal Research Center Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia.

### 11.20-11.40 Coffee Break

**11.40-13.30 SYMPOSIUM 3: ZUKOVSKA-PASTUKHOV SYMPOSIUM ON TRANSLATIONAL NEUROSCIENCE** (Chairs: AV Kalueff, AV Semyanov, IV Ekimova)

**11.20-11.40 BEHAVIORAL TESTS OF THE MOUSE VISUAL FUNCTION UNDER OPTOGENETIC THERAPY USING TRANSFORMER MAZE.** VI Ni, EV Filatova, IY Morina, ML Firsov, Sechenov Institute of Evolutionary Physiology and Biochemistry, St. Petersburg, Russia.

**11.40-12.00 EFFECT OF INTRAVENOUS ADMINISTRATION OF CAFFEINE MODULATED SPLENCYTES IN THE DEVELOPMENT OF NEUROINFLAMMATORY PROCESSES IN THE MODEL OF LASER-INDUCED TRAUMATIC BRAIN INJURY IN ZEBRAFISH.** TG Amstislavskaya, EV Markova, EV Nehoroshev, WS Hao, MA Kleshchev, AA Akopyan, MA Tikhonova, IV Savkin, EV Serenko, AV Kalueff, Novosibirsk State University, Scientific Research Institute of Neurosciences and Medicine, Research Institute of Fundamental and Clinical Immunology, Novosibirsk, Russia; School of Science, XJTU, Suzhou, China.

**12.00-12.20 ADAPTIVE AND PATHOLOGICAL RESPONSES TO STRESS: REEVALUATING PTSD PATHOPHYSIOLOGY.** AP Sarapultsev, MV Komelkova, EY Gusev, South Ural State University, Chelyabinsk, Russia.

**12.20-12.40 CHRONIC SLEEP RESTRICTION: CONSEQUENCES FOR THE BRAIN AND ENDOCRINE FUNCTIONS.** IV Ekimova, MB Pazi, KV Lapshina, KV Derkach, AO Shpakov, Sechenov Institute of Evolutionary Physiology and Biochemistry RAS, St. Petersburg, Russia.

**12.40-12.55 THE ROLE OF WATER CHANNEL AQP4 IN THE NEUROPROTECTIVE MECHANISMS IN A RAT MODEL OF PARKINSON'S DISEASE.** KV Lapshina, MV Khanina, MA Guzev, MP Kaismanova, IV Ekimova, Sechenov Institute of Evolutionary Physiology and Biochemistry RAS, St. Petersburg, Russia.

### 13.30-14.30 Lunch Break

**14.30-14.50 ISBS TALK: HIPPOCAMPUS AND AMYGDALOID NUCLEI - THE BRAIN STRUCTURES MOST RESISTANT TO VOLUME DECREASE IN PHYSIOLOGICAL AGING: MR VOLUMETRIC STUDY.** D Kozic, S Stojanoski, J Boban, University of Novi Sad Faculty of Medicine, Novi Sad, Serbia.

**14.50-15.10 ISBS TALK: INNOVATIVE APPROACHES TO NEUROMODULATION AFTER SPINAL CORD INJURY.** PE Musienko, Laboratory of Neuroprostheses, St. Petersburg State University, Pavlov Institute of Physiology RAS, St. Petersburg, Neurobiology Department, Sirius University of Science and Technology, Sirius, Neurorehabilitation Technologies Laboratory, LIFT (Life Improvement by Future Technologies) Center, Moscow, Russia.



**15.10-17.50 SYMPOSIUM 4: EXECUTIVE FUNCTION IN ONTOGENESIS** (Chairs: EI Nikolaeva, KI Kunnikova)

**15.10-15.25 THE ROLE OF EXECUTIVE CONTROL IN THE EFFECTIVENESS OF COGNITIVE TRAINING.** OM Razumnikova, Novosibirsk State Technical University, Novosibirsk, Russia.

**15.25-15.40 THE INFLUENCE OF SCREEN TIME ON THE QUALITY OF EXECUTIVE FUNCTIONS OF PRESCHOOL CHILDREN.** Nikolaeva EI, Kalabina IA, Sutormina NV, Isachenkova MV, Herzen State Pedagogical University, St. Petersburg, Russia.

**15.40-15.55 FORMATION OF EXECUTIVE FUNCTIONS IN CHILDREN WITH EXPERIENCE OF INSTITUTIONALIZATION.** E Dydenkova, G Portnova, K Minin, Nizhny Novgorod State Pedagogical University, Nizhny Novgorod, Institute of Higher Nervous Activity and Neurophysiology, Moscow, Russia.

**15.55-16.10 THE SPECIFICS OF EXECUTIVE FUNCTIONS IN YOUNGER CHILDREN WITH INTELLECTUAL DISABILITIES.** E Dunaevskaya, Herzen State Pedagogical University of Russia, St. Petersburg, Russia.

**16.10-16.25 PSYCHOPHYSIOLOGICAL FACTORS OF RESISTANCE TO SUBSTANCE DEPENDENCE.** P Ivashina, Herzen State Pedagogical University of Russia, St. Petersburg, Russia.

**16.25-16.40 PRECURSORS OF FEATURES OF COGNITIVE DEVELOPMENT OF PREMATURE CHILDREN IN PRESCHOOL AGE.** OA Ivanova, Voronezh State University, Voronezh, Russia.

**16.40-17.00 Coffee Break**

**17.00-17.15 PSYCHOPHYSIOLOGICAL MECHANISMS OF COGNITIVE DEVELOPMENT IN CHILDREN WITH ARTERIAL ISCHEMIC STROKE: RESEARCH DESIGN.** KI Kunnikova, Ural Federal University, Ekaterinburg, Russia.

**17.15-17.35 RELATIONSHIP OF ONLINE INFORMATION SEARCH AND EXECUTIVE FUNCTIONS IN CHILDREN.** N Sutormina, Herzen State Pedagogical University of Russia, St. Petersburg, Russia.

**17.35-17.50 A COMPARATIVE ANALYSIS OF CORRELATION BETWEEN THE DEVELOPMENT OF EXECUTIVE FUNCTIONS AND INTERNAL HEALTH IN PRIMARY SCHOOLCHILDREN AND ADOLESCENTS.** VS Merenkova, SA Burkova, Bunin Yelets State University, Yelets, Herzen State Pedagogical University of Russia, St. Petersburg, Russia.

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**17.50-18.10 ISBS TALK: DYSFUNCTION OF THE HIPPOCAMPAL ASTROCYTES OF KRUSHINSKY-MOLODKINA RATS DURING EPILEPSY DEVELOPMENT.** MV Glazova, YS Grigorieva, AA Naumova, SD Nikolaeva, Sechenov Institute of Evolutionary Physiology and Biochemistry RAS, St. Petersburg, Russia.

**18.10-19.00 COBRAIN GLOBAL EDUCATIONAL INITIATIVE: ROUND TABLE ON CAREERS IN NEUROSCIENCES.** Moderator: M Movsesyan, Discussants: KB Yenkoyan, TV Strelakova, J Jaworski, AV Kalueff, AV Semyanov, TG Amstislavskaya.

**19.00-20.00 COBRAIN YOUNG SCIENTIST PROJECT EXPERT REVIEW PANEL MEETING.** Moderator: M Movsesyan.

**18.10-20.30 MODERATED POSTER SESSION 1**

**THE ROLE OF TRANSCRIPTION FACTOR NEUROD1 IN MOUSE CORTICOGENESIS.** MS Gavrish, AD Okhainikov, AO Motorina, VS Tarabykin, Research Institute of Neurosciences,



Lobachevsky State University of Nizhny Novgorod, Nizhny Novgorod, Russia; Institute of Cell Biology and Neurobiology, Charité Medical University, Berlin, Germany.

**BEHAVIORAL CHARACTERISTICS OF DIFFERENT LINES OF ZEBRAFISH.** DS Galstyan, TO Kolesnikova, AN Ikrin, AM Moskalenko, AV Kalueff. Institute of Translational Biomedicine, St. Petersburg State University, Institute of Experimental Medicine, Almazov National Medical Research Centre, St. Petersburg, Sirius University of Science and Technology, Sirius Federal Territory, Russia.

**ANXIETY AND DEPRESSION-LIKE BEHAVIOR OF ZEBRAFISH IN A MODEL OF UNPREDICTABLE CHRONIC STRESS.** MM Kotova, SV Amikishiev, AV Kalueff, Sirius University of Science and Technology, Sirius Federal Territory, Russia.

**INVESTIGATION OF THE EFFECT OF DRUGS ON ZEBRAFISH BEHAVIORAL PATTERNS USING MACHINE LEARNING.** DA Lukovikov, TO Kolesnikova, AA Korotaev, AV Kalueff, Sirius University of Science and Technology, Sirius Federal Territory, St. Petersburg State University, Almazov National Medical Research Centre, St. Petersburg, Russia; School of Science, XJTLU, Suzhou, China.

**EXTRACT OF *AMANITA MUSCARIA* INDUCES ANXIETY-LIKE BEHAVIOR IN ZEBRAFISH.** AE Makhortykh, VD Riga, NO Prokhorenko, TO Kolesnikova, AV Kalueff, Sirius University of Science and Technology, Sirius Federal Territory, Russia.

**USING EEG BIOMARKERS FOR PHENOTYPING SOCIAL DEFICITS IN RATS.** VD Riga, AA Rebik, IS Midzhanovskaya, Sirius University of Science and Technology, Sirius Federal Territory, Institute of Higher Nervous Activity and Neurophysiology RAS, Moscow, Russia.

**CRISPR/CAS9 MEDIATED INACTIVATION OF THE *KCNQ3* GENE CAUSES MALFORMATION OF THE CORPUS CALLOSUM.** AA Babaev, MS Gavrish, SA Tutukova, AD Okhalmnikov, VS Tarabykin, Research Institute of Neurosciences, Lobachevsky State University of Nizhny Novgorod, Nizhny Novgorod, Russia; Institute of Cell Biology and Neurobiology, Charité Medical University, Berlin, Germany.

**BEHAVIORAL CONSEQUENCES OF GENETICALLY DETERMINED DYSFUNCTION OF STRIATAL-ENRICHED PROTEIN TYROSINE PHOSPHATASE STEP IN MICE.** VS Moskaliuk, PD Komleva, NV Khotskin, DV Bazovkina, EA Kulikova, Institute of cytology and genetics SB RAS, Novosibirsk, Russia.

**ACUTE AND CHRONIC EFFECTS OF GBR 12909, FLUOXETINE AND THEIR COMBINATION ON ADULT ZEBRAFISH (*DANIO RERIO*).** AN Ikrin, AM Moskalenko, AD Shevlyakov, SV Amikishiev, TO Kolesnikova, DS Galstyan, AV Kalueff, Sirius University of Science and Technology, Sirius Federal Territory, Institute of Translational Biomedicine, St. Petersburg State University, St. Petersburg, Russia; School of Science, XJTLU, Suzhou, China.

**A NEW SENSOR FOR NON-INVASIVE ASSESSMENT OF STRESSOR CONDITIONS OF THE ORGANISM.** LG Simonyan, GG Karamyan, AM Manukyan, VR Sargsyan, HL Kostanyan, LH Misakyan, RSh Sargsyan, Laboratory of Integrative Biology, LA Orbeli Institute of Physiology NAS RA, Armenia.

**THE ROLE OF EVOLUTIONARY NEW ENHANCERS ON NEOCORTEX DEVELOPMENT.** AO Kustova, A Newman, JCC Suescún, VS Tarabykin, Research Institute of Neurosciences, Lobachevsky State University of Nizhny Novgorod, Nizhny Novgorod, Russia; Institute of Cell Biology and Neurobiology, Charité Hospital, Berlin, Germany.

**THE CHEMOGENETIC MODULATION OF DAT-KO RATS BEHAVIOR IN HEBB-WILLIAMS MAZE.** AA Gromova, TS Shemyakova, AD Belskaya, NP Kurzina, RR Gainetdinov, AB Volnona, Institute of Translational Biomedicine, St. Petersburg State University Faculty of Biology and University Hospital, St. Petersburg, Russia.

**ASSESSMENT OF AGE-RELATED BEHAVIORAL EFFECTS OF CHRONIC STRESS IN LABORATORY RATS (*RATTUS NORVEGICUS*).** TO Kolesnikova, AM Moskalenko, AN Ikrin, NO





Prokhorenko, AV Kalueff, Sirius University of Science and Technology, Sirius Federal Territory, Russia; School of Science, XJTLU, Suzhou, China.

**EFFECTS OF LOW-DOSE 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN EXPOSURE ON THE DEVELOPMENT OF RAT OFFSPRING.** KV Pakhomov, DS Vasilev, Sechenov Institute of Evolutionary Physiology and Biochemistry RAS, St. Petersburg, Russia.

**PERSEVERATION IN ADHD SYNDROME: MODEL EXPERIMENTS ON DOPAMINE KNOCKOUT RATS.** AB Volnona, AD Belskaya, AA Gromova, RR Gainetdinov, NP Kurzina, Institute of Translational Biomedicine, St. Petersburg State University Faculty of Biology and University Hospital, St. Petersburg, Russia.

**EMOTIONAL-PAINFUL STRESS IN RATS WITH CONTRAST EXCITABILITY AFFECTS THE CELL GENOME STABILITY OF CENTRAL NERVOUS SYSTEM DIFFERENTLY.** VD Shcherbinina, MB Pavlova, NA Dyuzhikova, EV Daev, Pavlov Institute of Physiology RAS, St. Petersburg State University, Saint Petersburg, Russia.

**ACUTE BEHAVIORAL EFFECTS OF RACLOPRIDE, A SELECTIVE D2 ANTAGONIST ON ADULT ZEBRAFISH.** KV Apukhtin, VS Nikitin, AV Kalueff, Sirius University of Science and Technology, Russia.

**THE EFFECTS OF NEUROLIPINS ON LIPOPOLYSACCHARIDE-INDUCED NEUROINFLAMMATION IN VITRO.** KA Arsentiev, SP Konovalova, MYu Bobrov, VV Bezuglov, PE Musienko, Sirius University of Science and Technology, Sirius, Russia.

**RELATIONSHIP BETWEEN SPEECH AND READING IN CHILDREN WHO SURVIVED POSTERIOR FOSSA TUMORS.** S Mironets, M Shurupova, A Karelin, Neurocognitive Laboratory, Rogachev National Medical Research Center of Pediatric Hematology, Oncology and Immunology, RAE Data Center, Federal Center of Brain and Neurotechnologies, Moscow, Russia.

**MOUSE REPEATED AGRESSION PARADIGM: DEPRIVATION FROM FIGHTING RESULTS IN HIGHTENED ANXIETY AND AGRESSION IN MALE CD1 MICE.** AS Mutovina, KA Ayriyants, AA Saponova, PE Kisaretova, NP Bondar, Novosibirsk State University, Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia.

**INTENSITY DEPENDENCE OF AUDITORY-EVOKED POTENTIALS AS AN INDICATOR OF DEPRESSION SYMPTOMS SEVERITY.** S Prasad, DG Mitiureva, OV Sysoeva, Institute of Higher Nervous Activity and Neurophysiology RAS, National Research University Higher School of Economics, Moscow, Russia.

**MODELING OF PTSD IN SEXUALLY MATURE MALE RATS BORN TO MOTHERS STRESSED DURING PREGNANSY CAUSES MEMORY IMPAIRMENT AND HORMONAL DYSFUNCTION OF THEIR OFFSPRING.** ED Shigalugova, GI Kholova, NE Ordyan, Pavlov Institute of Physiology RAS, St. Petersburg, Russia.

**EEG FACE ODDBALL PARADIGM AS THE TEST FOR EMOTIONAL REACTION.** A Popyvanova, E Pomelova, D Bredikhin, M Koriakina, AN Shestakova, E Blagovechtchenski, Centre for Cognition and Decision Making, Institute for Cognitive Neuroscience, HSE University, Moscow, Russia.

**ANTIMICROBIAL, ANTIPROLIFERATIVE, AND POTENTIAL ANTISEIZURE PROPERTIES OF ARTEMISIA VULGARIS AND ARTEMISIA GLAUCA FROM KAZAKHSTAN.** O Karapina, A Trofimov, B Sailike, Y Yermagambetov, G Mamytbekova, D Birimzhanova, Y Suleimen, B Akbay, T Tokay, Nazarbayev University, Kazakh University of Technology and Business, Astana, Kazakhstan.

**PECULIARITIES OF DEVELOPMENT IN CHILDREN WITH MOTOR DISORDERS: THE EEG ASPECT.** MM Koriakina, DO Bredikhin, OE Agranovich, AN Shestakova, ED Blagoveshchensky, National Research University HSE, Moscow, Turner Scientific Research Institute for Children's Orthopedics, St Petersburg, Russia.

**C.R.A.B.: THE PARADIGM TO STUDY READINESS POTENTIAL.** E Pomelova, D Bredikhin, A Popyvanova, K Bartseva, A Kuznetsova, A Kirsanov, M Koriakina, E Blagovechtchenski, Centre for



Cognition and Decision Making, Institute for Cognitive Neuroscience, HSE University, Moscow, Laboratory of Behavioural Neurodynamics, St. Petersburg State University, St. Petersburg, Russia.

**FACILITATORY EFFECTS OF COLD PRESSOR TASK ON CORTICOSPINAL EXCITABILITY: A PILOT STUDY.** KV Bartseva, UR Nikishina, MM Koriakina, MU Lukov, AS Kirsanov, DA Fomicheva, DA Andreeva, EA Levchenko, AS Dasaeva, ED Blagovechtchenski, St. Petersburg State University, St Petersburg, HSE University, Moscow, Russia.

**mTOR, AUTOPHAGY AND SIRT-1 IN BRAIN DURING PRENATAL HYPERHOMOCYSTEINEMIA.** AV Mikhel, IV Zalozniaia, AD Shcherbitskaia, SK Bochkovskii, YP Milyutina, DS Vasilev, AV Arutjunyan, Ott Research Institute of Obstetrics, Gynecology and Reproductive Medicine, Sechenov Institute of Evolutionary Physiology and Biochemistry RAS, St. Petersburg, Russia.

**STRESS AND ELECTRICAL INJURIES IN LARGE FARM ANIMALS.** NS Orlyansky, ON Eremenko, Trubilin Kuban State Agrarian University, Krasnodar, Russia.

**DYNAMICS OF BRAIN ELECTRICAL ACTIVITY DURING PROLONGED AUDIOVISUAL STIMULATION.** NE Tadevosyan, BB Forghan, AA Tumanian, LV Vahradyan, AS Khachunts, LA Orbeli Institute of Physiology NAS RA, Yerevan, Armenia.

**EVALUATION OF SIMPLE VISUAL-MOTOR REACTION TIME IN DIFFERENT AGE GROUPS DURING MENTAL LOAD.** AA Tumanian, AS Khachunts, AR Sargsyan, NE Tadevosyan, LA Orbeli Institute of Physiology NAS RA, Yerevan, Armenia.

**COMPARATIVE STUDY PARAMETERS OF HEART RATE VARIABILITY AND OF PSYCHOLOGICAL STATE OF THE ARTSAKH WAR PARTICIPANTS.** AA Sahakyan, HG Galstyan, AV Sargsyan, LV Vahradyan, NE Tadevosyan, LA Orbeli Institute of Physiology NAS RA, Yerevan, Armenia.

**STUDY OF THE QUALITY OF LIFE AND ANXIETY OF THE POPULATION OF ARTSAKH IN THE POST-WAR PERIOD USING THE SF-36 QUESTIONNAIRE.** HG Galstyan, AA Tumanian, GH Sakanyan, MA Mardiyan, LA Orbeli Institute of Physiology NAS RA, M Heratsi Yerevan State Medical University, Yerevan, Armenia.

**APPLICATION OF THE “WHO SHORT QUESTIONNAIRE” METHOD IN THE ANALYSIS OF HEALTH-RELATED QUALITY OF LIFE IN INDIVIDUALS DURING POST-WAR TIME ON THE EXAMPLE OF THE POPULATION OF ARTSAKH.** AV Sargsyan, AA Sahakyan, NE Tadevosyan, HG Galstyan, LA Orbeli Institute of Physiology NAS RA, Yerevan, Armenia.

**REFINEMENT OF DECELLULARIZED GRAFTS FOR PERIPHERAL NERVE TISSUE ENGINEERING.** VS Grigoryan, GP Sevoyan, SS Gasparyan, PV AnjanKumar, SV Karapetyan, ZI Karabekian, LA Orbeli Institute of Physiology NAS RA, University of Traditional Medicine, M Heratsi Yerevan State Medical University, Yerevan, Armenia; George Washington University, Washington DC, USA.

**USING TEMPORAL EEG SIGNAL DECOMPOSITION TO IDENTIFY NEUROPHYSIOLOGICAL MARKERS AMONG STROKE PATIENTS.** DG Muhammad, N Syrov, A Medvedeva, Y Alieva, L Yakovlev, D. Petrova, GE Ivanova, AY Kaplan, MA Lebedev, Vladimir Zelman Center for Neurobiology and Brain Rehabilitation, Skolkovo Institute of Science and Technology, Federal Center of Brain Research and Neurotechnologies, FMBA, Laboratory for Neurophysiology and Neuro-Computer interfaces, Faculty of Biology, Faculty of Mechanics and Mathematics, Lomonosov Moscow State University, Moscow, Russia.

**NEURAL CORRELATES OF INDIVIDUAL DIFFERENCES IN TIME PERCEPTION.** DG Mitireva, OV Sysoeva, Institute of Higher Nervous Activity and Neurophysiology of RAS, Moscow, Russia.

**MOTOR LEARNING AND BELIEF UPDATING IN BIPOLAR DISORDER.** M Ivanova, K Germanova, G Kopytin, A Ragymova, D Petelin, M Herrojo Ruiz, National Research University Higher School of Economics (HSE), First Moscow State Medical University, Moscow, Russia; Goldsmiths, University of London, London, UK.



**THE VULNERABILITY OF DOPAMINERGIC NEURONS IN MICE WITH CONDITIONAL INACTIVATION OF THE ALPHA-SYNUCLEIN GENE AND CONSTITUTION BETA-SYNUCLEIN KNOCK-OUT.** R Karpov, A Krayushkina, O Morozova, T Ivanova, E Lysikova, K Chaprov, Institute of Physiologically Active Compounds at Federal Research Center of Problems of Chemical Physics and Medicinal Chemistry RAS, Chernogolovka, Russia.

**EFFECTS OF AGING ON THE DEVELOPMENT OF EPILEPSY IN THE KRUSHINSKY-MOLODKINA (KM) RATS.** EP Aleksandrova, AA Kulikov, AP Ivlev, EV Chernigovskaya, Sechenov Institute of Evolutionary Physiology and Biochemistry RAS, St. Petersburg, Russia.

**ALTERATIONS IN SELF-GROOMING MICROSTRUCTURE AND EXPLORATION-RELATED BEHAVIOR IN TPH2-KO MICE.** NA Krotova, IS Zhukov, PD Shabanov, N Alenina, AV Kalueff, KA Demin, RR Gainetdinov, Institute of Translational Biomedicine, St. Petersburg University Hospital, St. Petersburg State University, Institute of Experimental Medicine, Almazov National Medical Research Centre, St. Petersburg, Higher School of Economics, Moscow, Neurobiology Program, Sirius University of Science and Technology, Sirius, Russia; Cardiovascular and Metabolic Diseases, Max-Delbrück-Center for Molecular Medicine (MDC), Berlin, Germany.

**THE FUNCTIONAL STATE OF ASTROGLIA IN THE HIPPOCAMPUS OF NORMAL AND EPILEPTIC RATS: ANALYSIS OF GENETICALLY DETERMINED DIFFERENCES AND THE EFFECT OF PIRACETAM.** AA Naumova, YS Grigorieva, SD Nikolaeva, KA Ivanova, MV Glazova, Sechenov Institute of Evolutionary Physiology and Biochemistry RAS, St. Petersburg, Russia.

**EARLY SIGNS OF AUTISM SPECTRUM DISORDER.** O Frolovskaya, Herzen State Pedagogical University of Russia, St. Petersburg, Russia.

**MOUSE MODELS OF NEURODEGENERATIVE DISEASES.** EI Leonova, II Akhmarov, OA Kirillov, AV Chirinskaite, JV Sopova, Center of Transgenesis and Genome Editing, St. Petersburg State University, St. Petersburg, Russia.

## Day 3, May 18, 2024

### *Venue – Yerevan State Medical University*

09.00-17.00      **REGISTRATION**

**09.30-09.45 ISBS TALK: A LONG HISTORY OF ISBS CONFERENCES – PROMOTING TRANSLATIONAL NEUROSCIENCE STRESS RESEARCH AND EDUCATION.** AV Kalueff, ISBS Office, New Orleans, USA; School of Science, XJTLU, Suzhou, China.

**09.45-10.00 ISBS TALK: INDUCTION OF INFLAMMATION IN EARLY POSTNATAL PERIOD: EFFECT ON ACTIVATION OF ASTROCYTES AND MICROGLIA IN BTBR MALE MICE.** MM Kolesnikova, Novosibirsk State University, Novosibirsk, Russia.

**10.00-11.30 SYMPOSIUM 5: ZEBRAFISH NEUROSCIENCE SYMPOSIUM** (Chair: TG Amstislavskaya)

**10.00-10.15 ACUTE AND CHRONIC EFFECTS OF NITROGLYCERIN IN ADULT ZEBRAFISH (*DANIO RERIO*).** TO Kolesnikova, AN Ikrin, AM Moskalenko, AV Kalueff, Sirius University of Science and Technology, Sirius Federal Territory, Russia.

**10.15-10.30 COMPARATIVE STUDY OF THREE NAVIGATION STRATEGY OF ZEBRAFISH IN THE TRANSFORMER MAZE.** EV Filatova, Sechenov Institute of Evolutionary Physiology and Biochemistry, St. Petersburg, Russia.



**10.30-10.45 INTRANASAL METHOD OF DRUG DELIVERY IN ADULT ZEBRAFISH USING NICOTINE TARTRATE.** DS Galstyan, TO Kolesnikova, AV Kalueff, Institute of Translational Biomedicine, St. Petersburg State University, Institute of Experimental Medicine, Almazov National Medical Research Centre, Sirius University of Science and Technology, Sirius Federal Territory, Russia; School of Science, XJTLU, Suzhou, China.

**10.45-11.00 BIOCHEMICAL AND BEHAVIORAL EFFECTS OF PREDNISOLONE IN ADULT ZEBRAFISH.** EV Nikiforova, AV Zhdanov, SL Khatsko, AV Kalueff, Ural Federal University, Yekaterinburg, Russia; School of Science, XJTLU, Suzhou, China.

**11.00-11.15 LOCOMOTION ACTIVITY OF THE ZEBRAFISH *DANIO RERIO* REGISTERED BY SFCO HYDROPHONE.** AS Khachunts, SG Gevorgyan, AA Tumanian, AR Sargsyan, NE Tadevosyan, GS Gevorgyan, LA Orbeli Institute of Physiology NAS RA, Yerevan State University, Yerevan, Armenia.

**11.15-11.30 ISRIB-INDUCED BRAIN TRANSCRIPTOMIC AND BEHAVIORAL EFFECTS IN TRAUMATIC BRAIN INJURY-EXPOSED AND CONTROL ZEBRAFISH.** NP Ilyin, AD Shevlyakov, GA Boyko, AM Moskalenko, AN Ikrin, DS Galstyan, TO Kolesnikova, NV Katolikova, SA Chekrygin, AV Kalueff, KA Demin, Almazov National Medical Research Centre, Institute of Translational Biomedicine, Core facility "Center Bio-Bank", St. Petersburg State University, St. Petersburg, Neurobiology Program, Sirius University of Science and Technology, Sirius, Scientific Research Institute of Neurosciences and Medicine, Novosibirsk, Russia; School of Science, XJTLU, Suzhou, China.

**11.30-11.50 Coffee Break**

**11.50-13.50 ISBS SYMPOSIUM 6: LAPIN BIOLOGICAL PSYCHIATRY SYMPOSIUM (Chair: A Kalueff)**

**11.50-11.55 GENERAL INTRODUCTION**

**11.55-12.10 WHAT ARE THE EXPERIENCES AND CONSEQUENCES OF STRESS DUE TO EMOTIONAL ABUSE ON MARRIED WOMEN?** HN Shilubane, R Mulaudzi, ET Nkhwashu, University of Venda, Thohoyandou, South Africa.

**12.10-12.25 THE ORBITOFRONTAL CORTEX DETERMINES THE SPECIFICITY OF MODEL-BASED LEARNING.** KM Costa, R Scholz, K Lloyd, P Moreno-Castilla, MPH Gardner, P Dayan, G Schoenbaum, National Institute on Drug Abuse Intramural Research Program, National Institute on Aging Intramural Research Program, Baltimore; University of Alabama at Birmingham, Birmingham, USA; Max Planck Institute for Biological Cybernetics, Tübingen, Germany; Concordia University, Montreal, Quebec, Canada.

**12.25-12.40 CAREGIVER BURDEN AND FAMILY SUPPORT ON CLINICAL RECOVERY IN PATIENTS WITH SCHIZOPHRENIA: A LONGITUDINAL STUDY.** A Caqueo-Urizar, Universidad de Tarapacá, Arica, Chile.

**12.40-12.55 VOLUNTARY PHYSICAL ACTIVITY DECREASES DEPRESSION-LIKE SYMPTOMS VIA INTERLEUKINE-1 $\beta$  RECEPTORS IN STRESSED MICE.** Z Sudani, HA Mahdirejei, Ali-Akbar Salari, Salari Institute of Cognitive and Behavioral Disorders (SICBD), Karaj, Alborz, Iran.

**12.55-13.10 EFFECT OF PRENATAL HYPERHOMOCYSTEINEMIA ON THE STRUCTURE AND FUNCTIONING OF THE CIRCULAR SYSTEM OF THE RAT PLACENTA.** DS Vasilev, NL Tumanova, AN Kadenov, AV Mikhel, IV Zalozniaia, YP Milyutina, AV Arutjunyan, Sechenov Institute of Evolutionary Physiology and Biochemistry RAS, Ott Research Institute of Obstetrics, Gynecology and Reproductive Medicine, St. Petersburg, Russia.

**13.10-13.25 DYNAMIC CHANGES IN NEUROVASCULAR CONNECTIVITY IN PATIENTS WITH CHRONIC CEREBRAL CIRCULATORY DISORDERS: A STUDY OF RESTING-STATE FMRI AND**



**CEREBRAL PERFUSION.** VD Abramova, International Tomography Center SB RAS, Novosibirsk State University, Novosibirsk, Russia.

**13.25-13.40 NEW TRANSCRIPTOMIC BRAIN PATTERNS FOR AUTISM SPECTRUM DISORDERS PATIENTS.** AD Shevlyakov, AN Ikrin, TO Kolesnikova, LG Danilov, KA Demin, AV Kalueff, Sirius University of Science and Technology, Sochi, St. Petersburg State University, Almazov National Medical Research Centre, St. Petersburg, Russia; School of Science, XJTLU, Suzhou, China.

**13.40-13.55 EEG ASSOCIATION WITH BLOOD INDICES IN HEALTHY AGING.** I Mikheev, I Polikanova, O Martynova, School of Psychology, HSE University, Federal Scientific Center for Psychological and Interdisciplinary Research, Institute of Higher Nervous Activity and Neurophysiology RAS, Moscow, Russia.

**13.55-15.00 Lunch Break**

**15.00-16.20 MOLECULAR NEUROSCIENCE SYMPOSIUM OF THE INSTITUTE OF MOLECULAR BIOLOGY NAS RA** (Chair: AA Arekelyan)

**15.00-15.30 TEMPORAL CHANGES OF GENE EXPRESSION IN HEALTH AND MENTAL DISORDERS.** AA Arakelyan, S Avagyan, A Kurnosov, T Mkrtychyan, G Mkrtychyan, R Zakharyan, KR Mayilyan, H Binder, Institute of Molecular Biology NAS RA, Armenian Bioinformatics Institute, Yerevan, Armenia; Interdisciplinary Center for Bioinformatics, Leipzig University, Leipzig, Germany.

**15.30-15.50 CAVITY CONSTRICTION OF KCNQ CHANNELS IMPEDES K<sup>+</sup> CONDUCTION.** V Vardanyan, Institute of Molecular Biology NAS RA, Yerevan, Armenia.

**15.50-16.20 THE COMPLEMENT SYSTEM: A CNS AND IMMUNITY WAYPOINT IN THE PATHOGENESIS OF PSYCHIATRIC ILLNESSES.** KR Mayilyan, AF Soghoyan, RB Sim, Institute of Molecular Biology NAS RA, Yerevan, Armenia; MRC Immunochemistry Unit, Department of Biochemistry, Oxford University, Oxford, UK; Department of Therapeutics, Faculty of General Medicine, University of Traditional Medicine, Department of Psychiatry, Yerevan State Medical University, Health Ministry of Armenia, Psychosocial Recovery Center, Yerevan, Armenia.

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**16.20-16.40 ISBS TALK: PROSPECTS FOR PREVENTION OF POST-STRESS DISORDERS BASED ON RESTORING THE INTEGRITY OF THE INTESTINAL BARRIER.** IN Abdurasulova, AV Matsulevich, VA Nikitina, NN Matsulevich, NM Grefner, Institute of Experimental Medicine, St. Petersburg, Russia.

**16.40-17.00 ISBS PLENARY LECTURE: ZEBRAFISH MODELS OF COMPLEX BRAIN DISORDERS.** AV Kaluev, AD Volgin, Department of Biological Sciences, Suzhou Key Laboratory of Neurobiology and Cell Signaling, School of Science, Xi'an Jiaotong-Liverpool University, Suzhou, China; International Zebrafish Neuroscience Research Consortium (ZNR), Global HQ, Slidell, USA.

**17.00-17.20 Coffee Break**

**17.20-17.35 COGNITIVE FUNCTIONING, PSYCHOLOGICAL WELL-BEING, AND PROFESSIONAL MOTIVATION IN OLDER ACADEMIC WORKERS.** EN Romanova, PA Manukyan, Research Institute for Brain Development and Peak Performance, RUDN, Moscow, Russia.

**17.35-17.50 EFFECTS OF DYNAMIC ENVIRONMENTAL STRUCTURE ON HUMAN SPATIAL NAVIGATION IN A VIRTUAL MAZE.** PA Manukyan, VV Tolchennikova, EN Romanova, Research Institute for Brain Development and Peak Performance, RUDN University, Biological Faculty, Lomonosov Moscow State University, Moscow, Russia.



**17.50-18.05 IMMUNE FUNCTION, GUT ULTRASTRUCTURE, AND MICROBIOTA COMPOSITION MODULATION BY *ENTEROCOCCUS FAECIUM* L-3 ADMINISTRATION REDUCES DISEASE SEVERITY IN EAE MODEL IN RATS.** AN Trofimov, EA Tarasova, AV Matsulevich, NM Grefner, MK Serebryakova, IV Kudryavtsev, EI Ermolenko, IN Abdurasulova, Institute of Experimental Medicine, St. Petersburg, Russia.

**18.05-19.00 COBRAIN GLOBAL EDUCATIONAL INITIATIVE: SESSION FOR YOUNG SCIENTISTS – KEYS TO SUCCESS.** Moderators: M Movsesyan, KB Yenkovyan

## Day 4, May 19, 2024

**Venue – LA Orbeli Institute of Physiology NAS RA**

**09.00-17.00 REGISTRATION**

**09.30-09.40 OPENING AND WELCOMING ADDRESSES**

NM Ayvazyan, Institute of Physiology Director and Conference Co-Chair  
AV Kalueff, ISBS President and Conference Chair

**09.40-10.00 ISBS TALK: NEUROBIOLOGY AND THERAPEUTIC UTILITY OF NATURAL NEUROTOXINS TARGETING PRE- AND POSTSYNAPTIC MECHANISMS OF NEUROMUSCULAR TRANSMISSION.** NM Ayvazyan, LA Orbeli Institute of Physiology NAS RA, Yerevan, Armenia.

**10.00-14.15 ORBELI SYMPOSIUM ON PHYSIOLOGY (Chairs: NM Ayvazyan, LM Firsov)**

**10.00-10.15 CORRELATION OF SYNAPTIC PROCESSES IN THE PERIAQUEDUCTAL GRAY MATTER OF THE BRAIN IN A MODEL OF PARKINSON'S DISEASE WITH HYDROCORTISONE PROTECTION.** MV Poghosyan, ME Hovsepyan, MH Danielyan, AL Minasian, HY Stepanyan, KV Karapetyan, RSh Sargsyan, JS Sarkissian, LA Orbeli Institute of Physiology NAS RA, M Heratsi Yerevan State Medical University, University of Traditional Medicine, Yerevan, Armenia.

**10.15-10.30 DIABETIC STRESS AND SPINAL CORD INJURY: BEHAVIORAL, MORPHOLOGICAL, AND ELECTROPHYSIOLOGICAL CORRELATES.** KV Simonyan, MH Danielyan, AS Isoyan, RA Avetisyan, LG Avetisyan, KA Nebogova, VA Chavushyan, Orbeli Institute of Physiology NAS RA, Yerevan, Armenia.

**10.30-10.45 CHANGES IN CENTRAL BLOOD FLOW UNDER THE INFLUENCE OF SPELEOCLIMATE AND RHEOGRAM PARAMETERS.** VA Semiletova, Department of Normal Physiology, Voronezh State Medical University, Voronezh, Russia.

**10.45-11.00 THE NEUROIMMUNE-INFLAMMATORY MODEL OF CHRONIC STRESS, DISTRESS, AND DEPRESSION.** MV Komelkova, AP Sarapultsev, EY Gusev, South Ural State University, Chelyabinsk, Russia.

**11.00-11.15. PSYCHONEUROIMMUNOMODULATORY EFFECTS OF IMMUNE CELLS IN DEPRESSION-LIKE STATE.** EV Markova, MA Knyazheva. Research Institute of Fundamental and Clinical Immunology, Novosibirsk, Russia.

**11.15-11.30 A SPIKE IS A SPIKE: ON THE UNIVERSALITY OF ITS FREQUENCY CHARACTERISTICS IN FIVE EPILEPSY MODELS.** A Sargsyan, PM Casillas-Espinosa, D Melkonian, TJ O'Brien, G van Luijtelaa, LA Orbeli Institute of Physiology NAS RA, Yerevan, Armenia; Department of Neuroscience, Central Clinical School, Monash University, Melbourne, Victoria,



Kaoskey Pty Ltd, Sydney, New South Wales, Australia; Donders Centre for Cognition, Radboud University, Nijmegen, Netherlands.

**11.30-11.45 EMOTIONAL ABNORMALITIES AS EARLY BEHAVIORAL SYMPTOMS OF ALZHEIMER'S DISEASE IN APP/PS1 MUTANT MICE TO CORRELATE WITH PLAQUE FORMATION.** K Sitdikova, A Gorlova, S Morozov, Z Nefedova, K Chaprov, T Strekalova, Institute of General Pathology and Pathophysiology, Sechenov First Moscow State Medical University, Moscow, Institute of Physiologically Active Compounds RAS, Chernogolovka, Belgorod State National Research University, Belgorod, Russia.

#### 11.45-12.15 Coffee Break

**12.15-12.30 THE EFFECTS OF COMPETITIVE STRESS ON THE COMPONENTS OF EVENT RELATED POTENTIALS DURING JOINT VERBAL PROBLEM SOLVING.** NV Shemyakina, ZhV Nagornova, Sechenov Institute of Evolutionary Physiology and Biochemistry RAS, St. Petersburg, Russia.

**12.30-12.45 MOTOR EVOKED POTENTIALS CHANGE UNDER CONDITIONS OF VARIOUS DOPAMINERGIC CONTROL IN THE DAT-KO RAT MODEL.** DS Kalinina, OV Gorsky, RR Gainetdinov, PE Musienko, Department of Neuroscience, Sirius University of Science and Technology, Sirius, Institute of Translational Biomedicine, St. Petersburg State University, Sechenov Institute of Evolutionary Physiology and Biochemistry RAS, Pavlov Institute of Physiology RAS, St. Petersburg, Life Improvement by Future Technologies Center "LIFT", Moscow, Russia.

**12.45-13.00 ISBS ONLINE TALK. AN INTERDISCIPLINARY BIOLOGICAL MODEL OF PSYCHOPHARMAPHYSIOLOGICAL FUNCTION QUANTITATIVELY VISUALIZED BY MOLECULAR AND BODY TEMPERATURE INDICATORS IN THE ELDERLY.** M Koshiba, Yamaguchi University, Yamaguchi, Tohoku University, Tohoku, Saitama Medical University, Saitama, Japan.

**13.00-13.15 ANALYSIS OF THE EEG RHYTHMS POWER DURING VIEWING AN EMOTIONAL VIDEO AS A BIOMARKER OF A PERSON'S PSYCHO-EMOTIONAL STATE.** ED Blagovechtchenski, MM Koriakina, KV Bartseva, UR Nikishina, MU Lukov, DA Fomicheva, VV Moiseeva, AN Shestakova, National Research University HSE, Moscow, St Petersburg State University, St Petersburg, Yaroslav-the-Wise Novgorod State University, Novgorod, Russia.

**13.15-13.30 CONTINUOUS MEASUREMENT OF ELRCTRODERMAL ACTIVITY AS AN INDICATOR OF STRESS LEVELS EXCITABILITY: A PILOT STUDY.** MY Lukov, ES Zemnukhov, St. Petersburg State University, St. Petersburg, Novgorod State University, Velikiy Novgorod, Russia.

**13.30-13.45 PAIN AND BEHAVIOR.** AV Voskanyan, AV Moghrovyan, LM Parseghyan, SS Poghosyan, AA Darbinyan, LA Orbeli Institute of Physiology NAS RA, M Heratsi Yerevan State Medical University, Armenia, Yerevan.

**13.45-14.00 THE RELATIONSHIP OF EXCITATORY AND DEPRESSOR SYNAPTIC PROCESSES IN ANTINOCICEPTIVE RAPHE MAGNUS NUCLEUS ON THE MODEL OF PARKINSON'S DISEASE UNDER CONDITIONS OF PROTECTION WITH NAJA NAJA OXIANA (NNO) VENOM POISONING.** HY Stepanyan, AL Minasyan, MV Poghosyan, TK Harutyunyan, KV Tsakanyan, HG Vahradyan, ZA Avetisyan, JS Sarkissian, LA Orbeli Institute of Physiology NAS RA, University of Traditional Medicine, Yerevan Haybusak University, Yerevan, Armenia.

**14.00-14.15 SLEEP DISTURBANCES IN PATIENTS AS A RESULT OF STRESS FACTOR DUE TO HEADACHE ATTACKS.** IV Fokin, Moscow Central House of Sciences, Moscow, Russia.

#### 14.15-15.30 Lunch Break



## **15.30-18.00 MODERATED POSTER SESSION 2**

**ERP AMPLITUDES TO "EDIBLE" VS "INEDIBLE" NOUNS CHANGE DEPENDING ON GLUCOSE LEVEL IN HUMAN BLOOD (A PILOT STUDY).** EI Galperina, VA Ivanov, YA Chilgina, OV Kruchinina, Sechenov Institute of Evolutionary Physiology and Biochemistry RAS, Herzen Russian State Pedagogical University, St. Petersburg, Russia.

**1-DEAMINO-8-D-ARGININE-VASOPRESSIN IMPLEMENTS ITS ANALGESIC EFFECTS IN ELECTROCUTANEOUS PAW STIMULATION TEST IN RATS BY MODULATING THE ACTIVITY OF MONOAMINES IN THE BRAIN.** AA Nikitina, SG Belokoskova, SG Tsikunov, Institute of Experimental Medicine, St. Petersburg, Russia.

**THETA OSCILLATIONS MAY INTERFERE WITH ALPHA AND BETA DESYNCHRONISATION OF SUBTHALAMIC NEURONS DURING MOVEMENTS IN PARKINSON'S DISEASE PATIENTS.** AA Nezvinskiy, EM Belova, AA Gamaleya, AA Tomskiy, AS Sedov, Semenov Research Center for Chemical Physics RAS, NN Burdenko National Medical Research Center of Neurosurgery, Moscow, Russia.

**THE ROLE OF DIET AND DRINKING WATER IN EMOTIONAL RESPONSES: AN INSIGHT FROM ANIMAL MODELS.** A Burova, A Gorlova, G Somlyai, K Chaprov, K Sitdikova, A Litavrin, E Svirin, J de Munter, T Strekalova, Neuroplast BV, Department of Psychiatry and Neuropsychology, Maastricht University, Maastricht, Netherlands; Institute of General Pathology and Pathophysiology, Sechenov First Moscow State Medical University, Moscow, Russia; HYD Pharma Inc., Budapest, Hungary.

**AGING-RELATED IMPAIRMENT OF GLUCOSE TOLERANCE: THE EFFECTS OF THE WESTERN DIET AND DRINKING WATER WITH ALTERED DEUTERIUM CONTENT.** Z Nefedova, A Burova, E Svirin, J de Munter, E Kochina, A Gorlova, G Somlyai, T Strekalova, A Umriukhin, Neuroplast BV, Maastricht, Netherlands; RUDN University, Department of Normal Physiology, Sechenov Moscow State Medical University, Institute of General Pathology and Pathophysiology, Moscow, Russia; HYD Pharma Inc., Budapest, Hungary.

**THE ZEBRAFISH VERTICAL 100-500-ML CYLINDER TEST AS A SIMPLE AND FAST METHOD FOR MEASURING FISH STRESS AND ANXIETY.** L Yang, Y Zhang, Y Lin, J Cui, Y Qin, C Zhao, AV Kaluev, Department of Biological Sciences, Suzhou Key Laboratory of Neurobiology and Cell Signaling, School of Science, Xi'an Jiaotong-Liverpool University, Suzhou, China

**ANTIDEPRESSANT AND ANXIOLYTIC EFFECTS OF SMALL DOSES OF ANTIPSYCHOTIC DRUG SULPIRIDE IN ZEBRAFISH.** AS Lebedev, DS Galstyan, TO Kolesnikova, MS Papulova, DK Saklakova, AV Kalueff, St. Petersburg State University, St. Petersburg, Russia; School of Science, XJTLU, Suzhou, China.

**EFFECTS OF CHRONIC NITROGLYCERINE ADMINISTRATION ON MECHANICAL SENSITIVITY OF RATS.** VD Ilyushichev, AA Kochneva, NO Fokeeva, PE Musienko, EV Gerasimova, Sirius University of Science and Technology, Sochi, Russia.

**EFFECT OF NITROGLYCERIN ON MAST CELL DEGRANULATION IN A MODEL OF CHRONIC MIGRAINE IN RATS.** NO Fokeeva, VD Ilyushichev, AA Kochneva, PE Musienko, EV Gerasimova, Sirius University of Science and Technology, Sochi, Russia.

**COMPARISON OF PAIN SENSITIVITY THRESHOLDS IN RATS WITH DIFFERENT DOPAMINE LEVELS USING THE ELECTRONIC VON FREY SYSTEM.** AA Kochneva, VD Ilyushichev, NO Fokeeva, PEM Musienko, EV Gerasimova, Center for Genetics and Life Science, Sirius University of Science and Technology, Sochi, Russia.

**PATTERNS OF ELECTRICAL BRAIN ACTIVITY FOLLOWING ACUTE NITROGLYCERIN EXPOSURE IN ADULT ZEBRAFISH, AND THEIR RELEVANCE TO MODELING MIGRAINE.** VD Riga, TO Kolesnikova, DS Kalinina, EV Gerasimova, AV Kalueff, Sirius University of Science and Technology, Sirius Federal Territory, Russia.





**THE NARROW 5-ML VERTICAL CYLINDER TEST AS A POTENTIAL RAPID ASSAY FOR ZEBRAFISH STRESS-EVOKED 'DESPAIR'-LIKE BEHAVIOR.** L Yang, Y Zhang, Y Lin, C Zhao, Y Qin, J Cui, AV Kaluev, Department of Biological Sciences, Suzhou Key Laboratory of Neurobiology and Cell Signaling, School of Science, Xi'an Jiaotong-Liverpool University, Suzhou, Jiangsu, China.

**THE EFFECT OF LASER BEAMS ON BEHAVIOR OF ADULT ZEBRAFISH: TOP, SIDE OR BOTTOM LASER HAS NO EFFECT ON FISH ANXIETY.** KV Apukhtin, VS Nikitin, TO Kolesnikova, AV Kalueff, Sirius University of Science and Technology, Sochi, Russia.

**THE IMPACT OF DIFFERENT CONCENTRATIONS OF BACTERIAL MELANIN ON THE BEHAVIOR, MORPHO-FUNCTIONAL STATE OF THE BRAIN, AND BONE MARROW IN A RAT MODEL OF PARKINSON'S DISEASE.** KV Karapetyan, KA Nebogova, AG Karapetyan, AM Dallakyan, MV Pogosyan, ZA Avetisyan, MH Danielyan, LA Orbeli Institute of Physiology NAS RA, Yerevan, Armenia.

**THE IMPACT OF HYDROPONIC *SUTHERLANDIA FRUTESCENS* ON HIPPOCAMPAL NEURONAL ACTIVITY IN A RAT MODEL OF PARKINSON'S DISEASE.** LP Manukyan, LE Hambardzumyan, VH Sarkisian, KV Simonyan, LE Hovhannisyanyan, LV Darbinyan, Sensorimotor Integration Lab, Neuroendocrine Relationships Lab, Orbeli Institute of Physiology NAS RA, GS Davtyan Institute of Hydroponics Problems NAS RA, Yerevan, Armenia.

**PROTECTIVE EFFECTS OF L-THYROXINE ON HIPPOCAMPAL VASCULAR MORPHOLOGY AND ELECTRICAL ACTIVITY IN THYROIDECTOMIZED RATS.** LV Darbinyan, KV Simonyan, LG Avetisyan, LE Hambardzumyan, LP Manukyan, KV Karapetyan, MH Danielyan, Orbeli Institute of Physiology NAS RA, Yerevan, Armenia.

**NEW THERAPIES AND THERAPEUTIC DIET PROTOTYPE: PROMISING EFFECTS IN FEMALE APP/PS1 MICE, A MODEL OF ALZHEIMER DISEASE.** K Sitdikova, J de Munter, K Chaprov, A Tsoy, A Gorlova, Z Nefedova, E Svirin, A Kassenova, L Ohanyan, N Ayzvazyan, K Lebedeva, M Kuznetsova, T Veremeyko, ED Ponomarev, S Askarova, T Strekalova, Institute of General Pathology and Pathophysiology, Sechenov First Moscow State Medical University, Moscow, Russia; Neuroplast BV, Maastricht, Netherlands; Astana National Laboratory, Department of Biology, School of Sciences and Humanities, Nazarbayev University, Astana, Kazakhstan; LA Orbeli Institute of Physiology NAS RA, Yerevan, Armenia; Biomedical Sciences Department, City University of Hong Kong, Hong Kong, China.

**NEONATAL INFLAMMATION DOES NOT LEAD TO DELAYED EFFECTS ON THE GLUTAMATERGIC SYSTEM AND BRAIN NEUROPLASTICITY: CHARACTERISTICS OF MICE WITH AUTISM-LIKE PHENOTYPE.** EV Mezhlumyan, KA Ayriyants, AS Mutovina, MM Kolesnikova, NP Bondar, Novosibirsk State University, Institute of Cytology and Genetics, Novosibirsk, Russia.

**COPPER COMPLEXES  $\text{Cu}(\text{L}^{\text{CF}_3})_2$  AND  $\text{Cu}(\text{L}^{\text{cur}})_2\text{H}_2\text{O}$  AS RADIOPROTECTIVE COMPOUNDS.** AG Karapetyan, VS Grigoryan, AM Dallakyan, LA Orbeli Institute of Physiology NAS RA, University of Traditional Medicine of Armenia, Yerevan, Armenia.

**COMPARATIVE ELECTROPHYSIOLOGICAL STUDY OF THE ACTIVITY OF VESTIBULO- AND RETICULOSPINAL NEURONS IN FROG.** LR Manvelyan, DO Terzyan, ML Grigoryan, LR Ohanyan, Orbeli Institute of Physiology NAS RA, Yerevan, Armenia.

**IMPLEMENTATION OF STIMULATION OF SOME LIMBIC BRAIN STRUCTURES ON IDENTIFIED VAGAL NEURONS OF THE SOLITARY TRACT NUCLEUS.** EA Avetisyan, AA Petrosyan, SA Shogeryan, NA Sahakyan, VH Sarkisian, LA Orbeli Institute of Physiology NAS RA, Yerevan, Armenia.

**INVESTIGATION OF THE ROLE OF TRACE AMINE-ASSOCIATED RECEPTOR 5 (TAAR 5) IN THE RESTORATION OF SENSORIMOTOR FUNCTIONS AFTER SPINAL CORD INJURY.** AD Buglinina, DS Kalinina, EA Romanyuk, PE Musienko, Department of Neuroscience, Sirius University of Science and Technology, Sirius, Sechenov Institute of Evolutionary Physiology and Biochemistry RAS, Institute of Translational Biomedicine, St. Petersburg State University, St. Petersburg, Life Improvement by Future Technologies Center "LIFT", Moscow, Russia.



**AUTOPHAGOLYSOSOMES FORMATION IN BRAIN TISSUE OF RAT FETUSES SUBJECTED TO PRENATAL HYPERHOMOCYSTEINEMIA.** AV Alov, NL Tumanova, AV Mikhel, IV Zalozniaia, YP Milyutina, DS Vasilev, AV Arutjunyan, Sechenov Institute of Evolutionary Physiology and Biochemistry RAS, Ott Research Institute of Obstetrics, Gynecology and Reproductive Medicine, St. Petersburg, Russia.

**THE PRACTICAL CHALLENGES AND LIMITATIONS OF DETECTING MOTOR UNITS FROM SURFACE ELECTROMYOGRAPHY.** GV Iskarevsky, AE Pozdnyakova, AA Pekonidi, DA Onishchenko, AM Beknazarova, YR Bravyy, Sirius University of Science and Technology, Sirius Federal Territory, Russia.

**IS ARTIFICIAL INTELLIGENCE AN EFFECTIVE TOOL FOR PROVIDING THERAPY ADVICE IN NEUROREHABILITATION?** AM Beknazarova, GV Iskarevsky, AA Pekonidi, YR Bravyy, DA Onishchenko, Sirius University of Science and Technology, Sirius Federal Territory, Russia.

**EFFECT OF BLOOD FLOW RESTRICTION ON RECRUITMENT THRESHOLD AND AMPLITUDE-FREQUENCY CHARACTERISTICS OF MOTOR UNITS DURING EXERCISE.** AA Pekonidi, GV Iskarevsky, AE Pozdnyakova, AM Beknazarova, AS Kirsanov, DA Onishchenko, YR Bravyy, Sirius University of Science and Technology, Sirius Federal Territory, Russia.

**RAPID CORTICAL PLASTICITY: DISSOCIATING THE EFFECTS OF ACTIVE AND PASSIVE ATTENTION IN AUDITORY PROCESSING.** G Kopytin, A Kondratenko, M Ivanova, A Gorin, A Shestakova, V Moiseeva, National Research University Higher School of Economics, Moscow, Russia.

**REGULATION OF CHARACTERISTICS OF ELECTRICAL RHYTHMOGENESIS IN THE REPRODUCTIVE SYSTEM.** AV Mkrtychyan, NG Hunanyan, RG Chibukhchyan, TA Piliposyan, HH Mkrtychyan, YY Trofimova, KV Kazaryan, LA Orbeli Institute of Physiology NAS RA, Yerevan, Armenia.

**ACUTE BEHAVIORAL EFFECTS OF NOVEL N-BENZYL-2-PHENYLETHYLAMINE DERIVATIVES IN ZEBRAFISH LARVAE.** DD Martynov, DS Galstyan, NP Ilyin, NI Golushko, AV Kalueff, Institute of Translational Biomedicine, St. Petersburg State University, St. Petersburg State Pediatric Medical University, St. Petersburg, Institute of Experimental Medicine, Almazov National Medical Research Centre, Sirius University of Science and Technology, Sirius Federal Territory, Russia; School of Science, XJTLU, Suzhou, China.

**BEHAVIORAL EFFECTS OF TOFIZOPAM IN ZEBRAFISH NOVEL TANK AND TAIL IMMOBILIZATION TESTS.** VV Tishkina, DS Galstyan, TO Kolesnikova, MS Papulova, AV Kalueff, Institute of Translational Biomedicine, St. Petersburg State University, St. Petersburg State Pediatric Medical University, Institute of Experimental Medicine, Almazov National Medical Research Centre, St. Petersburg, Sirius University of Science and Technology, Sirius Federal Territory, Russia; School of Science, XJTLU, Suzhou, China.

**RHODOPSIN G-PROTEIN SPECIFICITY ADJUSTMENT FOR RETINA OPTOGENETIC PROSTHESIS.** DA Meshalkina, SD Losev, ML Firsov, Sechenov Institute of Evolutionary Physiology and Biochemistry RAS, St. Petersburg State University, St. Petersburg, Russia.

**THE STRUCTURE OF COURTSHIP BEHAVIOR IN DROSOPHILA MALES: BOUNDARIES OF PLASTICITY.** SA Fedotov, AA Goncharova, NG Besedina, LV Danilenkova, EA Kamysheva, JV Bragina, Laboratory of Toxinology and Molecular Systematics, LA Orbeli Institute of Physiology NAS RA, Yerevan, Armenia; Laboratory of Comparative Behavioral Genetics, Pavlov Institute of Physiology RAS, St. Petersburg, Russia.

**EFFECTS OF REPEATED EXPERIENCE OF AGGRESSION ON GENE EXPRESSION IN HYPOTHALAMUS IN MALE MICE.** AA Saponova, AS Mutovina, PE Kisaretova, R Salman, NP Bondar, Institute of Cytology and Genetics SB RAS, Novosibirsk State Research University, Novosibirsk, Russia.



**BRIDGING SELF- AND SOCIAL GROOMING: COMPUTATIONAL ANALYSES OF RODENT BEHAVIOR AND BRAIN GENES.** AM Moskalenko, AN Ikrin, AV Kozlova, TO Kolesnikova, AV Kalueff, Sirius University of Science and Technology, Sirius Federal Territory, Russia.

**17.00-17.30 CONFERENCE CLOSING  
ANNOUNCING FUTURE ISBS CONFERENCES AND EVENTS**

**DAY 4 TOUR: PANORAMIC TOUR OF YEREVAN (tickets required)  
TOUR DEPARTS FROM ORBELI INSTITUTE MAIN ENTRANCE**

**CONFERENCE DINNER (tickets required)**

# **POST-CONFERENCE DAYS**

## **May 20-21, 2024**

***Research visits to laboratories:***

- ***Yerevan State Medical University***
- ***YSMU COBRAIN Center***
- ***LA Orbeli Institute of Physiology NAS RA***

**MAY 20, 2024**

**POST-CONFERENCE TOUR 1: GARNI, GERHARD, ARARAT (tickets required)  
TOUR DEPARTS FROM COBRAIN MAIN ENTRANCE**

**ISBS WORKING RESEARCH FIELD VISIT (BY INVITATIONS ONLY)  
BUS DEPARTS FROM COBRAIN MAIN ENTRANCE**

**MAY 21, 2024**

**POST-CONFERENCE TOUR 2: ETCHMIADZIN-ZVARTNOTZ (tickets required)  
TOUR DEPARTS FROM COBRAIN MAIN ENTRANCE**

**ISBS WORKING RESEARCH FIELD VISIT (BY INVITATIONS ONLY)  
BUS DEPARTS FROM COBRAIN MAIN ENTRANCE**